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ON HALLUCINATIONS CONSISTENT WITH REASON

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On Hallucinations Consistent with Reason.

By JOHN ORDRONAUX, M. D., Professor of Medical Jurisprudence, &c.

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ON HALLUCINATIONS CONSISTENT WITH REASON.

By John Ordronaux, M. D., Professor of Medical Jurisprudence, &c.

A Lecture Delivered before the Students of Columbia College, New York.

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Gentlemen:—Any examination of the subject of mental unsoundness must be incomplete, which does not include some notice of the phenomena of hallucination. This too often neglected chapter of mental pathology is the true arcana of mystery—the grand storehouse of nature's secrets, which science seeks in vain to penetrate. As its limits span the unfathomable gulf between mind and matter, and trench upon the domain of the infinite, so the physical tests by which material causations are measured fail us here, and we are left to grope among isolated facts, and self-gratifying conjectures, happy, too happy, if we can trace a few sequences, and measure a few effects. The inward voice of intuition, which never speaks without striking the key-note of a natural truth, teaches us, even in the absence of all sensational knowledge, that there is a link which catenates us to Infinity. It is the consciousness of a personal identity—of an imma-

terial principle within us whose essence eludes our search, albeit its operations reveal the order of its laws. It is the principle of intelligence, as distinguished from the *property* of sensation. And inasmuch as the degree of development of the intelligence is the measure of man's mentality, so the cloudiness or clearness of this principle, its ability rightly to apprehend—rightly to *comprehend*, whatever ideas are presented to it, will always determine the normal or abnormal state of the mind. The insane generally reason well from their own premises. Grant but the truth of these, and their conclusions are not often erroneous. It is in the intelligence that lies the disorder. The self-deception is in the misapprehension of the *original* relation of things, and not in the subordinate relations which flow out of them. In this view of the subject, any disturbance of the intelligence towards whatever sense radiated, may provoke the occurrence of hallucination. The particular sense simply repeats in a physical manner the delusion which already exists in its intellectual centre. Whence it follows that we may have hallucinations of a particular sense, as of sight, sound, smell, or taste, without involving either of the rest; and in all these conditions of partial derangement, the mind may or may not be conscious of the error under which it labors.

Indeed, it is so common to associate with the idea of insanity, those extreme forms of mental perturbation which are indicated by unmistakable physical manifestations, that we are in danger of overlooking those milder functional disturbances which sometimes afflict even the healthy. Violence of conduct and vehemence of language, or its contrary, moroseness and taciturnity—acts of glaring absurdity, or of childish awkwardness—paroxysms of unbridled temper and incoherent utterance, "full of sound and fury, signifying nothing"—these are the usual lineaments which the unlearned and unskilled in mental pathology ascribe to the insane.

Much, all of this indeed, is unquestionably true at different times, and yet to insist that any one of these facts by itself constitutes insanity, is simply to assert that a simple acceleration or retardation of function is a morbid phenomenon, and that health has fixed and absolute limits, beyond which it never passes. In reality, nature,

throughout all the economy of organized life, nowhere operates with the dull, monotonous precision of clock-work. There is a margin to mental as well as physical health, within which the functional pendulum may oscillate with more or less rapidity, and still without disturbance of the general economy. Our daily feelings and our daily strength, whether of mind or of body, are not absolutely similar throughout any given week or month; and our bodies—although it may pain us to confess it—are but the representative barometers that indicate the epidemic character of the season—the influences of air, diet, exercise, occupation and modes of thought upon our physical well-being. These are the grand elements which operate upon the springs of emotional life, and produce contradictions and diversities in human character. There are temperaments, like those of Robert Hall, Montaigne and Thomas Hood, which are capable of enduring, serene and unruffled, the acutest pangs of bodily infirmity; while there are others, like Coleridge and De Quincey, who, tortured to madness by excess of nervous sensibility, fly to the dearly-purchased palliatives of human art for that relief which kills while it affects to cure. Such natures represent the extremes of reflex sensation—they show also the presence of a material power antecedent to the operations of the will; for, strong as this latter may be, it can smother nature's voices only for a while, and sooner or later their right to be heard as well as felt will assert itself. "*Naturam expellas furcâ tamen usque recurret*"—is the significent language of Horace in illustration of this idea.

It is natural, then, for physical ailments to make themselves *seen* as well as felt, and the outward revelation which they make to us in the form of *symptoms*, is only the mute and unwritten language of suffering organs. But we must remember that the point at which this expressive tongue speaks, or the dialect which it adopts, is not always related, even by analogy, to the centre of the disturbing force. It is easy to understand why laborious or impaired digestion should reveal itself through a sensation of weight and oppression in the stomach, but it is not easy to understand, nor can it be explained, why the dreams emanating in such a condition of body, should always be

