



# International Journal of Political Science and Public Administration

Publisher's Home Page: <https://www.svedbergopen.com/>



Research Paper

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## Anti-Race As a Scientific As Well As Political Stance

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### Article Info

Volume 2, Issue 1, June 2022

Received : 24 March 2022

Accepted : 19 May 2022

Published : 05 June 2022

[doi: 10.51483/IJPSPA.2.1.2022.45-48](https://doi.org/10.51483/IJPSPA.2.1.2022.45-48)

### Abstract

Elsewhere I proposed then proved the Boas-Lewontin Law. It says, basically, that race as an explanatory variable in human diversity, is not up to much. It explains less than 10% of human morphological variation. In this paper I remind readers that the law shows race to have no reputable explanatory value in science. Its continued use as a classificatory tool in some science disciplines is simply political and should be exposed as such.

**Keywords:** *Boas, Lewontin, Law, Race, Racism*

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### 1. Introduction

In Walters (2018) I proposed the Boas-Lewontin Law, based on academically discovered diversity patterns. In Walters (no date) I proved the law, thereby giving it theoretical clout. It now has status as a Law of Nature, yet it remains largely ignored by my profession anthropology, as well as by evolutionary biology, and by all disciplines and sub-disciplines that might fancy themselves as being concerned with race and racism (e.g., politics, sociology, race studies, evolutionary psychology, race theory, etc.), and by all else as well.

In 2021, Walters (no date) was rejected by a leading high-reputation *Anthropology* journal, whose editor informed me that while it was “intriguing,” it would be better placed in a more “specialized” publication outlet.

It is my aim in this paper to re-visit the law, describing it as simply as possible in words. I fear that the scientific and mathematical formalism of the law and its derivation may turn many social and political scholars and activists away from it, ignoring it as unfathomable scientism, failing to see it as helpful. Maybe even seeing it as no more than “intriguing.” Please, don’t do that. Take this version in simple words as your starting point, knowing that the clout of scientific and theoretical backup stands firmly as the basis of the law.

### 2. Some Background

Many reactionary forces deploy some vague pseudo-scientific backing and support for their racist views and actions. So did Hitler. My aim in developing this research is to show that pseudo-science is all the reactionary voices have. It is not science. It is ideology wearing the disguise of science. On the other hand, by attacking the weak basis of race through scientific analysis, I aim to help undermine its use in racist dogma and behavior.

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### 3. The Law in Simple Words

The Law says roughly that for biological or genetic diversity there is never less difference within a given group than there is between that group and other groups.

Understand that. Take a group of people, which we can call A. Take a second group called B. Let us analyze in some way the amount of difference we encounter spread in group A. Then we will do the same for B. These differences are worked out by taking measurements of individuals within the group. Then we make some calculation to obtain a measure for the group as a whole. We call this diversity. The measurements can be morphological, as they were for Franz Boas in his studies. Or they can be genetic, as they were for Richard Lewontin, in his.

According to the law, the difference between group A and group B will never be greater than the diversity within either group, A or B (within what we call sensible appropriate boundary conditions – more on these below).

Counterintuitively, group A always shows more differences among individuals of that group, than the difference between some group value of A and the same group measurement of B.

The same will be true for group B. Group B always shows more differences among individuals of that group, than the difference between some group value of A and the same group measurement of B.

I hope that gives readers and scholars a plain understanding of the law. For emphasis, and learning-assistance, I will state the law again.

The Boas-Lewontin Law says roughly that for biological or genetic diversity there is never less difference within a given group than there is between that group and other groups.

### 4. The Research Discoveries of Boas and Lewontin

Statements of the discovery were first set down empirically early in the 20<sup>th</sup> century by the anthropologist Franz Boas. He researched human morphological measurements, using a sample of nearly 18,000 immigrants to the USA. Then independently some 50 or 60 years later it was re-discovered by the biologist Richard Lewontin.

Early in the 20<sup>th</sup> century Boas worked with the United States Department of Immigration to study immigrant arrivals from seven identifiable ethnic groups, sampling “a total of almost 18,000 persons” (Stocking, 1968, p. 177) or, as it is reported in Table 18 of his monumental tome, 17,821 people (Boas, 1912, p. 84). His measurements were physical, body size and shapes, and presence or absence of features. Boas asked: Are morphological characters set in stone, as it were, by hereditary history? Or Are they malleable, changeable according to environmental factors and conditions?

He also completed a study on behalf of the Department of Ethnology of the World’s Columbian Exposition, which involved a physical examination of North American Indians. The material Boas was able to put together involved measurements from “about 17,000” Native Americans (Boas, 1974a, p. 192). He asked simply: Are the differences between so-called races really all that important in human diversity?

