2. That the "scientific purposes" be, in the first place, the investigation and exposition of such branches of science connected with medicine and surgery as the two Colleges may from time to time determine.

The College has subsequently adopted the report.

Now, I submit with the utmost respect, but with the greatest earnestness, to those here assembled, that a course of physiological physics, to be delivered in the new college of science, would be a real boon to all students of medicine, whether they had succeeded in obtaining their diploma or not. The human body is a mass or congeries of separate machines, susceptible of mechanical explanation; but, setting aside the heart and lungs, already named, how many students have their attention specially drawn to Donders's and Landolt's optical researches on the eye and eyesight, or to Helmholtz's account of the mechanism of the ear? Such a course, moreover, would in no way clash with other courses given elsewhere on different branches of the same great subject, and it would eminently fulfil the exact purpose, even to the very words, of the great man whom we are to-day met to commemorate.

AN ADDRESS
ON
THE PSYCHOLOGY OF JOKING.

Delivered at the Opening of the Medical Society of London, October, 1887.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P., LL.D., F.R.S.,
Physician to the Hospital for Epilepsy and Paralysis; and Physician to the London Hospital.

After some preliminary remarks, Dr. Hughlings Jackson said: I think punning does not receive enough attention. In spite of Dr. Johnson's well-known dictum, we should not despise punning. Sydney Smith says that it is the foundation of all wit. Supposing three degrees of evolution, I submit that (1) punning is the least evolved system of joking, that (2) wit is evolved out of punning, and that (3) humour is evolved out of wit. Everybody has heard of Sydney Smith's remark—that it requires a surgical operation to get a joke into the head of a Scotchman. But he spoke without distinguishing. The Scotch have a great appreciation of those highly evolved jocosities displaying the humorous, although, no doubt, a scorn of simple, lowly evolved jocosities, such as plays on words. It is difficult to form a conception of a Scotch Punster; yet I have heard an Aberdonian, a physician of world-wide reputation, make a pun.

Punning is well worthy of the Psychologist's attention. I seriously mean that the analysis of puns is a simple way of beginning the methodical analysis of the process of normal and abnormal Mentation. This, I think, I can easily show.

Vision is stereoscopic; in a sense it is slightly diplopic, for there are two dissimilar images, although there seems to be but one external object, as we call it. To borrow the ophthalmological term, we can say that Mentation is "stereoscopic;" always subject-object, although we often speak of it as single ("states of consciousness," etc.). Just as there is visual diplopia so there is "mental diplopia," or, as it is commonly called, "double consciousness."

Now I come back to punning. We all have "mental diplopia" when hearing the answer to a riddle which depends on a pun—"When is a little girl not a little girl?" Answer: "When she is a little horse (hoarse)" The feeble amusement we have in the slightly morbid mental state thus induced is from the incongruous elements of a "mental diplopia." The word "hoarse" rouses in us the idea of a little girl who has taken cold, and the same sounding word "horse" rouses in us the idea of a well-known quadruped at the same time. We have the sensation of complete resemblance with the sense of vast difference. Here is, I submit, a caricature of the normal process of all mentation. The process of all thought is "stereoscopic" or "diplopic," being the tracing of relations of resemblance and difference.

To call punning a slightly morbid mental state may be taken as a small joke. But I do not think it very extravagant to describe it so; it certainly is not if it be a caricature of normal mentation. A miser has been defined as an amateur pauper; the habitual drunkard is certainly an amateur lunatic. And in the same style of speaking we may say that—well, we will say that punning is playing at being foolish; it is only morbid in that slender sense.

The word "play" carries us on in a slightly different direction. Jocosities of all degrees of evolution (1) puns; (2) witticisms; and (3) humorous statements are the "play of mind,"—play in the sense in which the word has been used in the remark that the "æsthetic sentiments originate from the play impulse." A further definition of play, as thus used, is given in the following quotation from Spencer:—"The activities we call play are united with æsthetic activities, by the trait that neither subserve, in any direct way, the processes conducive to life" (*Prin. Psych.*, vol. ii, p. 627). There would be a great intellectual advance—due, I presume, to Internal Evolution—when man began to value things for their beauty apart from their use: one sign of his having "got above" his mere animal self. For it showed that, over and above mind required for mere animal existence, he had some surplus mind for greater ends of life. So I contend that our race owes some respect to the first Punster. For the dawn of a sense of the merely ridiculous, as in punning and simplest jokes, shows the same thing as the dawn of æsthetic feeling—surplus mind, something over and above that required for getting food and for mere animal indulgence. All the more so if punning be that out of which wit and humour are evolved.

It is not a good sign if a man be deficient in humour, unless he have compensation, as Wordsworth had, in a sense of the sublime, or in great artistic feeling, or in metaphysical subtlety. The man who has no sense of humour, who takes things to be literally as distinct as they superficially appear, does not see fundamental similarities in the midst of great superficial differences, overlooks the transitions between great contrasts. I do not mean because he has no sense of humour, but because he has not the surplus intellect which sense of humour implies. Humour, being the "play" of mind, is tracing deep, fanciful resemblances in things known to be very different. This is "playing" at generalisation, and is only a caricature of the same kind of process which made Goethe declare that a skull is a modified part of a vertebral column.