of a horrifying and distressing character. Were those dreams simply of an oppressive character, as where a great sense of weight is experienced about the chest, we could analogically explain them by the overloaded state of the stomach; but when they pass into the presentation of unfathomable gulfs over which we are suspended, or of battle-fields upon which we are being attacked, the theory of analogy completely fails us. We are thereupon forced to conclude, that the law regulating the association of ideas is one whose operations are not entirely volitional. Its functions are ceaselessly going on, whether we sleep or whether we wake. When we desire we call up a train of thought, but having done so we can not always dismiss it again; for although we may throw before it the veil of other thoughts, it will nevertheless break through them, as the morning sun pierces the mists of night, and re-assert its more engrossing presence. Thus the weary lawyer or physician who, with brain overtasked and nerves unstrung, seeks nature's great restorer on his midnight couch, strives in vain to banish from his mind the image of those many doubtful cases upon which he has exhausted his talents through the livelong day. Useless the attempt to disperse the ghosts of those mighty enterprises. Vain, indeed, to summon up images of less magnitude with which to dispel them. As well might you endeavor to oppose the gentle Zephyr to the stormy Boreas. The mighty business of the day hath mastered him. The deity at whose shrine he has but too faithfully ministered will not be sated yet, and the poor, weary worshipper is compelled to repeat his intellectual sacrifice, happy enough when outraged nature drags him wounded from this altar into her temple of sleep and oblivion.

It has been remarked by Schlegel, in his Philosophy of Life, that "many facts in medical experience, and peculiar phenomena of disease—as well as the loathsome generation of insects in the atmosphere, or on the surface of the earth, and many diseased states in both, appear to point rather to some intrinsically evil, and originally *wild*, demoniacal character in the sphere of nature." This opinion agrees substantially with that of the Christian fathers, and was the one actively maintained by them in their conflicts with Paganism.

It was a reflection of that system of pantheism, which ascribed to every law of nature the handiwork of a distinct deity. More particularly was this the case with that class of mental disorders which, inexplicable by us, was still less explicable by them. Among the ancients, therefore, any departure from the normal standard of mental health was always regarded as a visitation of evil spirits, from which priestly exorcism could alone afford relief. And the nomenclature of these disorders, borrowing its complexion from the pervading hue of public opinion, indicated their ascription to causes of a supernatural character. The scientific knowledge of that day being on a par among pagans and christians, we accordingly find the writings of the Fathers abounding with passages attributing to the "blast of demons" divers sicknesses and severe accidents, sudden and strange extravagances, blight in the grain, taint in the atmosphere, pestilential vapors, foul madness and manifold delusions. Much of this was undoubtedly founded upon the frequent allusion to evil spirits which is to be met with in the New Testament, but more to that ignorance of physiological as well as pyschical laws which has waited for eighteen centuries to be dispelled. The old idea of a pythonic or demoniac possession, in which the individuality of the person and his identity are swallowed up by the enveloping presence of the *daimon*, is well described to us in the Gospel of Matthew. It was the characteristic symptom of the approach of the *afflatus* or inspiration to the ancient oracles at Delphos and Dodona, and is still seen among the Hindoo pythonics of the present day. Modern science recognizes this phenomenon as the prodromic stage and the unvarying accompaniment of an access of epileptic, hysteric and convulsive disorder. Indeed, since no divine prohibition restrains us from examining this subject, nor enjoins a belief in the presence and active interference of disembodied spirits on the earth, we are at liberty to avail ourselves of all the resources which progressive knowledge can afford in aid of investigation. A careful comparison, therefore, of the phenomena of demoniacal possession as described in the Scriptures, with the manifestations daily revealed to us in the various forms of mental disease, must satisfy us that they are identical in character, if not in degree,

with such maladies as *mania, epilepsy, hysteria,* and *chorea.* While the inspiration of both ancient and modern oracles is easily recognised to be born, if not of these disorders, at least of influences similarly acting upon the brain through the operation of powerful narcotics, far be it from me to say that those perversions of the moral affections, which even the most rationalistic system of medicine can not always trace to a connection with physical agencies—that cropping out of the blossom of original sin—may not depend, for aught we know to the contrary, upon more subtle influences even than those of blood, nerve or vital force. Certainly, the inexplicable, and generally inscrutable, character of the malignant tendencies underlying moral depravations of conduct—tendencies at once so brutal and overpoweringly fiendish—often occurring in those previously of the most correct and sober deportment, leave us in doubt whether the sphere of merely physical agencies can produce such dire moral tendencies, without first overpowering the intellect—this latter being the only medium through which we can view moral manifestations. Unfortunately for the certainty of all our investigations, we can only examine, but not always explain; and until conjecture gives way to fact, and belief gives way to knowledge, we shall scarcely be able to advance beyond the ante-chamber of mental pathology.

