

“do not bear out this view, for they show that the hereditary tendency is most powerful towards the same sex. The hereditary tendency is more often transmitted to the male children than to the female, while the same neurosis transmitted through the mother, is somewhat more apt to affect the female children. Both insanity and idiocy seem more frequently transmitted through the male parent than through the female.”

Much of this the author traces to the bad effects of drunkenness.

B. Danilewsky.—A method of estimating the proportions of white and grey matter in the brain. (“*Centralblatt, f. d. Med. Wissenschaften,*” No. 14, 1880).

Danilewsky’s method is founded on the Archimedean principle:—Given the specific gravities of the whole brain (p) of the grey (a) and white (b) substances, and the weight of the whole brain (P), calculate the quantity (x) of white or grey matter by the formula $x = \frac{Pb(p-a)}{p(b-a)}$

By carefully avoiding such sources of error as variations of temperature, moisture, &c., Danilewsky found that his results were satisfactorily uniform.

Thus, one set of results is given by the figures:

Human cerebrum.

Grey matter,	39·0—38·7—38·2—37·7	per cent.
White	61·0—61·3—61·8—60·3	”

He further finds that of the total 39 p.c. of grey matter, 33 p.c. is contributed by the convolutions and 6 p.c. by the basal ganglia. With these data we can calculate easily the square surface of the brain, if we ascertain the depth of the grey matter of the convolutions. Assuming this latter to be on the average 2·5 mm., Danilewsky finds 1,588 square centimetres in one brain, and 1,692 in another.

EDWARD G. GEOGHEGAN.

4. *Retrospect of Mental Philosophy (Periodical Literature.)*

Psychology No. II.

By B. F. C. COSTELLOE, B.Sc. and M.A., Glasgow, B.A., Oxon.

Mind: A Quarterly Review of Psychology, Nos. xviii. and xix.
(April and July, 1880.)

Our English philosophical quarterly amply maintains its interest, although the number of papers devoted to our more special subject is not great. The April number contains a sketch by Prof. Croom Robertson, the Editor, of the contents of Prof. Goltz’s third Memoir on brain-localisations, in opposition to the recent work of Hitzig and Ferrier. The main point of Prof. Goltz’s criticism, which will not be

unknown to most of our readers, is the insistence upon a distinction between *permanent* and *temporary* effects of a destruction of portions of the cerebrum. He has found, after most extensive washing-out of the grey matter of the cortex, that neither total loss of touch, sight, smell, &c., nor permanent paralysis of any muscle followed. And his conclusion from these and various corroborating experiments is, that any part of the cortex seems to be a possible organ of voluntary motions, and that, if all its parts are not perfectly equivalent and adaptable *inter se*, they are at least so far able to take up the functions of any parts destroyed as to negative the theory of circumscribed cortical centres. The whole criticism, of course, is only a stage in the development of the theory of brain functions, upon which no one imagines that the last word has by any means been yet said.

Of a bearing more psychological is the paper by Mr. Grant Allen, on "Pain and Death." In a word, it is like so much else of the author's work—an ingenious, unsatisfactory, and suggestive attempt to apply the dogmas of Herbert Spencer to questions of æsthetics. Mr. Grant Allen is a devout believer in this new creed. He receives its articles with implicit and faithful orthodoxy; but, at the same time, like most ingenious disciples, he pleases himself by expanding and varying the details. This paper is a good example of the philosophical vices of the system he upholds. Pain is a difficult subject, if you treat it in any but a superficial manner. For it seems a thing so purely organic that, as the writer here remarks, it ought to be "perfectly explicable upon merely mechanical grounds." Yet, pleasure and pain are inconceivable apart from a conscious subject. "The whole set of movements could be mentally pictured as similarly occurring in a perfectly *insentient* automaton." What and why the difference? "Physiologists might have dissected for centuries, and they would never have known anything of pleasure or pain if they had not been able to *feel* it. Where, then, did the surplus attribute of "consciousness," of *feeling* in the true sense, come from? If we are simply products of evolution, how did this begin? Mr. Grant Allen is not unaware of the difficulty. He premises that he feels obliged to believe in an unconscious world, when sentience had not yet developed. How such feelings as pleasures and pains, which as he opines, must have been the beginnings of conscious life—how such items of consciousness could ever have originated out of the unconscious, he cannot divine. In truth, the transformation is distinctly inconceivable, and may be fairly called impossible. There is a gap here which Mr. Herbert Spencer cannot bridge.

