

# Critical to the clinical value of anthropological anomalies of the skull in Forensic Psychiatry and Criminal Anthropology (from the lessons of Professor Pasquale Penta 1899-1900 academic year)

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**Abstract.** Criminal Anthropology is a very interesting chapter in the History of Psychiatry of the second half of the nineteenth century and the beginning of the twentieth. Here, we present the point of view of Professor Pasquale Penta (1859-1904), director of the important Italian scientific Journal: *Journal of Forensic Psychiatry, Criminal Anthropology and Affine Sciences*, Psychiatric and Criminal Anthropologist, on the “anthropological anomalies”. He developed a position toward the clinical value of anthropological anomalies in forensic psychiatry diagnoses criticizing the excessive importance given also to individual anthropological anomalies.

**Key words:** criminal anthropology, Pasquale Penta, forensic psychiatry, history of psychiatry

## Introduction

Among the debated Lombrosian generalizations elaborated in the name of the criminal anthropology, that of the anthropometric studies on the skull aroused criticism within the scientific community of forensic psychiatry. Also, among the supporters of criminal anthropology, there were conflicting opinions about the psychiatric diagnosis made using anthropological tools aimed at defining the “anomalous personalities” (1).

When the theory of evolution entered into Italian scientific circuits, biological anthropology, in particular craniology, a positivist instrument indispensable to investigate various aspects of human life, surpassed the naturalistic boundaries and thus entered the field of forensic psychiatry.

A careful examination of the national scientific literature of those years is essential to define how the

study of physical anthropology could diagnose psychiatric diseases or even the criminal type.

In particular, our research focused on what was published in the article of Pasquale Penta (Fontanarosa, april 1859 – Napoli, 29 november 1904) in the *Journal of Forensic Psychiatry, Criminal Anthropology and Affine Sciences* entitled *On the pathogenetic mechanism, the meaning and clinical value of anthropological anomalies in Psychiatry and in Criminal Anthropology (From the lessons of Psychiatry and Criminal Anthropology dictated to the students of Medicine and Law in the scholastic year 1899-1900)* (1).

As in several publications of the times, also in Penta’s article, some anthropologists and psychiatrists contrasted criminal determinism based on individual anthropometry and in particular on the metric observation of the skull.

The positivist thinking together with other new scientific ferments of the second half of the nine-

teenth century led to the creation of a new anthropology able to explain mental illness based on observing the shape of the skull (2). Therefore, anthropological biology entered as a diagnostic, prognostic and interpretative model in the psychiatric field and through the observation of abnormal anthropological features it was thought to estimate, identify and even classify psychiatric and neurological pathologies and of course the various forms of insanity and criminality (3).

Among the many methods of investigation of criminal anthropology, we deal with the chapter of Craniology and Craniometry, in particular the way in which criminal anthropologists, through the cranial anomalies and craniometrics indices, defined the different personalities, the psychiatric diseases and the criminal types.

### **The atavism theory and Penta's point of view on skull anomalies**

Precisely in that historical period in which fossil evidence of our evolutionary (4, 5) past was sought and found (6, 7), the supporters of the Lombrosian theory of atavism shared the idea that each atavistic feature corresponded to a characteristic aspect. Morphological similarities between "the wild man" and the "animals" justified the degree of inferiority in the human organization of "savage societies" (8, 9).

In this way, biological anthropology became part of Psychiatry and Criminology, with new instruments proposed by those who, by assigning to positivism the utmost confidence, suggested the "objective signs" (or features) for the diagnosis of mental illness and criminal personalities (10, 11). Physical similarities between degenerates, savages, and anthropoids had to be proved.

According to the followers of Lombroso, each step towards evolution represents a distance that separates us from the "savages" and the "inferior animals".

Therefore, each evolutionary step had to remove a *pithecoïd* character. According to this thought there was, therefore, the possibility of going back, thus undertaking a reverse path with respect to that of evolution. The theory of evolution in this vision would bring to light the lower strata of humanity. If some

ancestral characters were repeated on contemporary man, this happened for the degenerate and for the "wild man". For this reason, from the anthropological point of view, these two types of "lower humanity" physically resembled one another.

The ancestral physical characteristics, rather than the physiological features, could highlight the inferiority of human thought.

Turning away from the biological explanations for deviancy typical of Lombrosian criminal anthropology, the criticism of Penta is directed to the observations made on the skulls.

