A little reflection, bearing in mind the conditioning argument, makes these statements seem almost tautological. In each case conditioning is on the sample, and the approximations are good up to terms of *smaller* order than $n^{-1/2}$. It is not true that the conditional distribution of $(\hat{\theta}^* - \hat{\theta})/\hat{\sigma}$ is a good approximation to the distribution of $(\hat{\theta} - \theta)/\hat{\sigma}$. In this case the Edgeworth expansions of coverage probability for one-sided confidence intervals differ by terms of order $n^{-1/2}$. The same conclusion may be reached intuitively, noting that the statistic $(\hat{\theta} - \theta)/\sigma$ is not pivotal if σ is unknown. Work in Singh (1981), for example, concerns the approximation in (1) although I know of some authors who have tried to use it to promote an approximation of the distribution of $(\hat{\theta} - \theta)/\hat{\sigma}$ by that of $(\hat{\theta}^* - \hat{\theta})/\hat{\sigma}$.

I should make one final remark to tie these comments to those made by Professor Wu prior to his formula (2.10). Since the conditioning in (1) and (2) is on the sample, then $\hat{\theta}$ and $\hat{\sigma}$ are effectively constant, and so the conditional distribution of $(\hat{\theta}^* - \hat{\theta})/\hat{\sigma}$ is just a location and scale change of that of $\hat{\theta}^*$.

REFERENCE

SINGH, K. (1981). On the asymptotic accuracy of Efron's bootstrap. *Ann. Statist.* **9** 1187–1195.

DEPARTMENT OF STATISTICS
AUSTRALIAN NATIONAL UNIVERSITY
GPO BOX 4
CANBERRA ACT 2601
AUSTRALIA

DAVID HINKLEY[1]

University of Texas at Austin

Professor Wu is to be congratulated for making a significant advance in jackknife methodology. The general use of information measures to determine weights in subsampling schemes is surely correct, and the implementation here for regression is most interesting.

The one somewhat negative conclusion of the paper concerns the comparatively poor performance of the bootstrap. It is to this that I shall address my remarks, because the bootstrap approach has, quite innocently, been misapplied. Good results *can* be obtained with bootstrap methods, as I hope to explain with the help of relatively simple examples.

The first point has to do with conditional probability, which in the regression context arises from conditioning on the experimental vector $\mathbf{x}$ of explanatory variables. The key issue can be seen most easily in the simple linear regression

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