It is not my purpose at this time, however, to enlarge upon the extreme phases of a malady which we have already examined in its more prominent types. Having considered all the various forms of insanity as classified by experts, together with the legal relations which flow out of them; having shown you wherein the great sciences of law and medicine should, by yielding to each other's proper supremacy in all that belongs exclusively to either, unite in a spirit of generous compromise, it will be unnecessary for me to review these subjects here. I shall not therefore speak to you of *absolute* insanity. My design now is, to investigate that particular chapter in its philosophy, which is revealed to us through the minor aspects of mental disturbance. These firstlings may constitute, either the incubative stage of the disease proper—its dawning period, or, on the other hand, they may co-exist with perfect soundness of reason—being sim-

ple and single abnormities of function, in relation to particular thoughts, feelings, or acts. As such, they do not invalidate a will or a contract, unless they are found infecting its subject-matter; because a rational act implies a rational agent, and with degrees of understanding, or complexions of understanding, the law does not concern itself. If there be understanding and no fraud, the act will be valid. My subject then will be limited to the consideration of hallucinations consistent with reason.

Hallucination, as I have elsewhere shown, differs from illusion in that it involves disturbance of the *sensorium*, as well as of the senses. If I see an object distorted, it is simply an illusion, because a thing may be objectively true, and yet subjectively false. If I am pursued by sights, sounds, smells or tastes, for which no objective cause exists, this is an hallucination. Again, if I am *conscious* that the impression or idea is unwarranted by physical facts—that no sights, sounds, smells or tastes exist *outside* of myself—then the mind, by its competency to correct itself, proves the persistence of a state of health, equal at least to the behests of the will. If, on the contrary, I can not reason myself out of the *falsity* of an hallucination—if I can not dispel this *daimon* of the imagination—if I can not dissever it from surrounding phenomena, as the creature of the heat-oppressed brain—then the mind, permeated by this cloudy error, no longer obeys the will, and its faculties are completely swallowed up by the spectre before it. Horace has well depicted the character of this form of mental cloudiness, in the person of the citizen of Argos.

> "At Argos lived a citizen well known,
> Who thought he heard the accustomed tone
> Of deep tragedians, on an empty stage,
> And sat, applauding with ecstatic rage."

And in Shakspeare's comedy of "Taming the Shrew," a striking illustration of disordered idealization, is afforded in the person of Christopher Sly. The frolic consists in intoxicating Sly, and allowing him to recover himself in the midst of splendid surroundings, so that a true momentary hallucination is developed in him, and he imagines himself "a Lord, indeed."

"Am I a Lord? and have I such a lady?
Or do I dream? or have I dreamed till now?
I do not sleep: I see, I hear, I speak;
I smell sweet savors, and I feel soft things:—
Upon my life, I am a Lord, indeed;
And not a tinker, nor Christopher Sly."

The ability of self-identification is no proof of sanity, and the delusions so often entertained of glass limbs, or bodies made of wood, are not dissipated by producing sensation in substances which the deranged intellect knows should be senseless. The mind being enchained to the attributes of that which it believes to exist, naturally enough opposes that which it believes not to exist; and the reason—that ultimate tribunal to which the perceptive faculties return their observations for comparison—having a cloud before it, can not correct the misapprehension of the lower senses. It accepts them as realities, and directs the conduct of the body accordingly. When the hallucination, therefore, has firmly possessed itself of the mind, we have a state of ideal intellection, in which the reason, after long struggling to maintain its ascendancy over the judgment, has finally yielded, but after yielding can still apprehend and compare correctly the relations of other things. Thus it is rare, even in the insane, to have hallucinations of more than two senses simultaneously, and in the department to which I am addressing these observations, the hallucination does not often entend beyond one. Remembering, also, that false perceptions may exist without insanity, we shall be the better prepared to consider them in their connection with the history of some of the greatest minds which have ever existed.

We may state, as a fundamental truth in psychology, that the original basis of an hallucination in the healthy, is a state of prolonged reverie. In great minds, like those of St. Augustin, Chrysostom, Mahomet, Descartes, Dante, and Milton, *reverie*, that intensification of all the powers of thought upon one central object, is ever the prelude to some grand creation. "The christian Fathers," says a well known author, "retired to the solitude of the desert, or the convent, to indulge in profoundest thought, whence returning they came armed in a terrible panoply of invincible books." Some had visions—halluci-

nations more properly—but all felt the heaving of the great wave of thought within them, which overpowered physical nature, and made the man live only in the world of intuitions. That inner world, which none with less introspective power than theirs could see, was the shadowy domain of sublimated thought—a realm of abstraction into which few minds can penetrate and still live unimpaired. To look upon this inner temple is to suspend our psychical connection with earth, to soar skyward, and to return with the workshop of the mind confused and revolutionized. Such was unquestionably the case with Mahomet and Swedenborg, who, fancying themselves the children of inspiration, cherished with zealous ardor those profound reveries which invariably gave rise to ecstatic hallucinations. In this state they witnessed those revelations and probably wrote those descriptions of the spiritual world and its government, which have imparted to them, in the eyes of many, the high character of apostles and prophets. This form of hallucination, which from the peculiar phenomena attending it is called ecstasy, is a species of true catalepsy—sometimes passing into somnambulism; and a very curious illustration of this is related by Diogenes Laertius, in his life of Socrates, who, he tells us, while attending the siege of Potidea remained standing an entire day, in a cataleptic state. These conditions of mind are affirmed by Plato to have often visited his master, whose exaggerations of eccentricity he relates at great length in his *Banquet* and *Apology*. It would seem from these that the famous *daimon* of Socrates is in many respects liable to be construed into a hallucination of the sense of hearing, and, since this subject is still a moot one, it can with great propriety and utility be discussed in this connection.