Now I am about—not really digressing from what I have just said—to say something which sounds very paradoxical: that persons who are deficient in appreciation of jocosities in their degrees of evolution are, in corresponding degrees, deficiently realistic in their scientific conceptions. One would infer this *a priori*. Every child knows that a man born blind has no idea of light, but the educated adult knows, too, that the congenitally blind have no notion of darkness. And I think that observation confirms what *a priori* seems likely—that *pari passu* with the evolution of the sentiment of jocosity (playing at unreality) is the evolution of power of realistic scientific conception—from sense of the merely ridiculous with parallel realistic conception of simple things up to sense of humour, with parallel realistic conception of complex things. But we must be on our guard not to take commonplace realism about simple things to be realism when applied to very complex things. It seems at first glance more realistic to suppose that sourness is inherent in vinegar than that it is always a sensation in some percipient. But that the former hypothesis is very unrealistic is easily seen when we put such crude metaphysics in other words; the doctrine then is that part of the taster's own mind is outside himself. It is possible for the same person to be truly realistic in simple things, and to be intensely unrealistic in complex things. Thus, the really practical man, who may tell us that he despises metaphysics, may be crudely metaphysical when he deals with complex things—"explaining," for example, that a man comatose does not move because he has lost consciousness. Surely the truly realistic conception is that the comatose patient does not move any of his limbs from some physical disability, for essentially the same reason that a hemiplegic man does not move his arm and leg.

I now go back to my small joke that punning is a slightly morbid mental state, a "mental diplopia," a caricature of the normal "diplopia" of healthy mentation. From this point I make the assertion that the "physiological insanity" of dreaming is diplopic—a caricature of that of waking mentation. A physician read in the day of the strained relations of European States; in his dream at night he is called in consultation by Bismarck, and advises a course of the iodide of potassium (directions for the application of the remedy were not given). Clearly, there are here two very dissimilar mental states "pretending" to be stereoscopic; manifestly a seeming fusion of ideas of prescribing for a patient with ideas of the hostile attitude of European States. I hope some time to be able to show that such diplopia has the same kind of mechanism as that of the pun—that the two elaborate dissimilar states are held together by two same, or similar, simple mental states. I go on to remark that in some people there are beliefs as incongruously diplopic as some states in dreams; diplopic in that way to other people, at any rate.

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1. Killing a rabid dog to prevent people already bitten by it going mad. 2. Imagining it to be possible to study what are called "diseases of the mind" methodically, without distinguishing between the physical and the psychical. 3. A cleanly mother, from maternal solicitude, refraining from washing the top of her baby's head, lest it should come to have "water on the brain." 4. Imagining it to be possible to investigate complex subjects without the use of hypotheses; for instance, that Harvey could have made observations and experiments to *prove* the circulation of the blood, without *supposing* beforehand that it did circulate. 5. Anointing a blade with healing salve to cure a wound inflicted by the blade.

Once more I go back to punning for a new start, trying to show again by very simple cases that punning is only a caricature of, and therefore, for the psychologist, a valuable experiment on, the process of normal mentation. I take first a case, which is almost, if not quite, a pun, but one made unwittingly. What is called the inelegance of using the same word in one sentence, or in two consecutive sentences, causes mental diplopia. For even if each of the two words has the same dictionary meaning, we must bear in mind that a word loses something of that kind of meaning when forming part of a proposition, losing and taking meaning from its context. Hence, the second time the word comes, there is a faint revival of the ideas it symbolised when used the first time; along with a vivid revival of other ideas it now symbolises; there is a trivial confusion from slight mental diplopia, like that from an ill-understood pun. I now give a more striking example, one in which there is manifest diplopia without confusion.

A smell, say, of roses, I now have makes me think of a room where I passed much of my time when a child. Here clearly is "mental diplopia," and the mechanism of it is quite similar to that of the pun, making allowance for caricature in the latter. For the true process is that the smell of roses, now having, develops what we call the same smell, but really another smell, that of roses once had in the old room. The two scents, linked together, hold together two dissimilar mental states (1) present, now narrowed, surroundings, and (2) certain vague quasi-former surroundings. When the scent of hay or the caw of rooks rouses in us vague pleasurable feelings, the mechanism is of the same kind, but the process is more complex. To further insist on the fact that mentation is stereoscopic, with more or less manifest diplopia, I give an example of mentation which is exceedingly common. Whilst writing I suddenly think of York Minster. Here is mental diplopia—(1) narrowed consciousness of my present surroundings, and (2) cropping-up of consciousness of some quasi-former surroundings. Of course something, whether I can mentally seize it or not, in my present surroundings, has developed a similar something associated with York surroundings.

