DISCUSSION

David W. Chapman, U.S. Bureau of the Census

A method of accounting for unit nonresponse that is often overlooked--and, in fact, has not been mentioned yet during this session--is substitution. With substitution, each nonrespondent is replaced by a newly selected unit that has characteristics "similar to" those of the nonrespondent. Perhaps the reason that substitution is often overlooked is that some statisticians feel that this method is often misused. They believe that substitutes may be used too frequently--that the effort extended to secure responses from the original sample cases may not be as intensive as it would be if substitution were not used. It is also feared that during the processing and analysis of survey data, analysts may lose track of the substitutes and the level of substitution and,

consequently, may substantially overestimate the survey response rate and underestimate the potential for nonresponse bias.

However, if proper control is applied to the substitution process, and if substitutes are identified and monitored adequately, substitution may be a very useful method of accounting for nonresponse. In particular, it does provide real survey data to replace that of nonrespondents, rather than imputed values from other respondents. Substitution could be especially useful in an institutional survey for which a large number of characteristics of population units are available to use to select substitutes with characteristics similar to those of the nonrespondents.