So much for the origin of pleasure and pain. Mr. Allen has, besides, as might be expected, a vast idea of their importance to our lives. Surely even the most thorough-paced Utilitarians and Hedonists will be startled by such language as this:—"All perception and all intelligence have only a meaning so far as they relate to possible pleasures and possible pains. Every increment in intelligence is

merely an increase in the number of combinations by which the organism anticipates the one positively and the other negatively, through an ever-widening distance in space and time. In fact, *pleasures and pains are the real central substance of our whole lives*, all other portions of consciousness being merely subsidiary to these fundamental and all-important primary feelings." If we live for nothing but increase of pleasures—for more and purer "pulsations," as the æsthetic followers of Mr. Pater would say—life is a poor affair, and pessimism will soon become the only ethics. However, we will not stop to argue with the theory. We are only concerned here to notice that, as a consequence of the importance which it assigns to Pleasures and Pains, the physiological and psychological bearings of these are being studied at present with exceptional care. Even in the small batch of Reviews now under notice, there are more articles on this topic than on any other.

Mr. Grant Allen's paper, which is somewhat confused in its reasoning, is, in reality, directed to show how Pain is in many cases a *survival* from a former state of life, now become useless or even disadvantageous by the advances of intelligence, which enables us to look to our self-preservation as an end in itself, apart from feelings of pain. He paints, for example, a curious picture of a wonderful animal—the result of a long evolution—which should be so completely "adapted to its environment" under all possible circumstances, that it would never act wrongly or foolishly. In that case he believes the sense of Pain would cease to exist by a sort of atrophy, since there would be nothing to excite it. Would this eminently intelligent being, we wonder, have any pain in the reflection that most of his fellow-creatures were not so happily endowed as he, and lived in anguish accordingly? Perhaps the writer would say that this was a legitimate source of pleasure. But it is to be feared that the view partially laid down in this paper is a very hasty one, and far from fitted to explain to an inquirer all the mystery of suffering.

This paper, to which we have devoted more space than it is properly entitled to, is preceded in "Mind" by another from Mr. James Sully on "The Pleasures of Visual Form"—a translation of which appears also in the May number of the "Revue Philosophique." Its object is to analyse the diverse sources of the æsthetical pleasure derived from Form, separating therein the Sensuous element, or the sense of pleasure aroused by the mere sweep of the eye and the easy muscular movements involved therein, and the Intellectual factor, the explanations of which is made to rest upon the peculiar theory of "local signs," put forth by Lotze and accepted by Helmholtz.

Of the other papers in the same number of "Mind," the first is a clever reply by Mr. Leslie Stephen, in the anti-theological interest, to Mr. Balfour's recent "Defence of Philosophic Doubt"—a work which restates the old argument that Science is so riddled with necessary antinomies and scepticisms as to make it mere dogmatism for the

scientists to decry Theology. There are two ethical papers—a criticism of Mr. Herbert Spencer's "Data of Ethics," by Prof. Sidgwick, and a criticism of Dr. Ward on "Free Will," by Mr. Shadworth Hodgson, which must be read along with Dr. Ward's own summary of his answers to Prof. Bain in a short paper among the "Notes and Discussions." The notices of "New Books," include "The Metaphysics of the School," by Thomas Harper, S.J.; "The Emotions," by James McCosh, D.D.; and Professor Sayce's "Introduction to the Science of Language"—all works of interest in their special spheres.

