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Harvard XYY Study

We feel that the report by Barbara Culliton (News and Comment, 22 Nov. 1974, p. 715) on the XYY study being carried out by Walzer and Gerald of the Harvard Medical School does not clearly lay out the nature of the study and its implications, nor the basis of our objections. We and others in Science for the People have been concerned with both the premises and the social and political applications of certain programs of research into genetic factors in human behavior.

Implicit in these programs are the assumptions that we can and should attempt to distinguish between the behavior of groups of people on the basis of genetics. Many of these programs tend to focus the blame for supposed antisocial behavior on the genes of the individual, rather than on social, economic, and familial conditions. In the case of the XYY controversy, this orientation has led many researchers to hasty and far-reaching conclusions based on uncontrolled and biased experiments. In fact, the most recent and comprehensive review of the XYY literature concludes that “...the frequency of antisocial behavior of the XYY male is probably not very different from non-XYY persons of similar background and social class” (1).

The Boston study is a case in point. Walzer and Gerald are trying to determine whether there is any psychopathology associated with the extra Y chromosome. The study is funded by the Center for the Study of Crime and Delinquency of the National Institute of Mental Health. Those parents whose child is found to be XYY are told that the child has a chromosomal abnormality, and many specifically learn that it is XYY and of the conflicting information on this subject. It has already been reported that giving such information to parents induces anxieties about the child’s behavior that would not have existed otherwise (2).

How is the researcher to know whether behavioral problems that arise in the XYY children are due to the extra Y chromosome or to the impact on the parent-child relationship of telling the parents of the abnormality? Certainly not by controls: there are no control parents who are told that their child is XYY. Thus the design of the study precludes the possibility of obtaining any information about the presumed relationship between the extra chromosome and the child’s behavior. Yet in Culliton’s report, the XYY myth is perpetuated by references to unspecified behavioral problems in some of the boys being followed. These statements lend stronger credence to the stigmatization which XYY males currently suffer.

Our original criticisms were concerned, in part, with the absence of informed consent. The procedures have very recently been altered in response to our objections. However, irrespective of the details of the new consent procedures, mothers are still led to believe that the benefits of taking part in the study outweigh the risks. Since there is no XYY syndrome and no possible therapy for a nonexistent syndrome, no benefit can accrue to the family. To the contrary, the myth of the “criminal chromosome” is so well known to the public that families in this study are put at substantial risk of psychological and emotional damage on learning of the child’s extra chromosome.

In summary, this study cannot yield meaningful results, has no benefits but substantial risks to the families involved, and only serves to propagate the damaging mythology of the genetic origins of “antisocial” behavior.

Jon Beckwith, Dirk Elseviers


Beckwith and his associates are entitled to interpret the literature on the XYY syndrome as a “dangerous myth,” but they have no right to force their interpretation on others. Their view that knowledge is a danger from which the public needs protection is the same force that keeps textbooks out of West Virginia schools and leads to the type of academic McCarthyism that prevents Shockley and others with unpopular interests from fulfilling speaking engagements in our colleges.

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A comparison of film sensitivities with the spectral transmittance of H & E stain. Vertical lines are peak-wavelength sensitivities of KODACHROME II Professional Film (Type A) (solid lines) and KODAK Photomicrography Color Film 2483 (dashed lines). The spectral-absorption curve is from hematoxylin and eosin stain on a 5-micrometer section of adult guinea pig liver, read on a General Electric Recording Spectrophotometer.

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Marine Faunal Areas

In his review (13 Dec., p. 1028) of my book Marine Zoogeography (1), Richard Rosenblatt comments that there is not an explicit statement of criteria to be used in the establishment of regions, provinces, and boundaries, that the chapter on the pelagic realm has a literature list that ends in the 1960's, and that he could not find any mention of the central oceanic gyres. The facts are that the province (the basic zoogeographic unit) is defined in chapter 1 (1, p. 16), the chapter on the pelagic realm refers to five works published in 1970 or more recently, and that the latter chapter also includes a discussion of water masses and currents (1, pp. 335-338) in which the gyres are mentioned.

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References

The Big Horn Medicine Wheel

In his article (7 June, p. 1035), John A. Eddy describes the solstitial alignment of the cairns of the Big Horn Medicine Wheel in northern Wyoming and suggests that the heliacal risings of the stars Adebaran, Rigel, and Sirius could have been used as signals of the summer solstice. He also suggests that the 28 irregularly spaced spokes of the Medicine Wheel might
have been used to mark the days of the lunar cycle and that the circumferential stones depicted the structure of the Sun Dance Lodge or were decorative and not astronomically significant. A quotation from Walker (1) may cast further light on this matter. The preconquest Sioux gave the timing of the Sun Dance, a midsummer festival, as occurring "when the Moon is four hands' breadth above the edge of the world, when the Sun goes down out of sight." This raises the possibility that the Plains Indians were aware of eclipse seasons and that the 28 spokes functioned as an eclipse-predicting computer in a manner similar to the 56 Aubrey holes of Stonehenge. Many of the stone rings of England, Wales, and Scotland are not circular, and Hutchinson (2) has discussed the data pointing to a sophisticated grasp of metrology, geometry, and astronomy by the builders of these megaliths. The peculiarly flattened circumference of the Medicine Wheel may ultimately be shown to be geometrically rather than accidentally constructed. The archeological and astronomical studies now in progress by Eddy and his colleagues may clarify these and other speculations about this unique high-altitude observatory and "preliterate" notational systems.

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References

Eddy's article "Astronomical alignment of the Big Horn Medicine Wheel" was excellent, but I would like to add a note. Eddy asks, "Why would a nomadic people wish to mark the solstice?" since this is a practice "more commonly associated with agricultural societies." This problem should be seen in the proper context: in 1700, the "nomadic" big game hunters familiar to homesteaders and John Ford fans were largely agricultural people. The 19th-century bison hunters practiced some agriculture, but their grandparents were even more dependent on agriculture and a sedentary economy. It should also be noted that hunting requires a detailed understanding of seasonal changes.

John R. Cole
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