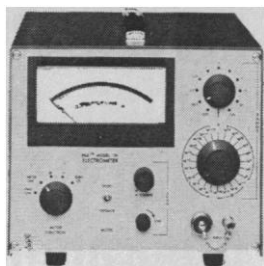
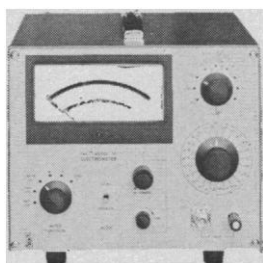


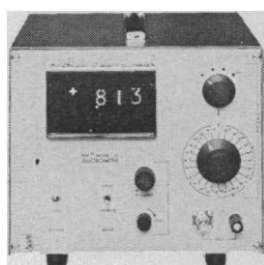
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claiming a new "discovery." The publication of some technical details about the correct use of an instrument is more a duty than a claim to fame. Such calibrations are performed every day in the laboratory by every working scientist.

Neither I, nor my colleagues in physiology, will relinquish our interests in the correct calibration of instruments, in the neurophysiological bases of alcoholism, in the etiology of alcoholism, or in the sociological problems of alcoholism, including that of slaughter on the highways. The fact that there are more than 6 million persons with serious alcohol problems in the United States alone (and similar percentages in most other countries) is the concern of each human, be he bureaucrat, physiologist, or Mr. Everyman.

N. HERBERT SPECTOR

*Department of Neurophysiology,
Walter Reed Institute of Research,
Washington, D.C. 20012*

Reference

1. Committee on Medicolegal Problems, *Alcohol and the Impaired Driver: A Manual on the Medicolegal Aspects of Chemical Tests for Intoxication* (American Medical Association, Chicago, 1968), p. 104.

"Back-to-the-Wall" Effect?

Twenty-seven World Series have been played since the end of World War II. Of these, 15 have lasted seven games. For equally matched teams the probability (p) of the series lasting seven games is

$$p = C_{27}^{15} (1/2)^{27} = 0.312$$

where C is the binomial coefficient.

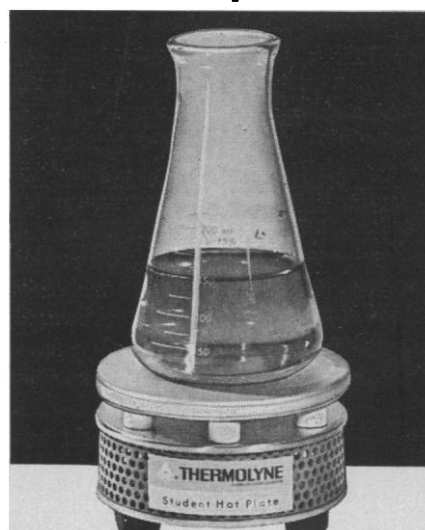
For unequally matched teams it is, of course, lower. The probability that 15 or more out of 27 such series would run seven games is

$$\sum_{n=15}^{27} C_{27}^n p^n (1-p)^{27-n} = 0.0076$$

There are, of course, theoretical difficulties associated with statistical interpretation of rare events defined after the fact, but this case is so easily defined, and the probability is so low, that its occurrence virtually demands investigation.

Upon detailed examination of individual games, one finds a peculiar anomaly in the results of the sixth games. Of 19 World Series that have gone to the sixth game, the team that was ahead going into the sixth game

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Table 1. Expectation and occurrence of the number of games in the World Series from 1905 to 1971.*

Expectation		Actual occurrence	
No. of games	p	1905-1944	1945-1971
4	.125	6/37 = .162	4/27 = .148
5	.250	14/37 = .378	4/27 = .148
6	.313	9/37 = .243	4/27 = .148
7	.312	8/37 = .216	15/27 = .555

*The years 1919, 1920, and 1921 are excluded because the series consisted of the best five out of nine games.

has won that game only four times! If the teams are matched, the probability of winning less than five times is

$$\sum_{m=1}^{10} C_m^{10} (1/2)^{10} = 0.0096$$

The phenomenon becomes even more unlikely when one realizes that the teams are not evenly matched and that the team that was ahead going into the sixth game was possibly the stronger team.

The theory has been advanced that there is a "back-to-the-wall" effect operating which tends to favor the trailing team in the sixth game. This explanation, however, is refuted by the fact that prior to the end of World War II the sixth game phenomenon is not detectable; the length of World Series agrees moderately well with theoretical prediction, although occurrence is biased toward slightly shorter series, probably due to team imbalance (Table 1).

Furthermore, analysis of other "back-to-the-wall" situations fails to indicate that this is a significant effect. The anomaly is clearly associated with the sixth game and with post-World War II baseball. Clearly some hitherto undetected behavioral influence is operating that warrants further investigation.

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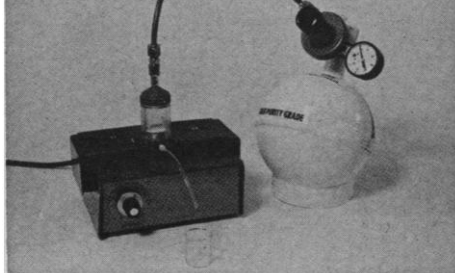
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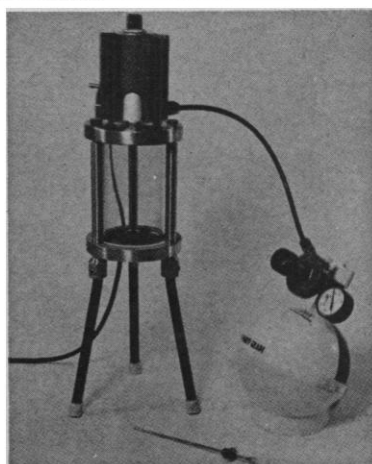
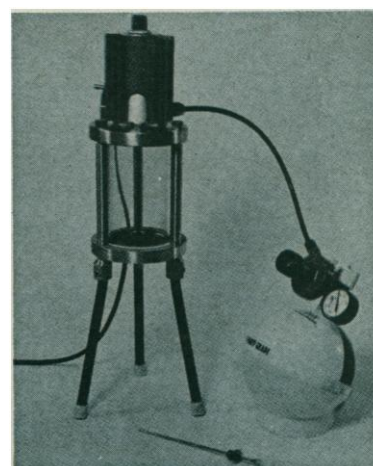
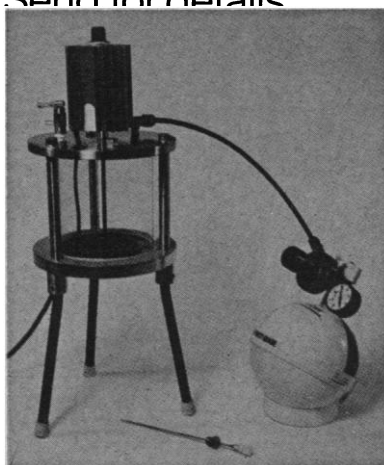


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