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## THE BIOLOGICAL THEORY OF ATAVISM AND ITS INFLUENCE ON SOCIAL POLICY

JERRY BERGMAN, PH.D.

### ABSTRACT

Atavism is the theory that some individual animals for some reason revert back to an earlier evolutionary type. In the case of humans, many behavioral scientists once believed that atavisms caused certain persons to revert in a major way, both physically and mentally, to their animal origins. Many criminologists adopted this theory to explain crime, and partly for this reason it influenced public opinion and official policy. The "criminal physical type" stereotype is still very much with us, even though the theory of atavism as a causative factor in criminal behavior has been empirically disproved. The concept of atavisms has today gone the way of vestigial and nascent organs.

Most disciplines try to accommodate without adequate examination that which they believe is the "accepted" conclusion of other fields. As Gould (1977: 223) noted, especially great was the influence of evolution in fields far removed from its biological core. One example is an uncritical acceptance of the theory of evolution into social policy. The result was the development of many unfounded theories which have been completely discredited today, some of which have had tragic consequences for multi-thousands of persons (Gould, 1981). The aspect of evolution discussed here is human organism atavism, or the view that certain physical traits appear in humans which are a "throw-back" to an earlier stage of our evolutionary history.

### BACKGROUND

Throughout western history most people have accepted the fixation of species view that each animal species was specially created in much the same form that it exists today. Although some ancient philosophers taught that animal species slowly changed or evolved because of various environmental influences, this theory did not receive wide support until Darwin introduced his theory of evolution by natural selection in the middle 1800's. Evolution soon profoundly influenced many individual theories--some which were later rejected. Social Darwinism is a good example. As Vold (1958: 10) claims:

...man's social organization has developed as a result of his biological evolution--hence, social evolution is subsequent to but essentially parallel with, and presumably a product of, biological evolution. Individual human characteristics and behavior are therefore to be understood as reflections of this common organic and biological heritage, not free and intelligently self-determined, but biologically determined.

Weatherwax (1909: 42) long ago noted: "Scientists in general recognize the principle of [biological] evolution, and its influence has carried over into the field of social problems and has had a profound influence on all thought." One area in which evolution has directly influenced social policy is criminology. The best example is the theory of atavism as developed by the man many regard as the founder of the science of criminology, Cesaro Lombroso. Dallemagne, a prominent French criminologist, summarizes Lombroso's influence in 1896 with these words:

His thoughts revolutionized our opinions, provoked a salutary feeling everywhere, and happy emulation [of his views resulted] in research of all kinds. For 20 years, his thoughts fed discussions; the Italian master was the order of the day in all debates; his thoughts appeared as events. There was an extraordinary animation everywhere.

As to Dallemagne's assessment, Gould (1981: 135-136) adds:

Dallemagne was recording facts, not just playing diplomat. Criminal anthropology was not just an academician's debate, however lively. It was the subject of discussion in legal and penal circles for years. It provoked numerous "reforms" and was, until World War I, the subject of an international conference held every four years for judges, jurists, and government officials as well as for scientist.

## BIOLOGICAL ATAVISM

The term atavism is from the Latin *atavus*, which means "an ancestor." Atavism, as a reversion to an ancestral type, was the belief that some individuals revert both physically and mentally in certain ways back to an earlier "evolutionary" type. This "degeneracy," it was at one time believed by many criminologists, caused criminals to look more like an "animal" and also behave "in more savage ways than their civilized counterparts" (Vold, 1958: 28). This theory was not an obscure view held by a few extremists, but "probably the most influential doctrine ever to emerge from the anthropometric tradition" (Gould, 1981). As a result of the theory, criminologists used a number of:

...tests to measure the physical characteristics of prison inmates, [and there from] Lombroso identified certain features typically found in the criminal population. Among these characteristics...were shifty eyes, receding hairlines, red hair, strong jaws, wispy beards, and the like. Lombroso came to the conclusion that criminals are a form of evolutionary throwback to a more primitive human type. (Robertson, 1981: 183)

Atavism was probably first suggested by Darwin (1881: 137) when he wrote, "with mankind some of the worst dispositions, which occasionally without any assignable cause make their appearance in families, may perhaps be reversions to a savage state from which we are removed by many generations." Because atavistic persons had not only degenerated behaviorally, but physically, it was believed that criminals could often be identified by physical traits alone. Abnormal dentition, asymmetry of the face, large ears, eye defects, "inverted" sexual characteristics and many others were all viewed as physical evidence of an atavistic person (Taylor, 1973: 41). Exactly how or why the atavistic criminal developed this physical and mental degeneration was never fully explained. Nonetheless, atavism was considered at this time a major evidence of evolution (Pal, 1918). It rode close behind the theory of evolution in both respect and acceptance. An early booklet on evolution concluded that one of the compelling proofs of evolution was (Pettit, 1942):

atavism, which means the reappearance in an individual of a character belonging to [one's] remote ancestors. It is an interesting phenomena... if we had really descended from ape-like creatures, we might expect to find some of the characteristics of these 5 ancestors appearing now and then among human beings.

