

## Letters to the Editor

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### Which Population?

*To the Editor:*

In a recent letter to the editor, Weir and Evett (1992) make an important point about the estimation of match probabilities in the forensic applications of VNTR typing, a point that requires further comment. They point out, entirely correctly, that if there is ethnic diversity in profile frequencies, it is not the ethnicity of the *defendant* that is the directly relevant question but rather the ethnic composition of the pool of possible alternative suspects. They ask "how likely it would be to find that profile in a random member of *the population*" (emphasis added). But what is "*the population*" when there is ethnic heterogeneity? The irony is that the very case they offer in their discussion, *State v. Passino*, provides a perfect illustration of the difficulty of assigning probabilities. The accused, Mr. Passino, was part-Abnaki Indian, and he successfully challenged the use of a Caucasian data base on the grounds that gene frequencies are not known for the Abnaki. Weir and Evett correctly point out that Mr. Passino's own ethnicity should not have been at issue, but they fail to note the rest of the circumstances of the case.

Franklin County, VT, on the border with Quebec, has the highest proportions of Indians, largely Abnaki, of any county in the state. The Abnaki and Abnaki-French-Canadian mixed families are a population straddling the U.S.-Canadian border, where they have resided since the Eastern Abnaki were forcibly ejected from their tribal lands in the late 18th and early 19th centuries. They are a chronically under- and unem-

ployed, impoverished, and marginalized rural group, many of whom live in trailer camps. The victim, who was herself half-Abnaki, was assaulted and killed in a trailer camp in which a large fraction of the other residents were also of Abnaki ancestry. In view of the circumstances of the crime and the social structure of rural Franklin County, the defense could make the entirely reasonable claim that it is indeed the Abnaki who comprise "*the population*" of potential suspects, of whom the defendant is only one. On the other hand, the prosecution might reasonably claim that a trailer camp on a state highway is accessible to any passing motorist, so that the entire population of western Vermont and eastern New York is the appropriate reference group. Rather than being faced with objective science, we are faced with subjective arguments about the patterns of people's lives. The reason that VNTR evidence is so unsatisfactory is precisely that we do not know how to answer the question, Which population?

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### Reference

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Weir BS, Evett IW (1992) Whose DNA? *Am J Hum Genet* 50:869

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