THE ORIGIN OF INSANITY.*

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Putting aside such comparatively rare causes as traumatism, sunstroke and syphilis, and speaking broadly and generally, the aetiology of insanity as commonly given may be reduced to two heads:

1. Heredity.
2. Mental, emotional or bodily strain of one kind or another.

But it is an obvious criticism that we must have insanity before it can be inherited, and that strain of every conceivable kind and degree is undergone by thousands of persons every day and even carried to the point of causing death without resulting insanity.

This being the case, it seems clear that we must revise our theory of the causation of the group of maladies in question, and I am anxious to add my mite toward a truer and more comprehensive explanation.

Some here present may perhaps pay me the compliment of remembering that ten years ago at Cincinnati I read a paper on the "Growth of the Intellect." In it I tried to show that human intelligence, starting far back in our remote ancestry from an aboriginal germ, concept or precept, and as it were sprouting therefrom (as a tree from its seed) became by a process of division and branching extending through many millenniums, the manifold and highly organized function that we know by that name at present. However well or ill I may have succeeded in my self imposed task, nothing is more certain to-day than that the intellect did come into existence in the manner indicated—that is, by a long process of gradual evolution. In the same address I pointed out that ancient literature, philology and the science of optics, all concurred to prove that our color sense

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is comparatively modern—that it probably did not exist when the Aryans, before their dispersion, still lived a pastoral horde in their original home, whether in Bactria, the Caucasus or Northern Europe. And I concluded my discourse by citing evidence that the sense of fragrance is still more modern than is the sense of color.

To-day I want to broaden what I said ten years ago into a general proposition to the following effect: The human mind, including in that term the intellect, moral nature and senses, is made up of a large number of faculties done up, as it were, in bundles. Thus the intellect is one bundle, and in it we have consciousness, self-consciousness, perception, conception, comparison, judgment, imagination, sense of humor, memory and so on. The moral nature is another bundle, and in it we have love, reverence, faith, fear, hope, hate—each one of which, and many more unnamed, could be, as you know, subdivided almost *ad infinitum* into degrees and varieties of those passions. Sight is another bundle—in it we have the sense of light and darkness, of form, of distance, of perspective, the color sense and so on. The sense of hearing another—made up of the sense of loudness, of distance, of pitch, of direction, of the musical sense and so on.

It is needless to extend the catalogue. I do not require to tell any person present (except for the sake of making my statement full and accurate) that the human mind is thus composed of groups of functions having certain definite relations one to the other, just as the fauna and flora of any given country are composed of groups of organisms having certain definite relations one to the other.

The next step in my argument, or statement, is to point out that as the human mind itself was not always in existence, but at some time or other was born and afterwards grew to what we see it to-day, so each one of these numerous faculties of which it is composed came into existence at some time or other.

And now comes the pivot fact upon which my thesis finally rests, namely, that the faculties in question are not all of the same age, but, on the contrary, some of them are very old (millions of ages), some very young (only a few thousand years), while others are of various ages between the extremes. How do we know this? Well, the length of time the race has been

possessed of any given faculty may be estimated from various indications. In cases in which the birth of the faculty belongs to comparatively recent times (as in the case of the color sense and the sense of fragrance), philology and human records (as pointed out by Geiger) may assist materially in determining the age of its appearance; but for the comparatively early appearing faculties, such as the initial intellect, self-consciousness, the sexual instinct or love of offspring, these means necessarily and obviously fail us. We fall back then upon the two following tests:

I. The age at which the faculty in question appears in the individual; and

II. The more or less universality of the faculty in the members of the race.

1. As ontogeny is nothing else but phylogeny *in petto*; that is, as the evolution of the individual is necessarily a repetition in a condensed form of the evolution of the race, simply because it cannot in the nature of things be otherwise; cannot, that is, follow any other lines—there being no other line for it to follow; it is plain that organs and functions (speaking broadly and generally) will appear in the individual in the same order in which they appeared in the race—and the one being known the other may with considerable confidence be assumed.

2. When a new faculty appears in a race it will be found at the very beginning in one individual and one only of that race. Later it will be found in a few individuals. Later in a small percentage of the individual members of the race. Later in half the members, and so on until after thousands of generations an individual who misses having the faculty is regarded as a monstrosity. In illustration of this statement compare, in man, the musical sense (a faculty just coming into existence) with self-consciousness, a faculty perhaps more than ten thousand generations old; or should it be thought that the facts in these cases are assumed for the purpose of the argument, consider the case of the color sense, the age of which can be approximately fixed by philology. This sense has existed in the race barely a thousand generations, and to-day in the British islands it is said to fail to appear in one person out of every sixty. The musical sense fails to appear in the same country probably in forty persons out of sixty—while self-consciousness perhaps does not fail to appear more than a few dozen times in six thousand adult persons.