The July number of "Mind" opens with a striking and very noteworthy paper on "Statistics of Mental Imagery," by Francis Galton. It appears that the writer has been moved to investigate the question of how far the power of visual memory—of "seeing with the mind's eye"—is general. The results in this way are singular, though they are yet incomplete. It seems, for example, that scientific men and hard thinkers in general, seldom possess that special kind of memory. They remember the individual facts and circumstances: but they cannot recall the past scene. Painters, it appears, have sometimes a like incapacity, though they, of all men, should least suffer from it. But the interest of the paper depends chiefly on the exposition of the statistical method pursued in the investigation—a method which is here explained because it should be applicable at once to the statistical treatment of all kinds of problems which involve comparisons of mental experiences. The principle on which Mr. Galton relies is the "inter-comparison" of various series of individuals. He puts a careful list of questions to a hundred persons, chosen at random, or selected if necessary, and when he gets from them their description (usually an unexpectedly clear one) of the results of their introspection, he arranges them "in order of merit," as it were. There is, of course, always a mass of average cases, little distinguished from each other; but there are also extreme cases, and others, both in excess and defect, which connect the extremes with the average by a regular gradation. In this gradation, he chooses certain fixed points at definite relative distances from the mean point or average case on either side. These he names the Quartile, Octile, and Suboctile; and they serve as the test points of every comparison. For example, in a series of 100 men questioned as to their power of recalling a pictorial memory of the morning's breakfast table, he would first determine the mean case, and the Quartiles, Octiles, and Suboctiles of excess and defect. He would next obtain *another* series of cases (boys, for example), and classify them similarly. Then, by comparing the Quartiles and Octiles of each series, he would find a measure of comparison as to the whole. The method, it must be confessed, is at least ingenious, and students of psychology, especially those who are concerned with insanity, may speedily find useful ways in which it can be applied.

The succeeding article is a very curious one, and is worthy of more attention than it is likely to receive. It is entitled, "The Unity of the Organic Individual," by Edward Montgomery, and it contains some very interesting but very oddly-stated reflections on the question of cell-life, and on the relation of the "organic individual" to the vital units out of which, according to the theories of modern biology, it is somehow built up. Among the other papers, most of which lie outside our more special limits, we would draw attention to an amusing dialogue, in which Mr. Shadworth Hodgson gives a wonderfully clear and lively exposure of the old sophistic fallacy of Achilles and the Tortoise. Mr. Sully sends a notice of one more of the many recent excursions into the long-neglected regions of baby-psychology, and also of Professor Schneider's book on "Brute Volition," which latter may profitably be read along with Mr. Bishop's discussion of Brute Reason and the fallacies which have usually beset all past inquiries into the subject.

Revue Philosophique, Nos. 51-56 (March-August, 1880.)

The French Review contains some admirable and most suggestive writing, to which our space will hardly allow us to do full justice. In the number for March the most interesting papers are the short notes of M. Guyau on the analogy between the mind in memory and the phonograph, and of Dr. Despine on "The Somnambulism of Socrates." These are followed by an unnecessarily lengthy review of Mr. Staniland Wake's book on "The Evolution of Morality," and an appreciative notice of M. Ribot's well-known work on "Contemporary German Psychology," by Dr. Charpentier, wherein the reviewer finds occasion to complain gently of M. Ribot's too physiological conception of psychology. It cannot be too often insisted upon that the physical concomitants of Thought are not the same thing as Thought itself, and that we know very little as yet either of the extent, nature, or cause of the difference.

The leading paper in the April number is, of course, the fourth part of M. Delboeuf's admirable essay on "Sleep and Dreams," which we have noticed previously. The present section is devoted to the explanation of the reproductive and reviving power of memory—the question of how our past becomes present again. In this are involved sundry deep discussions as to organic identity and reproduction in general, leading up to Remembrance and thence to Habit, from which finally, in the number for June, M. Delboeuf proceeds to evolve his explanation of the definite nature of Dreams. To the April number M. Perez also contributes yet another of the endless studies of child-life which have so fascinated psychologists lately, and discusses the moral development of children—a very knotty, but a very fruitful subject. Ch. Richet also furnishes a brief but useful note on the part played by muscular movements and adaptations in sensation. The

leading review is of Clifford's "Lectures and Essays," by M. Ephraim, who concludes, not, we believe, unjustly, that in this, its extremest form so far, "the School of Evolution has landed itself in an idealist metaphysics."

