they were known to be on the pill. Differences in choice of contraceptive methods by women of different demographic characteristics also contribute to the difficulty of drawing firm conclusions from such evidence.

The uncertainties of interpretation are given emphasis when we consider the disparity between the conclusions of the Sartwell report and those of a recent prospective British study reported by Ellen Grant. The Sartwell report, in addition to implicating oral contraceptives generally, concludes that sequential preparations are more hazardous in this regard than are the combination products. The Grant study, on the other hand, suggests that combination products with high estrogen content show a greater hazard than other preparations. She found relatively less hazard with the usual sequential formulations.

Mr. GORDON. Excuse me, Doctor. You talk about the Grant study and the Sartwell report? Are they mutually exclusive?

Dr. MEIER. Well, I do not intend any preference for one or the other in the language. The Sartwell report is a part of the FDA Advisory Committee report and it is commonly referred to by those involved in it as the Sartwell report. It is a study and in general terms, a highly meritorious study, every bit as good quality as the Grant study, as far as I know. The Grant study is one carried out in Britain, the Sartwell one carried out in the United States.

Mr. GORDON. Do they conflict?

Dr. MEIER. They do conflict, yes, quite flatly.

The testimony of vital statistics is also ambiguous. This was first noted by Drill and Calhoun, whose report has been criticized on various grounds. However, the far more intensive analysis of vital statistics rates in the Sartwell report seems also to lead to an ambiguous conclusion. The rates of mortality from thromboembolic conditions have increased over recent years, but this has occurred in most age groups and in men as well as women. A somewhat greater increase is found in women aged 25–34, although the difference is not statistically significant. The interpretation given in the Sartwell report is as follows:

> In our opinion, these findings are consistent with the hypothesis that oral contraceptives have produced a small increase in the mortality from thromboembolism, but they do not add any great support to it.

I do not disagree with this conclusion, but I would add that if we consider it at all likely that the diagnosis of thromboembolic death in young women may have been influenced to some extent by a heightened index of suspicion in the case of pill users, one might also argue that the vital statistics results are consistent with the hypothesis that oral contraceptives have not produced an increase in mortality from thromboembolic disease.

I turn now to information on cervical cancer. The possibility that long term administration of hormones might give rise to one or another form of cancer has been a concern from the start. The possibility of an effect which might be long delayed makes it one of the most potentially difficult problems to study and, correspondingly, one for which continuing studies should have been initiated