In order to illustrate how more or less universality in the race, along with the time of appearance in the individual, corresponds with the time of appearance of any given faculty in the race, the following facts may be given:

Self-consciousness appears in the individual at the age of three years and is fairly universal in the race. This is the basic human faculty—the faculty which constitutes its possessor, man. Our ancestors, before they had this faculty, whatever they were, were not men. But we do not draw the line so sharply now. There are thousands of idiots and imbeciles who never become self-conscious, and there must be many members of low races, such as Bushmen and Australians, who never attain to this faculty, but still we call these men. Self-consciousness has been in existence as long as man has been in existence—probably a few hundred thousand years.

I have said that self-consciousness appears in the average civilized man at the age of about three years. But consciousness of an external world is present in the individual man from, or almost from, birth—some three years, therefore, earlier than self-consciousness.

This faculty (that is, simple consciousness,) appeared in our ancestors very many million years before self-consciousness—and while many so called men have not self-consciousness, there is perhaps no creature which can by any latitude of speech be called man in whom simple consciousness is not found; that is, it is absolutely universal in the human race. Compare now these fundamental faculties with some which are comparatively modern.

The color sense comes into existence gradually in the individual—at three or four years of age there may be a trace of it. At eight years of age it was found by Jeffries still absent in a large percentage of children. Twenty to thirty per cent of school boys are said to be color blind, while only four per cent of adult males are so. Dr. Favre of Lyons reported in 1874 to the French congress for the advancement of science at Lille, certain observations that seemed to him to prove that congenital color blindness was curable—it does not seem to have occurred to him that the sense is normally absent in the very young. As mentioned above, the color sense is said to be absent in one out of every sixty adult persons in the British Islands. The age at

which it normally appears, therefore, and its degree of universality, correspond with the time of its appearance in the race, which, according to Geiger's researches (based largely on philology) was about a thousand generations ago.

The human moral nature includes many faculties, but for the purpose of the present argument it may be treated as if it were a simple sense. It comprises what we call conscience—sense of right and wrong, sexual love as distinguished from sexual passion or instinct, parental and filial love as distinguished from the corresponding instincts, love of our fellow men as such, love of the beautiful, awe, reverence, sense of duty, of responsibility, pity, compassion, faith. No human moral nature is complete without these and others unnamed here.

Now at what age does the human moral nature appear in individual man? You all know it is never present in quite young children. You all know it is often still absent at puberty and even at adolescence. It is a late acquired faculty—considerably later than the color sense. Then in what proportion of men and women does it fail to appear? There are so many adult men and women who have a partial moral nature, so many who, having little or no moral nature, wear (as well as may be) the outside semblance of one; the judging of men and women from this point of view is so difficult—the problem is so veiled and so complicated—that it is impossible to give more than an opinion. But read Prosper Despine's *Psychologie Naturelle*; read Havelock Ellis and other authors on criminal anthropology; consider the number of people with whom we, as alienists, are brought into contact, who manifestly (often confessedly) have few or none of the elements of the faculty in question, and I think you will be forced to agree with me that the number of adults who have little or no, or an undeveloped, moral nature, is far greater than the number who have little or no, or an undeveloped, color sense.

Turn now for a moment to the musical sense. This, far from being universal, is more often absent than present; it is never present except in such a monstrosity as Mozart) before full or well on to full maturity, and only dates back at most, perhaps, a few thousand years. It is an instance of a faculty in the act of appearing—not yet fully declared.

A description in detail of the evolution of the faculties of

which the human mind is composed would fill a large volume, and in order to write such a volume far more knowledge and far greater capacity would be needed than the present writer can pretend to. What has been said may serve to indicate the truth of the general thesis that these faculties are of all ages—some being very ancient, others very modern, and still others of intermediate date.