In particular, the criticism of Penta is directed to the observations made on the skulls. The criminal anthropologist also mentions Professor Sergi who has shown that as regards some cranial forms such as *scaphocephaly* or *mild microcephaly* could also exist in today's populations without these being attributed to a degeneration or to a development arrest (13).

It is also true that Penta says that the survival of certain characters, largely eliminated from the evolutionary progress and selection, could be found in human representatives who are less evolved.

Penta also argues that the anthropological anomalies (in particular here we refer to the cranial anomalies) were not to constitute anything new in the whole family, in the near and even distant ascendants of those who carry them.

According to Penta, this "inferior anthropological-physical type" has a distant origin that dates back to other more ancient conditions, even though the rest of their organism, including in particular the nervous system, could evolve regularly. In saying this, Penta makes us understand his point of view regarding "anthropological anomalies", that is, the individuals who reported them in their physicality could be normal in terms of intelligence and moral character (12, 13).

Penta, for example, believed that certain forms of scaphocephaly with large cheekbones and jaws, almost total prognathism, are not determined by morbid influences but rather by eating habits. A high vegetable or starchy diet, to the detriment of a diet rich in meat, required greater exercise of the mastication muscles and consequently a difference in the bony structures involved.

And as regards the origin of the anthropological anomalies Penta believed that even the absence of healthy hygienic conditions, a poor diet, the early onset of infections, conditions of social unbalance could be decisive factors.

The position highlighted by Penta regarding anthropological anomalies and atavism theory is interesting. He identifies in the degenerates a loss of the evolutionary successes, while the lower social classes are represented by those who have not completed the process of evolution (14, 15). In the second group, there was the ancestral character, true primitiveness, lack of evolution (16). For the physical and mental environment, they did not reach the high peaks of the upper classes.

Those who have stopped in anthropological forms often offer Lombroso the diagnosis of the anthropological type of the "born criminal" (17, 18).

On the use of anthropological anomalies from a clinical point of view, Penta reports that the outward appearance of these criminals resembled savages and anthropoids and could not refer to them as degenerates.

But Penta believes that in addition to simply a morphological factor there was also an etiological link.

Penta, also in his comparative investigations made outside the prison environments, especially among the peasants, recorded what was now signed by Lombroso as the anthropological type of the "born criminal" (19, 20) who carried these characteristics on the skull (prognathism, elusive, size of the cheekbones, receding chin, robust jaws, etc.) (21, 22).

Penta believes that these characteristics do not depend on a state of degeneration but, rather, on a phenomenon of limitation.

With regard to Penta, those peasants have lapsed from an anthropological level and due to unhappy conditions of existence, they could not get to more evolved anthropological forms.

Therefore, in degeneration there is greater disorder and the ontogenetic arrest is not uniform and general to reproduce in all its parts a phylogenetically archaic and brutal type (23).

It is evident that, according to what has been said, the degenerates and the primitives can resemble each other and also be confused, but this does not

mean that they are profoundly different due to their formation, their meaning and their importance.

In particular, Penta questions whether these features constitute an anomaly.

They are an anomaly if they relate to the evolved average of other men in the same country, not only for aesthetics but also for organic resistance itself and for the psychic level, which are much less in them than in the most evolved. According to Penta insanity, crime and other diseases are destined eventually disappear during the incessant path of evolution.

Penta recalls the work "on the pathogenetic mechanism" where he already claimed that many anthropological anomalies (of individual or singular appearance) are not really degenerative but rather mark a state of primitiveness that continues and is perpetuated in certain social strata of the race.

### **Craniometry studies and Penta's criticisms**

Penta criticizes, above all, the fact of having given great importance to anthropometry, of having created a quantity of curves and semi curves, of diameters and circumferences, which have interest and value in a long series of observations and cases, they have no value on the individual case and are more useful as an ethnographic and taxonomic study of man in general. It is in the calculation of the cephalic index that the criticisms are concentrated with a certain intensity. Based on the greater or lesser length of it, positivist anthropologists distinguished human races in dolichocephalic, mesocephalic, and brachycephalic.

In Italy, craniometric studies of anthropologists of the positivist period revealed that all three varieties (dolichocephalic, mesocephalic and brachycephalic) are present in the various provinces and none of these can be considered exclusively dolichocephalic or brachycephalic.