The demon of Socrates forms one of the most curious problems in the history of psychology. For an account of this metaphysical sphinx, we are indebted to the labors both of Plato and Xenophon—the former of whom has nobly vindicated the character of the Athenian sage in the *Apology* and *Banquet* and the latter in his Memorabilia. Modern writers, no less than ancient, have in vain exercised themselves upon this problem; the one side asserting the demon to be simply the voice of conscience—the other that it was a manifest hal-

lucination of the hearing. In the *Alcibiades* of Plato, Socrates thus describes his familiar spirit: "Celestial grace has bestowed upon me a wondrous gift, ever since my youth. It is that of a voice, which when it makes itself heard restrains me from acting, and never urges me forward. If a friend communicates any plan to me, and the voice at the same time makes itself heard, it is a sign of the disapprobation of such plan."

We also find that one of the articles of accusation against him was that he introduced new divinities at Athens, under the name of *daimons*.

Although at first sight it must be admitted that our prejudices, when investigating the mental health of the greatest philosopher of antiquity, are opposed to the recognition of any trace of infirmity, and in favor of an internal voice of conscience, such as exists in every morally responsible being—still, we must bear in mind that we are not thereby seeking to prove Socrates insane, but simply endeavoring to establish a certain fact with reference to his mind; that is, its tendency to be visited by hallucinations. To suppose that he was the only Greek whose conscience ever spoke to him, is an absurdity not to be tolerated in any psychical inquiry. There never was an honest man in any age who did not owe all of that character to conscience. It is plain that Socrates found in such friends as Crito, Chaerephon, Cebes, Plato and Xenophon, as pure consciences as the world then contained. To allege that he alone of all these virtuous patriots heard her divine voice, is to argue that conscience was a gift specially restricted to him; a form of proposition at once psychically incorrect, not to say impugning the justice of the Creator. What then could have been this demoniac voice, this something half human, half-divine, which arrested him when about to act, *without reference to the quality of the action*, and only with reference to the probability of success, of good or bad fortune? Is conscience as narrow and speculative as this? Does she act as a mental broker or factor, advising us when to buy and when to sell, when to undertake an enterprize and when not to? The absurdity of the idea is its best refutation, and we must accordingly turn to the domain of mental pathology in order to find a solution of our problem.

Given, a man of unaccountable oddity from youth;—wearing the same garment the year round; walking barefoot in winter and summer, dancing wildly at times, and with sudden leaps; carrying his head in a strange way; living in the most eccentric fashion; having no occupation but that of preaching and sermonizing in public places, at street corners, and even in the shops of artizans; pursuing every one with his questions, sparing none with his irony, and behaving in such an incomprehensible manner that Zeno the Epicurean called him the Athenian buffoon. What, if you remove the name of *Socrates* from this portrait, would you say of the liability of such a mind to have hallucinations? What would you not rather say of the probability of a false perception in such a man, if he daily told you that a certain demoniac voice was, at short intervals, warning not only him, but through him his friends, of the evil about to befall them? Is this conscience, or is it hallucination? And yet this was the father of ancient philosophy—the incomparable sage, whose death stamped his character with the highest attributes of moral perfection; the man who first raised the standard of philosophical rebellion against the absurdities of polytheism, and the vices of a corrupt society. It was not unbecoming praise in Cicero to exclaim, in that glorious imagery so peculiarly his own, that "Socrates was the first man who called down philosophy from heaven—who introduced it into cities and private dwellings, and compelled mankind to instruct themselves concerning life, manners, good and evil actions."

Philosophy, then, does not protect us against the access of mental disorders. Indeed, they are too often the price paid for that high intellection which the ignorant and the unlearned envy and carp at.

The greatest physician and natural philosopher of his time, Jerome Cardan, was visited by hallucinations, but from the symptoms attending them which he has described, it is easy to perceive that they were due to great disturbances of the circulation, both in the heart and brain. And Pascal, whose genius in mathematics was second only to that of Newton, when he had greatly injured his health by fastings, vigils, and bodily macerations, was visited so constantly by hallucinations that he actually fell into the superstition of wearing an *amulet*