The next link in the present chain of argument may be expressed as follows: In any race the stability of any faculty is in proportion to the age of the faculty in the race. That is, a comparatively new faculty is more subject to lapse, absence, aberration, to what is called disease, and is more liable to be lost than an older faculty. To many this proposition will seem a truism. If an organ or faculty has been inherited in a race for say a million generations, it seems *a priori* certain that it is more likely to be inherited by a given individual of that race than is an organ or faculty which originated say three generations back. A case in point is what is called genius. Genius consists in the possession of a new faculty or new faculties, or in an increased development of an old faculty or old faculties. That being the case, you all know that it was necessary for Galton to write a good sized volume to prove that genius is hereditary, so far was it from being an obvious fact that it is so; and even yet the heredity of genius is far from being universally accepted. But no one ever wrote a book to prove that sight, hearing or self-consciousness is hereditary, because every one knows without any argument that they are so. On the point in question Darwin says, speaking of horses: "The want of uniformity in the parts which at the time are undergoing selection chiefly depends on the strength of the principle of reversion." That is, parts or organs which are undergoing change by means of selection are liable to lose what has been gained by reverting to the initial condition. And again he says: "It is a general belief among breeders that characters of all kinds become fixed by long continued inheritance." In another place he speaks of "the fluctuating and, as far as we can judge, never ending variability of our domestic productions, the plasticity of their whole organization," and he attributes this instability to the recent changes these have undergone under the influence of artificial selection. And in still another place Darwin speaks of "the ex-

treme variability of our domesticated animals and cultivated plants."

But I scarcely need carry this part of the argument any further. You will probably all admit that the shorter time an organ or faculty has been possessed by a race the more unstable must it be in the race, and consequently in the individual; the more liable will it be to be dropped; the more liable to be defective; the more liable to vary; the more liable to be or to become imperfect—as we say, diseased. And that, *per contra*, the longer time an organ or faculty has existed in any race, the more certain it is to be inherited and the more certain it is to assume a definite, typical character—*i. e.*, the more certain it is to be normal, the more certain it is to agree with the norm or type of the said organ or faculty. In other words, the less likely is it to be imperfect—what we call defective or diseased. This being allowed, it will readily be granted:

1. That the race whose evolution is the most rapid will (other things being equal) have the most breakdowns; and

2. That in any given race those functions whose evolution is the most rapid will be the most subject to breakdowns.

If these principles be applied to the domesticated animals, (who have, most of them, within the last few dozen generations been much differentiated by artificial selections), they will explain what has often been looked upon as anomalous—namely, the much greater liability to disease and early death of these as compared with their wild prototypes. For that domestic animals *are* more liable to disease and premature death than wild is, I believe, admitted on all hands. The same principles will explain also how it is that the more highly bred an animal is—*i. e.*, the more widely it has been differentiated in late generations from a previous type—the more liable will it be to disease and premature death.

Taking now these principles home to ourselves—to the human race—we find them to mean that those organs and functions which have been the latest acquired will be most often defective, absent, abnormal, diseased. But it is notorious that in civilized man—especially in the Aryan race—the functions which have suffered most change in the last few thousand years are those called mental, that great group of functions, sensuous—intellectual—moral—which depend upon—spring from—the two

great nervous systems, the cerebro-spinal and the great sympathetic. This great group of functions has grown, expanded, put forth new shoots and twigs—and is still in the act of producing new faculties—at a rate immeasurably greater than any other part of the human organism. If this is so (and we all know it is so) then within this great congeries of faculties it is inevitable that we should meet with constant lapses, omissions, defects, breakdowns.

Clinical observation teaches us every day that the above reasoning is solidly grounded. It presents to us lapses of all degrees and in unlimited varieties: lapses in sense function such as color blindness and music deafness—lapses in the moral nature in whole or in part—lapses in the intellect of one or several faculties—or lapses more or less complete of the whole intellect, as in imbecility and idiocy. But over and above all these lapses and as a necessary accompaniment of them we have the inevitable breaking down of function which has once been established which we call insanity, as distinguished from the various forms and degrees of idiocy. For it is easy to see that if a function or faculty belonging to any given species is liable for any general cause to be dropped in a certain proportion of the individuals of that species, it must be also liable to become diseased—that is, to break down in cases where it is not dropped. For if the faculty in question is by no means always developed in the individual—if it quite frequently fails to appear, that must mean that in many other cases in which it does appear it will not be fully and solidly formed. We cannot imagine a jump from the total non-appearance of a given function in certain members of a species to the absolute perfection and solidity of the same function in the rest of the members. We know that species do not grow that way. We know that in a race in which we have some men seven feet high and others only four that we shall find, if we look, men of all statures between these extremes. We know that in all cases extremes presented by the race are bridged (from one to the other) by full sets of intermediary specimens. One man can lift a thousand pounds—another can only lift a hundred; but between these are men the limit of whose strength fills up the whole gap between the hundred and the thousand pounds. One man dies of old age at forty years, another at one hundred and thirty years, and every year and