Several anthropologists, however, claimed that the overall shape of the skull-facial could describe figures related to the personality: cuboid, ellipsoid, pentagoid, ovoid etc ... (24, 25).

Anthropometric studies received a strong impulse from the works of Broca and Virchow.

The analysis reported by Penta revealed that the

brachycephalic are prevalent among the Lombard-Veneto, Piedmont, Romagna, Liguria, Abruzzo regions and dolichocephalic are prevalent among the Calabrian, Campania regions (26, 27). Sergi also showed, with his studies, that one could not make a human classification by calculating the cephalic index. The cephalic index according to Sergi may represent one of the signs of the shape of the head and not the reason. Consequently, Sergi believes that the cephalic index has only secondary importance in the study of human races and therefore has no interest in any other applications in forensic psychiatry and criminal anthropology (28).

Although, when it comes to exclusively long skulls (ultradolichocephalic, from 66 downwards) or excessively short (ultrabrachicephaly from 90.00 upwards) they can be defined as anthropological anomalies and are accompanied by other physical notes such as scaphocephaly, oxycephaly, plagiocephaly until the trochocephaly (29).

Individual anthropometry, especially craniometry, could have no value in psychiatry and criminal anthropology.

However, Penta points out the fact that anthropometric studies have become so important to find application in police judiciaries because they are used in the identification of the delinquent in the system called *Berlintonage*, a system proposed by Bertillon in France (30).

The system also entered Rome and other police headquarters of the kingdom under the name of the Anthropometric Office.

Still according to Penta, no cranial form can indicate more or less in mental development (31). The author recalls that the most famous men in poetry, arts and sciences also show, in the cranial forms, the signs of the province to which they belong and are therefore dolichocephalic, brachycephalic or mesaticephalic.

Penta thus dismantles the theories of De Laponge and of Ammon (32) for which dolichocephaly would be, among the social classes, those who have greater initiative, suffer the power of social capillarity more and then move more, rushing from the rural towns to the city, from small to large human centers, so they cannot so easily be accepted and supported.

## The clinical value of anthropological anomalies

The distinction of anomalies in atavistic, pathological, monstrous and teratological was highlighted by different authors of that time. The term atavistic anomalies interpreted the abnormal features, meaning arrests of individual development (ontogenetically) as an abbreviated phylogeny, and then reproduction of animal characters, considered well below the phylogenetic profile (33).

For many of these anthropological anomalies, the comparison with the taxonomic characters of the lower animals was made and the result was more than surprising. For example, some anomalies of the cerebral convolutions (34, 35), the external prolongation of the parietal occipital sulcus - that in monkeys is a physiological character - the brevity of the calcarine fissure, the ethmoidal rostrum of Vogt and so on, due to many anomalies of hands and feet etc ...could be associated to the anthropological anomalies (36).

Penta also speaks of some anthropological anomalies of an endogenous and non-exogenous nature and are those that lead to the serious result of psychic and anthropological degeneration.

These are conditions that originate from fetal life, produced in the toxicity of the mother's blood.

The descendants of syphilitics, of alcoholics of the gouty, of the mad etc., are often born with rather serious anthropological anomalies.

## Conclusion

Penta insisted that completely normal man, that is without imperfections, can only be the product of the artist's imagination. Each of us has a weak side in our intelligence, in character and anthropological forms without being ill.

If we considered ill all those who presented some imperfections, or anthropological anomalies, we should think of the sick as ancestors. When in the impossibility of adaptation it therefore transmits anomalous forms, especially regressive.

According to the criminal anthropology of that time, there are regressive forms of evolution that many times could also be considered physiological.

Even in normal, therefore, anthropological anomalies can be found.

Each of us has some debased side both in intelligence and in anthropological forms, that the typical man does not exist without imperfections.

With regard to Penta, atavism could explain the anthropological anomalies and that these, however, would be nothing more than characters reappearing in man after having been erased or covered and reproducing what is normally found in this or other living beings below of modern civilized man (37).

To conclude Penta believes that if you wanted to accept the significance of these abnormalities, these must be taken into consideration if they are numerous and important in an individual and that they had to be found in relation to the nervous system (38).

According to Penta, therefore, these anomalies could have clinical, diagnostic and prognostic importance when their value is accepted. That is to say that on equal conditions the subject that presents many anthropological anomalies will be affected by degenerative mental illness (39).

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