against these demoniac visitations. Nevertheless, while subject to these intellectual disorders he wrote those admirable "Provincial Letters," which first shook the foundations of Jesuitism, and those "Moral Thoughts," which have afforded texts for many an overpowering homily, both in and out of the pulpit. That Pascal was partially deranged, none who have read his life will doubt. That it was not a disorder originally within his control, but aggravated by a wilful perversity of diet—a smothering of nature in her period of development, and an intentional changing of her outward and sympathetic tendencies into a forced introspection and introversion of her emotions, I, for one, entertain no doubt. It is always to be regretted whenever a great mind deliberately undertakes to destroy itself, by perverting or disobeying the laws of its own being. But I am not aware that we are required, either morally or physically, to sympathize with those whose superior intelligence arms them with a self-protective power not possessed by the ignorant. Both Socrates and Pascal by the asceticism of their lives invited mental disorders, and the difference between the two was due simply to the superior physical character of the Athenian, who, with all his homileties on the *kakon* and the *agathon*, still went abroad and mingled socially with his friends and the world. Pascal, on the contrary, had no physical manhood—nothing of that element of animal spirits which unites man to man in the bonds of friendship. Affection is not a mental process; if it were, we should form few if any attachments. The infant would not cling to its mother, the parent would not sacrifice life for its offspring; the dog would not starve himself upon his master's grave, if such conditions of self-devotion depended solely upon the *intellectual* sympathy of two creatures. So Pascal, abandoning his friends, living in seclusion, inwardly torturing his mind with contemplations only of human depravity, and never refreshing himself with the sight of human virtues at the fountain of friendship and social communion, became covered with the mould and mildew of a blighted nature, voluntarily sinking himself into the realm of melancholy, irritability, and partial lunacy.

Any powerful impressions long acting upon the common centre of

intellection, and thereby producing reveries, may give rise to hallucinations. Some time is undoubtedly required for this effect to manifest itself, because the mind when fatigued naturally relinquishes its hold of any subject which has exclusively occupied its attention. In doing this it does not dismiss, however, the subject as an entirety; it puts aside only the examination of its undiscovered and undetermined relations. What is already thoroughly acquired is absolutely retained, and may re-assert itself at times independently of volition. We are then said to have a "*fixed idea*," a predominant idea, and when it becomes overpoweringly strong, we do not hesitate to call it monomania.

When in connection with the mind, moreover, the passions or moral affections are greatly enlisted, the hallucinative process goes on with great rapidity. It would seem that the sanitary guardianship of the mind over the body and the body over the mind is entirely suspended, and acts of most manifest self-injury are performed without apparent concern as to their ultimate results. Love,—hate,—remorse,—despair,—may all in turn give rise to "spectral imaginings." In the "Comedy of Errors" we have an example of a poor, hen-pecked husband, who, from excess of little griefs, bickerings, upbraidings, and rebukes, which no suit for divorce could rid him from, finally turns mad:—

> "And thereof came it that the man was mad:
> The venom clamors of a jealous woman,
> Poison more deadly than a mad dog's tooth.
> It seems, his sleeps were hindered by thy railing:
> And therefore comes it, that his head is light.
> Thou sayest, his meat was sauced by thy upbraidings:
> Unquiet meals make ill digestions,
> Thereof the raging fire of fever bred;
> And what's a fever but a fit of madness?
> Thou sayest, his sports were hindered by thy brawls:
> Sweet recreation barred, what doth ensue
> But moody and dull melancholy,
> Kinsman to grim and comfortless despair,
> And at her heels, a huge infectious troop
> Of pale distemperatures, and foes to life?
> In food, in sport, and life preserving rest

To be disturbed, would mad or man, or beast:
The consequence is then, thy jealous fits
Have scared thy husband from the use of wits."

It is probable that, had not poor Mr. Caudle, the victim of so many "curtain lectures," enjoyed the rare and recuperative tonic of *sleep*, he also, with Antipholus of Ephesus, would have been crazed.

But the most gorgeous illustrations of hallucination with which either the ancient or modern dramatists abound, are those arising from the operations of *remorse*. Here the genius of Sophocles, Racine and Shakspeare have poured out all the wealth of their abounding store-houses, and we stand appalled in the presence of that ideal Orestes or Macbeth who, goaded by the stings of conscience, and pursued by the pale images of their victims, are being torn to pieces by the conflict of reason with emotion. The storm of passion in Macbeth, which kept his mind upon the rack between the prophecy of the weird sisters, and his desire to accomplish it through the instrumentality of his own hand, is one of the "most awful creations of the poetic mind." The ambitious prince, his soul kindled with the thirst of power which the crown of Scotland is to afford him, pauses between inclination and reflection. He wants to act on impulses, but conscience as quickly smothers the utterances of this turbulent voice. He hesitates, he reasons—until the tauntings of his wife goad his pride to madness. All his thoughts and feelings, turning with ten-fold fury upon themselves, overthrow the guiding reason, and he sees before him the fell instrument which is to accomplish his desire. The dagger-scene is as fine an illustration of a simple hallucination as can any where be found. It is true in all the essentials of a psychological portrait, and shows how the impression upon his senses, although corresponding with the dread purpose of his mind, still fails to satisfy his judgment. Reason finally triumphs; he rejects the hallucination as the creature of the heat-oppressed brain, and ascribes it to its true source—the "bloody business" which enslaves his mind.