Recapitulating, I say that the process of all thought is double, in degrees from a stereoscopic unity of subject and object to manifest diplopia (two objective states for one subject). The process of all thought is tracing relations of resemblance and difference, from simplest perception—to say what a thing is, is to say what it resembles and differs from—up to most complex abstract reasoning. The formula of the caricature of the normal process of thought is the "pretence" of some resemblance between things vastly different—from punning, where the pretended resemblances and real differences are of a simple order, up to humour, where both are highly compound. We have the "play" of mind in three degrees of evolution, three stages of increasingly complex incongruousnesses.

If I had time I could, I think, show that this address on jokes is not itself merely one big poor joke, but that what has been said applies closely to the study of "mental symptoms" in serious diseases. I should begin the new stage of the inquiry with the quasi-healthy feeling of "reminiscence," clearly an element in a mental diplopia. For my task would be an endeavour to show that all morbid mental states are departures from normal mental states in particular ways—that, for example, the process of mentation in the maniac is but a caricature of that in healthy people. Thus the reminiscence, although it is almost pedantic to call it morbid, is really a link between perfectly normal and decidedly abnormal mentation. For reminiscence occurs in slight attacks of a certain variety of epilepsy, as do other voluminous mental states ("intellectual auræ"), I call them all "dreamy states." These cases I should take next. There is clearly in them morbid mental diplopia, and yet this is traceably only a gross caricature of normal mental diplopia, being linked on to it by the reminiscence occurring in people we call healthy. And I think it could be shown that they have the same kind of mechanism as puns have. Next, taking these miniature and transient cases of insanity, and other cases commonly called insanity, I should try to show that the comparison of mentation with vision is of direct value.

In the symptomatology of a patient who has paralysis of an ocular muscle, there are many elements. There is morbid visual diplopia; in insanity there is morbid mental diplopia. The ophthalmologists' "true" and "false" images have their analogues in the "true" and "false" mental states in the cases of epilepsy mentioned. In the former, when the divergence of the eyes is slight, there is more visual confusion; in the latter, when the dissolution of the highest centres is shallow, there is more mental confusion. In the former, when the divergence is great, diplopia ceases (the patient, the ophthalmologist says, "neglects" the false image); in cases of epilepsy, upon deeper dissolution than that with which there is the "dreamy state," the actions are considerably coherent. The "erroneous projections" of the former have their clear analogues in the hallucinations of many cases of insanity.

Believing that all diseases are to be looked on as flaws in different parts of one Evolutionary system, I urge the "Comparative Study of Diseases of the Nervous System." I submit that, recognising the enormous difference between insanity and ocular paralysis, a profitable comparison and contrast may, nevertheless, be made, which will further a better knowledge of both. I do not mean simply that ocular paralysis may be taken as an illustration, to simplify explanation of a case of insanity, but also that, both being examples of Dissolution, the very same principles are displayed in each.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FIFTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

A CASE OF TROPICAL ABSCESS OF THE LIVER, WITH REMARKS ON THE STITCHING OF TWO PLEURAL SURFACES TOGETHER.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Dublin, August, 1887.

By RICKMAN J. GODLEE, M.S., F.R.C.S.

In the middle of June of this year I was asked by my colleague, Dr. Roberts, to see a man 24 years of age, who was the subject of abscess of the liver. It was an ordinary tropical abscess, developed whilst the patient was a soldier in India, and had followed a very free use of alcohol (in which he had indulged from the age of 15); he had had a severe attack of enteric fever and hepatic congestion on more than one occasion. In the early part of March, 1885, the abscess burst into a bronchus while the patient was actually engaged in drinking a pint of beer; and in February, 1886, after being treated in various military hospitals, he was discharged from the army.

The expectoration of blood and pus continued uninterruptedly after the first rupture; but this did not prevent the patient from following the arduous occupation of a tramcar driver, and from continuing his very free libations of alcohol, which were only varied by more heavy drinking bouts.

He was a fine, strong, well-built man, and though on admission to University College Hospital he was exceedingly anæmic, his muscular development was good, and he was well-nourished. The liver was slightly tender, and could just be detected below the ribs, and he felt a constant, dull, aching pain in the hepatic region. In the right back there was dulness, not sharply defined, reaching one inch and a half above the angle of the scapula, and over this area the breathing was weak, vocal resonance and fremitus were abolished, and coarse clicking and moist *râles* were heard. I could discover no tenderness over the lower ribs in the axilla, as can so often be done when a liver abscess is present.

I thought it probable that the abscess had burst first into the pleura, causing a localised empyema corresponding to the area of dulness, and that it had subsequently ruptured into the lung; but this diagnosis was wrong, for the dulness was afterwards found to be due to an enlargement of the liver upwards, and the abscess had burst directly through the diaphragmatic surface of the lung. Had a correct diagnosis been made, the matter might probably have been reached, though at a great depth, at one of the two commonest spots for a liver abscess to point, namely, in the lower part of the axilla, an inch or more above the margin of the ribs, and thus below the level of the pleura. As it was, the centre of the dull area was selected for operation, and, after three unsuccessful punctures with an aspirator

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