If some tester says that a result is statistically significant—meaning it is not just chance—this is generally a meaningless phrase. "Chance" is the gremlin. If you play at a casino, you will see 10 reds come up in a row. That is a 1,000 to 1 chance, but it happens and it happens quite often, especially if you are betting black. Chance might be 5 to 1, or 6 to 1, or 10 to 1 against test results happening, but they happen. But this is what confuses the Huntsville and UCLA men who use the same personality test and get different results.

A very dangerous element in the tests is that even if they worked exactly as they claimed, experiments including that at UCLA and others I have mentioned point up the existence of the "false-positive." It is a most dangerous thing. The UCLA MMPI test on sexual deviates stated that they had only 11 percent false-positives. Looking at it superficially, you say that 88 percent accuracy in finding

deviates, with only 11 percent false-positives, is good.

We should do a little simple arithmetic, which many testers fail to do. If you have 25,000 students and 50 sexual deviates, and the test is 88 percent accurate, you are going to find 44 of the 50. However, if the test labels 11 percent as false-positive, you are going to mislabel 11 percent of 25,000 students, or almost 3,000 students, as sexual deviates in order to find 44 who are. This simple arithmetic was pointed out by a Navy admiral during World War II, to a psychologist who came to him claiming he had a personal inventory scale which could predict 52 percent of all of the men in the Navy who would get section eights.

The admiral was very interested, of course. Then he asked about the false-positives. How many would be mislabeled? The psychologist assured him they would find 52 percent of the deviates, with only 6 percent false-positives. The admiral pointed out that there were almost 5 million men in the Navy, and that with 6 percent falsely labeled as potentially psychotic, we would lose 300,000 sailors to find 20,000 to 40,000 possible breakdowns. The admiral decided

to stay with the old system.

This question of mislabeling is vital because it shows why group testing cannot be used for individual analysis. Even though psychotics, as a group, score higher on the MMPI than normals as a group—because that is how the test was conducted—it is impossible to diagnose individuals with it. You fall into the same false-positive trap as in the Navy experiment. No one wants to be one of the

mislabeled.

Then why has it all happened? Why are we involved in this ridiculous situation? The reason is, of course, that we Americans are very impatient people. We insist on marketing our people the way we market cars and everything else. We insist on putting percentiles, labels, and numbers on people. If such a science existed we wouldn't have to worry. We could get wonderful corporation presidents, and wonderful Congressmen, and wonderful writers. But we can't do it, and to attempt to when we can't, is, I would say, a sin. That is all I have to say.

Thank you.

Mr. Gallagher. You have said a great deal and we appreciate all that you have said. It is very enlightening to us in grappling with some of these problems. For you to bring some sense into this whole area is very refreshing.