"Is this a dagger which I see before me,
The handle toward my hand? come, let me clutch thee:
I have thee not, and yet I see thee still.
Art thou not, fatal vision, sensible

To feeling, as to sight? Or art thou but
A dagger of the mind? a false creation
Proceeding from the heat-oppressed brain?
I see thee yet, in form as palpable
As this which now I draw.
Thou marshall'st me the way that I was going;
And such an instrument I was to use.
Mine eyes are made the fools o' the other senses,
Or else worth all the rest; I see thee still;
And on thy blade, and dudgeon, gouts of blood,
Which was not so before.—There's no such thing.
It is the bloody business which informs
Thus to mine eyes."

Had the reason not thus asserted its supremacy, and enabled Macbeth to understand the true relation of the hallucination to himself—he could not at law have been deemed otherwise than *insane*, which, although but partial, would still have rendered him criminally irresponsible for his deed of blood. But when, by a violent effort of the will, the cogitative faculty pierced through the flimsy veil of momentary delusion, he correctly refers the image to the intensity of thought bestowed upon the "bloody business," which then engrossed his mind. I entertain no doubt that we often have Macbeths before our criminal courts, who, could it be known, had by dint of imagining themselves murderers in gratification of fits of brutal revenge, produced a kindred state of hallucination in their own minds, so that when the bloody deed *was* done by them, they hardly paused to ask reason whether she might not have resisted successfully the blind impulses of passion.

Those moral lunatics who are beset by voices apparently emanating from Heaven, and commanding them to kill, are, we must believe, in the condition of Macbeth. For it is impossible to perform an intelligent action without previously conceiving the elements which enter into its execution. The mind does indeed act with such rapidity, that we are not always aware of the distinctive processes through which it passes in arriving at a conclusion. Hence we often do think mechanically as it were. But whenever we deliberate upon an act, then we may be said to *synthetize* its elements, by assigning to each its appropriate place. When the voice,

either of depravity or of disease, commands us to kill, and our minds are filled with the imperative of this necessity, we at once have a conception of the whole act, including some instrument by whose means it is to be accomplished; and if any particular one, like the dagger worn by Macbeth, be at hand, it presents itself accordingly to the mind's eye as the one predominant element in the delusional impression.

But as another evidence of Macbeth's sanity we have those striking evidences of remorse, which reveal how deeply the foundations of his nature are shaken. Remorse is not common to the insane. Doing what they deem to be absolutely right, good and proper, what should give rise to such an emotion in them? But Macbeth fully appreciated the enormity of his offence, even before committing it, and afterwards prophesied truly that remorse would murder slumber, and make the murderer ever after "lack the season of all natures, sleep." Hence his bitter exclamation :—

> "Methought I heard a voice cry, 'Sleep no more!
> Macbeth doth murder sleep, the innocent sleep.'"

And again, in answer to his wife's interrogatory, he repeats, more emphatically :—

> "Still it cried, 'Sleep no more!' to all the house:
> 'Glamis hath murdered sleep: and therefore Cawdor
> Shall sleep no more, Macbeth shall sleep no more!'"

There was no hallucination in this. It was the natural chiding of an outraged conscience already plying him with the scorpion's lash of remorse. When this blossom of bitterness had sufficiently rankled in his bosom—when he had pondered, in all its depth and depravity, his dark offence—then we find him assailed by dire hallucinations, which his reason can scarce dispel. The vision of Banquo's ghost now rises before him, and even occupies his seat. It nods and shakes its gory locks at the usurper, and so impresses him that, in the midst of the royal banquet, he cries out deprecatingly :—

> "Thou canst not say I did it: never shake
> Thy gory locks at me!"

His wife thereupon upbraids him with cowardice, in these taunting words :—

"O proper stuff!
This is the very painting of your fear:
This is the air-drawn dagger; which, you said,
Led you to Duncan!"

No sooner does she cease speaking and enchaining his attention, than the hallucination returns, and Macbeth exclaims anew :—

"Prythee, see there! behold! look! lo! how say you?
Why, what care I? If thou canst nod, speak too.
If charnel-houses and our graves must send
Those that we bury, back, our monuments
Shall be the maws of kites!"

That all this occurred while reason was still not dethroned, is shown by the fact of his telling his friends of his strange infirmity, which is nothing to those who knew him, and when the vision re-appears he so fully realizes its ideal character as to dismiss it with an expression descriptive of its emptiness :—

"Avaunt! and quit my sight! Let the earth hide thee!
Thy bones are marrowless, thy blood is cold;
Thou hast no speculation in those eyes
Which thou dost glare with."
* * "Hence, horrible shadow!"

In all that has been said upon the subject of hallucinations, I have confined myself solely to an examination of their various forms when patent. I have spoken of the strange juxtapositions of reason with unreason in minds ordinarily ranking among the foremost of earth. And, did time permit me, I might have farther extended our excursus into this domain of mystery, by examining some of those curious, epidemic, religious hallucinations, which swept over Europe during the intellectual crepusculum of the Middle Ages. It must suffice now to suggest only a few prominent names, by way of introducing you to a better acquaintance with our present subject, through the pages of illustrative history. To such characters, then, as Paracelsus, Pascal, Luther, Mahomet, Swedenborg, Cardan and Cellini, I must refer you for more specific details of the protean forms of hallucination.

