recent letter to the Journal of the American Medical Association: "Many investigators still maintain that this increase is merely apparent (sic) and (is) the result of a shift in the age composition of our population in recent decades, better diagnostic facilities, and a greater awareness of the medical profession for this particular cancer."

Cancer statisticians note, for example, that the greatest percentage increase in cigarette smoking in the last three decades has been among women. If prolonged and heavy smoking were actually a primary cause of lung cancer, they ask, would it not be natural to expect that lung cancer among women would be increasing far more rapidly than among men?

Yet exactly the opposite has been the case. While more and more women have become heavy smokers of many years' duration, cancer of the lung among males has been mounting far more rapidly than among females.

How misleading the "parallel growth" theory can be is demonstrated by the fate of a similar theory long advocated by anti-tobacco crusaders. When tuberculosis was on the rise, decades ago, they made much of the fact that tobacco consumption was also on the upgrade. "Cigarettes," they boldly declared, "definitely cause T.B."

But then something disconcerting began to happen. Cigarette consumption continued to mount ever higher. But T.B., which should have climbed right through the statistical roof, began to fall off sharply.

In fact, among women, the T.B. rate has fallen even faster than among men, despite the fact that it is among women that smoking has shown the greatest increase.

SKEPTICAL OF GRAHAM-WYNDER THEORY

Cancer research authorities go even further in raising questions about the validity of the recently published studies linking smoking to lung cancer. They point out that the "statistically significant correlation," which Drs. Graham and Wynder found, between smoking and the development of lung cancer, is far from proof that smoking is *the* cause and cancer the effect.

In his letter to the Journal of the American Medical Association, Dr. Deibert reminded his readers that earlier investigators had found similarly "statistically significant" data upon which they based theories that lung cancer was linked to influenza, to the pollution of the air with sulphur dioxide and carbon monoxide, to the increase in tarred roads and to the inhalation of exhaust fumes from gasoline and Diesel engines.

But these theories have long since been laid on the scientific back shelf.

The idea that lung cancer had increased as a result of influenza seemed to be supported by the figures—when only the 1918-'19 influenza epidemic was considered. But later research showed that no increase in lung cancer had followed the great influenza epidemic of 1889-'90 and that no rise in lung-cancer frequency among Icelanders had occurred following the 1918 epidemic, although it was particularly severe.

Experts at the U. S. Public Health Service's National Cancer Institute point out that both the Graham-Wynder and the Levin-Goldstein-Gerhardt studies are limited to smoking as a possible cause of cancer. Yet many environmental and occupational factors have been proved to cause lung cancer and still others are equally or more suspect than tobacco.

That such concentration upon a single cause, to the exclusion of all others, can lead to serious error was demonstrated in a research study conducted by Drs. René Huguenin, Jean Fauvet and Jacques Bourdin, of the Institute du Cancer, Paris. They were confronted with a substantial group of cases of cancer of the lung which had been blamed, originally, on tobacco. But when they considered the possibility of other causes, they were able to demonstrate that a substantial proportion of these patients had been exposed, in their work, to a cancer-causing oil mist. The easy road, of blaming tobacco, actually had served only to obscure the real cause in these cases, an occupational exposure to a dangerous cancer-causing agent that, once understood, could be attacked and controlled or eliminated.

It is precisely because incidents of this sort have occurred that men like Dr. Austin V. Deibert and Dr. W. C. Hueper, of the National Cancer Institute, regard the recent emphasis upon smoking as *the* cause of cancer of the lung as dangerously one-sided. They know that many industrial dusts have been demonstrated to cause cancer among workers in these fields. They fear that an all-too-easy emphasis upon smoking as the culprit may lead industry and public health authorities to neglect protective measures against these far more definitely proven cancer causes.

As Dr. Deibert put it in his critical letter to the A.M.A. Journal, "It seems advisable not to close our eyes to the possible or probable existence of other cancerigenic agents in any future search for the causes of cancer of the lung."

Finally, there are those who challenge the Graham-Wynder and Levin data on the ground that these studies made no comparison between cancer patients and ordinary smokers. In both reports, the "control groups" were not the general population, but a carefully selected group of sick people.

Is it logical, these critics ask, to accept the