month between forty years and one hundred and thirty years is the limit of some man's possible life. The same law that holds for the limit of faculties holds also for the solidity and performance of faculties. We know that in some men the intellectual functions are so unstable that as soon as they are established they crumble down—crushed (as it were) by their own weight—like a badly built house, the walls of which are not strong enough to sustain the roof. You all know that I refer to extreme cases of so called developmental insanity—cases in which the mind falls into ruins as soon as it comes into existence—or even before it is fully formed; cases of insanity of puberty and adolescence in which nature is barely able to form or half form a normal mind and totally unable to sustain it—and it consequently runs down at once back into chaos. You know the hopelessness of this class of cases (as regards recovery), and it is not difficult to see why they should and must be practically incurable, since their very existence denotes the absence of the elements necessary to form and maintain a normal human mind in the subjects in question.

In the realm of insanity, properly so called—that is, excluding the idiocies—these cases occupy the extreme position at one end of the scale, while those persons who only become maniacal or melancholic under the most powerful exciting causes such as child-birth and old age occupy the other end. That is, we have a class in whom the mind without a touch crumbles into ruin as soon as formed or even before it is fully formed. Then we have another class in which the balance of the mental faculties is only overturned by the rudest shocks, and then only temporarily, since the cases to which I refer recover in a few weeks or months if placed under favorable conditions. But between these two extremes, as you all well know, we have the whole wide space filled with an infinite variety of phases of insanity, exhibiting every possible condition of mental stability and instability between the two extremes mentioned. But throughout the whole range of the insanities you will find this law holds, namely: that the latest evolved of the mental functions, whether intellectual or moral, suffers first and suffers most, while the earliest evolved of the mental and moral functions suffer (if at all) the latest and the least.

If the mind be likened to a growing tree (a perfectly apposite

simile) then one may say that the lesser onsets of insanity shrivel its leaves—paralyse, or partially paralyse their functions for a time—the leaves standing for the later formed and more fragile emotions and concepts and especially for the later formed combinations of these. That deeper attacks kill the leaves and damage the finer twigs; that still more profound disturbances kill the finer twigs and injure the larger and so on until in the most profound and deep-rooted insanities—as in the developmental dementias—the tree is left a bare ghastly trunk without leaves or twigs and almost without branches.

And in all the process of destruction the older formed faculties, such as perception and memory, appetite for food and drink, shrinking from injury, and the more basic sense functions endure the longest—while, as has been said, the latest evolved functions crumble down first—then the next latest and so on.

A fact that well illustrates my main thesis—that insanity is essentially the breaking down of mental faculties which are unstable chiefly because they are recent and that it rests therefore upon an evolution which is modern and still in progress—a fact, I say, that well illustrates this thesis is the comparative absence of insanity among negroes.

I have said, as you know, that the large percentage of insanity in America and Europe depends directly upon the rapid evolution in late millenniums of the mind of the Aryan people. I suppose very few would claim that the negro mind is advancing at anything like the same rate. As a consequence of these different rates of progression we have in the Aryan people of America a much higher percentage than is found in the negro race.

When the United States census of 1880 was taken it was found that among forty-three million white people there were eighty-six thousand insane—exactly one in five hundred—while among six and three-quarters million negroes only a little more than six thousand were insane, or a proportion of only about one to one thousand one hundred.

Doubtless if we had statistics of other backward and stationary people a similar state of matters would be found—all such facts as we have leading to the conclusion that among savages and semi-savages there exists comparatively little insanity.

In conclusion, the results at which I have arrived in this paper may be summed up as follows:

1. All mental faculties arose each in its time and they are of all ages—many of them being quite modern.

2. The date of birth of a faculty in the race may be judged by the age at which it appears in the individual, and its more or less universality in the race.

3. The stability of a faculty in the individual depends upon its age in the race. The older the faculty the more stable it is, and the less old the less stable.

4. Consequently the race whose evolution is the most rapid will have the most breakdowns.

5. Those functions in any given race whose evolution is the most rapid will be the most subject to breakdowns.

6. In the more progressive families of the Aryan race the mental faculties have for some millenniums last past developed with great rapidity.

7. In this race the large number of mental breakdowns, commonly called insanity, are due to the rapid and recent evolution of those faculties in that race.