We have spoken of hallucinations arising from strong emotions

operating upon the centres of thought; of the influences of passion in confusing not only the judgment, but even the intelligence, and through it the senses. These are obvious causes, whose operation may be daily witnessed. None, therefore, will dispute their efficiency in producing the effects I have described. But I should overlook a very important department in the world of causation, were I to omit to notice those preliminary and preparatory conditions of mind, in which, without the occurrence of passion, the intellect may yet be considered as bordering upon disturbance.

I wish now to speak of a condition of mind, often predisposing to hallucinations, of which the authorities make no mention, although it is very common, and sometimes even dangerous in its character. It is an exaltation of, or exaggeration in, the rapidity of mental processes, due to the influence of persistent tension upon the brain. As you will naturally infer, it is the unwelcome attendant upon all active minds when overworked. I shall make no separate allusion, at this time, to the probable influences of narcotics in assisting to produce, or to exaggerate when present, this state of the intellect. As I am making a simple, psychological inquiry into a form of disorder, I shall confine myself to the essential causes producing it, and shall not venture upon any physiological disquisition into the remote and correlated sources of its origin. We can all agree upon the fact—whatever we may think of its causes—of the existence of a species of mental disturbance, born primarily of fatigue, exhaustion, or prostration; and which, with your permission, and for want of any other name, I shall call a state of *mental hyperæsthesia*. This is that state of mind in which one finds himself whose mental faculties have been strained to their utmost tension for a great length of time. The result of long and unabated fixedness of attention upon any one train of thought, is speedily to exhaust the mind; and just in proportion to the degree of volitional effort expended, will there ensue rapidity of exhaustion. The mind at such a time, although greatly fatigued, is not disposed to quiescence, but continues to oscillate under the reflex influence of its original stimulus.

This, of itself, is not a condition of ill-health, if it can be speedily

removed. So long as the strain does not exceed the recuperative powers of the organ thus overtasked, the shock is not immediately dangerous. But we must remember that this unnatural stimulation of a function exhausts the tone of the organ performing it, in advance of the effects of age. So that, with the mind as with the body, we can preserve it in vigor up to a very late period of life, if we will only use it as not abusing it. And I may state, in passing, a curious illustration of this truth in the fact that, at this time, the statesmanship of England is in the hands of men over seventy years of age; while in this country no man is deemed an available candidate for either judicial or political office, who has passed the scriptural limit of human longevity. Now a state of mental hyperæsthesia clearly borders upon abuse of the intellectual powers; nor can we wonder, therefore, at the train of melancholy effects to which it gives rise.

In this condition of things the brain is inordinately active; its blood-vessels are greatly dilated, its whole substance consequently enlarged. It presses in all directions upon the skull, which seems hardly of a size to contain it; and when this cerebral plethora is continued for weeks and months, who can marvel that men in the very maturity of age, and apparently strong enough to work over their desks for nine hours a day, should suddenly drop paralyzed—become victims to hallucination and insanity, or, worse still, fall into apoplexies. It is not asserting too much to say, that if our time-pieces were kept wound up to a similar pitch of tension by constantly turning the key, their main-springs, although made of steel, would not last a month! Yet this is the mental status of many professional men, particularly in large cities, where the unremitting pressure of business, and the fever of competition, stimulate them to unnatural efforts. Persons often overwork their minds unconsciously, because, through the compensating influences of nature, the external effects of the injury are for a while concealed, and not until some unmistakable evidence looms up across the intellectual horizon is the offender made aware of his wrong-doing.

The majority of professional men toil far into the small hours of

night, and then retire—to sleep? scarcely any, if at all; but only to think over and over again the duties of the morrow, until a hazy forgetfulness, not deserving the name of slumber, steals over the still occupied brain, and leaves it to finish in dreams the disconnected fragments of daily business. Need we ask what is the consequence of this mode of life when protracted? Every thing shows us that Nature's laws are never violated with impunity, and slow-footed justice, halting and lame though she may be, rarely fails to overtake the retreating criminal. In those individuals who habitually overtask the brain, we shall find manifestations of that form of hallucination which is the offspring of intensified and protracted thought. It is the true *hallucinatio studiosa*, and the period at which it develops itself will depend upon certain physical causes, not necessary to be mentioned here. Let it suffice to say, that these hallucinations are generally preceded by inability to sleep *soundly*, and this tendency to insomnolence once established, readily passes into that of *coma vigilans*, a state productive of exquisite irritability. When the brain is long robbed of sleep, it loses both the knowledge of, and the ability to, sleep; so that it requires to be re-educated, as it were, into this aptitude. During this condition of vigil it reacts upon the stomach, and this again upon the brain, so that we now have two foci whence nervous irritability can be radiated and interchanged. The famous Lawrence Sterne was once in this condition for several months, and Martin Luther, as the result of his protracted mental labors, was often visited by a hallucination that the Prince of Darkness stood before him, and on one occasion went so far in believing it as to throw his inkstand at him. General Rapp tells us that once, desiring to speak with the Emperor Napoleon, he entered his cabinet unannounced. He found him in so deep a reverie that his entrance was unperceived until he intentionally made a noise. Napoleon then recovered, and pointing to the ceiling said: "Look up there! Do you not see it? It is my star! It is beaming before you. It has never deserted me! I see it on every great occasion." Dr. Johnson, too, whose mighty intellect could endure a superhuman amount of labor, was the victim nevertheless of hallucination, and one of the most superstitious