He was able to show that the greatest proportion of difference in human body morphology occurred within-groups. Much less difference was accounted for by differences between groups. That is to say, if we are dealing with supposed racial differences, far less difference occurred between the so-called races than occurred within the particular races themselves. As it was originally worded by the man himself: “the differences between different types of man are, on the whole, small as compared to the range of variation in each type” (Stocking, 1968, p. 192).

He stated this many times in slightly different wordings:

- “The indefiniteness of distinctions between different types is due to the variability of the types ... and to the comparatively small differences between the types” (Boas, 1922, p. 33);
- “The differences between different types of man are, on the whole, small as compared to the range of variation in each type” (Boas, 1922, p. 94);
- “The wide range of individual variability in each race” rendered differences between races “insignificant” by comparison (Boas, 1974b, p. 314);
- “Every racial group consists of a great many family lines which are distinct in bodily form. Some of these family lines are duplicated in neighboring territories and the more duplication exists the less is it possible to speak of fundamental racial characteristics ... differences between the family lines belonging to each larger area are much greater than the differences between the populations as a whole” (Boas, 1940, p. 5).

Leading into World War II, Boas, then a Professor of Anthropology at Columbia University in New York City, was the world's leading researcher in the statistical analysis of human morphological diversity. The science led him to be an outspoken advocate against racism. That he was Jewish, born and raised in Germany, no doubt had influence on his advocacy and politics. He is said to have done more for the case against racism than anyone, anywhere, ever (Walters, 2018). For his troubles, the Nazis burned his books and rescinded his University of Kiel doctoral degree.

Decades later, along came Richard Lewontin, a Professor of Genetics at Harvard University. Apparently, he was unaware of Boas' existence, much less his research discovery. But as we shall see, he would hit on the very same idea. Lewontin (1972, 1974) worked mainly with experimental data concerning flies of the genus *Drosophila*. But he also turned his attention to genetic differences in humans. At that time 17 polymorphic genes had been well enough studied across a variety of human populations to make valid quantification possible. Lewontin (1974, pp. 152-7) was able to calculate genetic measures, technically: heterozygosity from allele frequencies. He did this for national groups, groupings of national and tribal people merged as races, and these races merged as the entire species. He devised two simple indices based on differences and proportions. These gave respectively, the proportion of the total genetic diversity due to differences between national or tribal groups, and the proportion of the total diversity that arises from racial differentiation.

His results (see his Table 34 in Lewontin, 1974 for full details) showed that 85% of human genetic diversity was found within local geographic groups, that is, within his national populations, while differences between nations within races was only 7.5%, and differences between races also accounted for only 7.5%. He acknowledged that there were various ways nations, tribes, etc., could be considered, but regardless, these decisions "in no way affect the 85% variation within groups" (Lewontin, 1974, p. 155).

As happens in the silos of science, Lewontin appears to have been unaware that Boas had found the same thing for humans all those decades before. Never mind; his genetic studies gave strong quantitative conclusions and support for the pattern Boas had discovered. In the 1972 paper he referred to a set of other studies that had, since his original findings, shown the result to be widely confirmed in many animal groups, including "man" (Lewontin, 1972, p. 382).

But the headline numerical finding was breathtaking. That 85% put paid to many assumptions that were made about race and races. Much was believed about the reality and scientific validity of race as a classificatory tool in science, that was simply not true. Boas had quietly discovered this, but Lewontin's stunning statistic blew away any notion that the widespread popular views held any credibility. 85% of all the diversity was to be found within groups.

As an example of contemporary relevance, imagine taking a sample of Trump supporting white Americans and a sample of African Americans. The Trumpers show 85% of the diversity within themselves. As do the African Americans. In simple language this means that individual Trumpers could be shown to be more different from each other, than any of them are from any of the African Americans.

Now, I return briefly, as I said above I would, what are called boundary conditions. Caveats of sample size, temporal contiguity, and geographical proximity must be taken into account. No one would be surprised, for example, that a group of 3-million-year-old Australopithecines are going to be far more different from a group of modern Africans than either diverse within its group. Common sense must be applied to claim about human diversity. To discuss the discovery, we must put it in sensible contexts, of say, contemporary times. The time scale of difference must be sensible. It must not be dragged across 3-million-years, for example.

## 5. Conclusion

The Boas-Lewontin Law shows the overwhelming irrelevance of race as a human classificatory tool. In this paper I have given a narrative account of the law, leaving aside the mathematical technicalities dealt with elsewhere. As a scientist, with both my great predecessors clearly in my sights, I have tried in words to put paid to the relevance of race using their great discoveries. This is done in the hope that it also helps to put paid to racism. I am realist enough, however, to know that the political struggle for that continues and must continue. We scientists can do our bit, but the political war must go on. And to ensure a world populated by those who believe in the good life for the maximum number of people, who believe in decency and tolerance, who believe in understanding and humanity, it must be won.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Conflicts of Interest

The author declared no conflicts of interest.

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