The number for May contains the commencement—which extends to thirty pages—of a forthcoming study of Memory from a biological point of view, by the Editor. M. Ribot starts from his own psychological standpoint, and bases his inquiry from the first upon physiology. For the same reason also he follows up a preliminary consideration of the healthy memory by another inquiry (which occupies a large space in the August number) into the Pathology of Memory, especially in reference to its more *general* disorders. *Partial* affections and aberrations will be treated of in the next section. Besides Mr. Sully's translated paper on "Visual Form," the May number contains the analysis of an Italian treatise on Pain and a notice of a new popular handbook of psychology called "Physiologie de l'Esprit," by M. Paulhan—a thorough satire, if one were needed, on the modern rage for pocket science and railway-carriage philosophy.

In the number for June the interest again centres in M. Delboeuf's concluding article already mentioned. The results at which he arrives are well worth stating, but since it would be impossible to do them any justice in the space at our disposal, we are reluctantly compelled to refer our readers to the original; by which, indeed, they will lose nothing, for M. Delboeuf's style is not less masterly than his reasoning. There are analyses of a marvellous book by M. Mamiani—"La Religione dell'avvenire"—and a suggestive little work by C. Vogt on the physiology of writing. The curious in such things will also find here a collection of all the courses of philosophical lectures announced by the Italian Universities.

The July number is less interesting. Its main paper is by M. Paulhan on the subject of "Personality," which Hume opened, and which no one has since closed. M. Paulhan is clear that our notion of personality and our belief therein does not imply the existence of any entity, spirit, or force in us other than the series of phenomena which we call our experience. To say that he does not prove his point is a lenient criticism. The writer appears to us to write out of a very imperfect appreciation of a very difficult problem, and the result is as little satisfactory as it ought to be.

The number for August contains, as we have already said, the continuation of M. Ribot's able treatise upon Memory, along with two other articles which will repay perusal—that by M. Debon on our power of organic localisation, or reference of psychological sensations to special points of our organism (with relation especially to the controversy as to our perception of space and extension), and that by M. Tarde on the question of a possible measure of Desires and Beliefs, as to which he is paradoxical enough to maintain not only

that these are quantities, but that they are in the end the *only* quantities in psychology.

Philosophische Monatshefte, 1880, Vol. xvi., Heft 1, 2, 3.

The German periodical contains comparatively little that is likely to interest our readers. We may mention, however, a singular pair of papers by Gustav Knauer on the distinction between "Seele and Geist"—a distinction untranslated as yet in our psychological language. He maintains that modern writers since Leibnitz have lost sight of a distinction between that "soul" which we have in common with the animals, and that "spirit" which they have not, and which he finds not in our reasoning power, but in the moral consciousness. There is a review of a feeble book on Haeckelianism by L. Stern, and of a curious series of Hegelian lectures published by the Norwegian Professor Monrad.

Vierteljahrsschrift für Wissenschaftliche Philosophie, 1880, Vol. iv., 1, 2.

After a profound paper on Volition, entitled "Die Causalität des Ich," the Quarterly gives us the second of a series of interesting papers by Dr. F. Tönnies upon the philosophy of Hobbes, followed by an essay on the philosophical value of the mathematical analysis of Space and its relations. Our readers will be chiefly interested in the very able and friendly review of Sidgwick's recent publications on Ethics, *à propos* of his article "Ethics" in the *Encyclopædia Britannica*. It is always well to look at English thought through Continental spectacles, whenever possible. The question of the "Causalität des Ich" is continued in the second number, but there is nothing of special interest.

Journal of Speculative Philosophy, 1880, Vol. xiv., 1, 2.

The American Review, in its first number for the year, is chiefly occupied by a controversy between two Scotch Hegelians—Prof. Edward Caird and Mr. J. Hutcheson Stirling—as to the interpretation of Kant's "Deduction of the Categories." The April number contains an article, unfortunately of little value, on the "Psychology of Dreams," by Julia Gulliver, and another by W. T. Harris, containing the outlines of a "Psychology of Education." The translations from the German philosophers are, as always, well selected, but hardly as well done.