men of his time. Rare Ben Johnson was also similarly visited, and Andral, the great anatomist, was pursued for a long time by the image of a child, which he had most critically dissected. Leuret, the philosopher, himself a psychologist, was greatly annoyed by visions which he could not rid himself of. And I have several instances noted among my own observations of similar facts. A friend of mine, who is the President of a bank, and a shrewd financier and economist, is exceedingly annoyed by the presence of a bottle of sarsaparilla, which is always spouting its contents before his eyes. The moment he fixes his attention closely upon any object the bottle disappears, but on releasing the mind from this contemplation the bottle returns. Yet none of these men whom I have mentioned were insane, none would have been disqualified at law either civilly or criminally. On the contrary, every one would pronounce them blessed with strong reason. Theirs were cases of mental dyspepsia. I am inclined to think that, in our country, the very laws of business, of society, of education—in a word, the genius of our institutions—favors, and, I may say, forces us into, a preternatural activity of mind. As slowness and deliberation of action are regarded as marks of mental incapacity, so the premium and the prize are assigned to the opposite extreme, and the man in self-defence is obliged to be "fast."

Moral influences—modes of living—pushing and crowding the education of the mind into such limited periods of time as do not admit of development proportionate to the ascending scale of duties imposed upon it—these are the causes which produce in America an universal precocity of mind. In the educational department, some improvements are, we are happy to say it, beginning to redeem us from the charge of gross physiological ignorance, and the alternation of bodily exercises with mental tasks, promises to protect the immature minds of school boys from the ostentatious stretchings of pedagogues and ambitious fathers. As the health of manhood depends in a great measure upon the health of childhood, so the vigor of mind with which the young man begins life will depend upon the character of labor imposed upon it during early youth. Up to this time, then, we are certainly masters of our mental occupations, their duration and their quality.

It is far different, however, with men in professional life. Once entered within those lists, and there is no intermission consistent with reputation and a due discharge of duties. From this battle-ground there is no honorable escape, save through death. The professional man, like the knights of Branksome Hall, must wear his harness by night as well as by day. Ready must he be at any moment to obey a summons, whatever its character, or the complexity of interests it involves. The tide of traffic, of litigation, of statesmanship—all the rivers of industry in our country, flow at such a rapid rate, that, once embarked in his own little shallop, each must ply his oars unceasingly, if he would ascend the stream to its fountain-head. What weary hours of toil—what vigils—what brain-throbbings await us in the passage! What but a brave heart, an earnest purpose, a consciousness of rectitude, can bear us through the long reaches of patient abiding, or of protracted labor.

But God, wiser than man, has arranged the economy of nature with particular reference to our all necessities. He has given us the day to toil in, and the night for rest. If you will but observe it, it is incredible how much labor—thorough, progressive work—how much study can be accomplished, how much writing can be done, what varieties of intellectual tasks can be successfully achieved, day after day, and month after month, by working the brain only during the day, and resting sacredly at night from all labors. You may say that man is a creature of habit, bound by no special hours, either of rest or labor, and that he can accustom himself to anything; but in this you err. It may not be always easy to explain the connection between physical and mental phenomena; still less can we explain the influence of certain hours of the day upon our bodies, as contrasted with other hours. The problem is of difficult solution. I may say this much, however, that there never was a recorded case of extreme longevity in a man who was not at the same time a sound sleeper and an early riser. And these two conditions presuppose early hours of retiring. As a class, the insane cannot be said to sleep—they merely slumber, and one of the most painful objects to behold is he whom neither "poppy nor mandragora, nor all the

drowsy syrups in the world can medicine to sleep." That man is either insane, or on the point of becoming so, and he will soon tell you of "*chimeras dire*"—hallucinations, in a word, afflicting him through eye or ear. Therefore, gentlemen, since from so many incontrovertible circumstances we are nationally prone to undue activity of mind, and since, as professional men, we are additionally exposed to the dangers attending upon over-tasked intellects, let us put the warder of repose between us and that state of mental tension which so constantly threatens our intellectual health. Let us, then, cultivate sleep—not the sleep of sloth and inertia, not the listless reverie of ennui, not the *keff* of the Arab, or the noon-day siesta of the tropics, but that other and nobler Somnus, whose temple opening only at nightfall, invites the weary, day-worn traveller to rest. Here, with the silent stars for his everlasting ministers, he sits enthroned in halls of sweet obliviousness, waiting, with the lavish and impartial affection of a parent, to crown us all with the poppy wreath of sleep.

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