Many behavioral scientists accepted the belief that individual "throwbacks" regularly occurred in "normal" families, producing different types of humans. These researchers de-emphasized the effect of the environment and sociological factors in general. They spent much time measuring body parts, especially foreheads and brain cases, concluding that the closer the person resembled an ape, the more behavioral "regression" that had occurred.

## ATAVISM AND SOCIAL POLICY, THE MAJOR TRAGEDY OF THIS VIEW

The introduction of the theory of evolution, by Cesaro Lombroso, was summed by McCaghy (1976:14):

Lombroso was a physician trained in psychiatry and biology, and he was aware of the...recent works of Charles Darwin, who connected modern humans with a nonhuman past through his theory of evolution. Lombroso had been involved for some time in the study of physical differences between criminals and normals, but his notion of atavism as a cause of crime emerged as a bolt from the blue during his autopsy of an infamous robber whom Lombroso found to have skull depressions characteristic of lower primates.

Lombrose, described as "one of the best-known and possibly one of the least well understood figures in criminology" was the founder of the *positivist school*, which applied scientific method to study the cause of behavior. McCaghy (1976: 14) claims that:

...his importance in spurring research on the criminal is undeniable...Lombroso's most important book was L'Uomo delinquente (The Criminal Man), first published in Italy in 1876. Here he presented his doctrine of evolutionary atavism. Criminals were seen as distinct types of humans who could be distinguished from noncriminals by certain physical traits...to identify persons who were out of step with the evolutionary scheme. Such persons were considered to be closer to apes or to early primitive humans than were most modern individuals; they were throwbacks (atavists) to an earlier stage in human development.

In his The Criminal Man, Lombroso includes a long series of anecdotes to show that the usual behavior of animals is criminal and amoral. Among the many examples that he provides includes their eliminating sexual rivals by "murder," killing out of rage ("mad" elephants, and other animals going on a stampede, etc.) and even behavior such as ants becoming impatient over recalcitrant aphids which were then killed and devoured as "punishment. Lombroso concludes that even insectivorous plants procure food in ways which are the "equivalent of crime." Having established to his own satisfaction that all animals are "criminal, he then proceeded to build a case for the view that humans who commit crime must have reverted back to their animal ancestry. Even the language used by atavistic criminals, he argued, showed this regression--it was similar to "savage tribes" and included many onomatopoeias and personifications of inanimate objects. Said Lombroso, "they speak like savages because they are true savages in the midst of our brilliant European civilization." (1876: 225) He describes his conclusions further: (Quoted in McCaghy 1976: 14)

At the sight of that skull, I seemed to see all of a sudden...the problem of the nature of the criminal--an atavistic being who reproduces in his person the ferocious instincts of primitive humanity and the inferior animals. Thus were explained anatomically the enormous jaws, high cheek-bones, prominent superciliary arches, solitary lines in the palms, extreme size of the orbits, handle shaped or sessile ears found in criminals, savages, and apes, insensibility to pain, extremely acute sight, tattooing, excessive idleness, love of orgies, and the irresistible craving for evil for its own sake, the desire not only to extinguish life in the victim, but to mutilate the corpse, tear its flesh, and drink its blood.

Lombroso's theory was not a work of abstract science: he founded and actively led an international school of criminal anthropology' that spearheaded one of the most influential of late-19th century social movements. Lombroso's 'positive,' school campaigned vigorously for changes in law enforcement and penal practices." (Gould, 1981: 225).

The most well-known early research which disproved the atavism paradigm as a factor in causing crime was completed by Charles Goring (1913). In a study that was considered at the time a model of scientific and technical accuracy, he carefully compared approximately 3,000 English convicts with several large groups of Englishmen who did not have criminal records. The convicts he studied were all recidivists, and therefore he assumed that most were of a "thoroughly criminal type." In addition, comparisons were made with 1) university undergraduates, 2) officers in the British army, and 3) hospital patients. His conclusion was that "there were no more protrusions or other peculiarities of head among the prisoners than among the royal engineers" (Vold, 1958: 53). Although Goring's work resulted in the final death blow to the theory of atavism and crime, it took years to convince its many devoted followers that it had no validity. Gould (1981: 134) notes:

Lombroso slowly retreated under the barrage. ...Not for a moment did he compromise or abandon his leading idea that crime is biological. He merely enlarged the range of innate causes. His original theory had the virtue of simplicity and striking originality--criminals are apes in our midst, marked by the anatomical stigmata of atavism. Later versions became more diffuse, but also more inclusive. Atavism remained as a primary biological cause of criminal behavior, but Lombroso added several categories of congenital illness and degeneration: "We see in the criminal," he wrote (1887, pg. 651), "a savage man and, at the same time, a sick man."

In view of these obvious facts, Lindesmith, et al. (1937:667) concludes that this biological theory of criminality rapidly spread to the elite in criminology because it was:

a logical development of already existing tendencies in the social sciences. Chief among these was the spread of Darwinism. After the publication...of Darwin's Origin of the Species, Darwinian concepts not only swept through the biological sciences, but were also applied in a wholesale manner in the social sciences--in anthropology, political sciences and sociology.

Lindesmith (1937: 671), also notes that the development of science has included periods where "myth and fashion and social conditions have often exercised an influence quite unrelated to the soundness of theories or to the implications of accumulated evidence." Referring

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