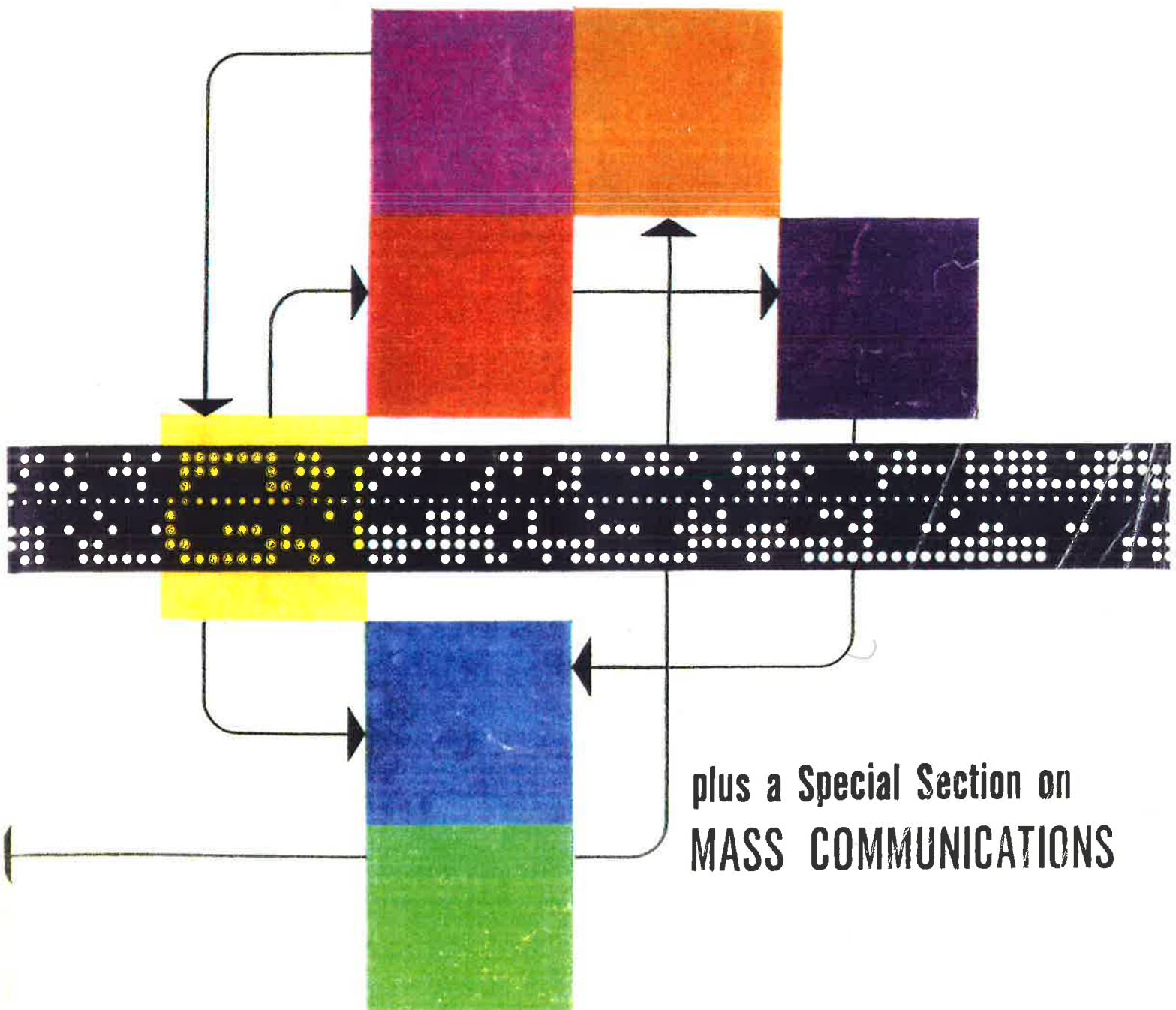


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THE PUBLIC AND

SMOKING

Fear or Calm Deliberation ?

BY CLARENCE COOK LITTLE

A biologist who graduated from Harvard in the famous class of 1910, CLARENCE C. LITTLE served as president of the University of Maine and then of the University of Michigan before taking up a leading role in cancer research. He is presently scientific director and chairman of the Scientific Advisory Board to the Tobacco Industry Research Committee.

WE ALL agree, I am sure, that excess in and abuse of any human activity are undesirable and should be discouraged, whether it is the use of alcohol or coffee or tobacco, or the function of eating, of exercise or inactivity, of work or recreation. For the vast majority, however, the temperate expression of most of these same activities is an essential part of total health and well-being.

When any of these commonplace activities falls under suspicion as being a specific factor in the causation of human disease, we can agree also that this is a matter for serious consideration, but we must be extremely cautious in evaluating the basis for such suspicion and the extent of the supposed risk involved, and in avoiding the creation of fear and panic.

This is especially true today, when we are dealing with ailments, such as cancer and heart disease, of people mostly in advanced age groups. These do not, so far as our present knowledge goes, fit into the categories of the old-time pathologists — they are not specific diseases produced by specific causes with specific patterns of injury to specific tissues.

It is now generally agreed that they are, at least in part, diseases related in some way to present-day stress, modern environment, and to extension of life into the problem of old age. The

worries of home, of business, of driving along highways, of crowded living, the search for relaxation and, not the least, the fears of being sick or of catastrophe have an untold effect upon the body and, if sufficiently intense, may certainly lead to illness, if not cause it.

As to seeking specific causes of cancer, and also heart disease, science is only now on the threshold of what I hope will be great advances in developing better methods of testing the biologic activity of many, many substances that we all use or are exposed to from day to day and, more important, of assigning to them their relative place in the scale of risks we assume in our daily lives. For it cannot be gainsaid that while there is an absolute-ness about the hazards to life, there is no such thing as absolute safety for life. The very things that are essential or important to continued, effective living may be harmful or even fatal under conditions of misuse or abuse.

In the field of tobacco use and health, all concerned admit the need for more knowledge and research. Differences exist mainly over the evaluation of our present knowledge, or lack of it, and the direction and emphasis of future research.

There are some who feel and proclaim that "beyond reasonable doubt" cigarette smoke contains one or more as yet unknown substances that

may cause cancer in man. They would concentrate their research on isolating, identifying, or "removing" these substances even though no such agent has been discovered experimentally.

Others believe, however, that the existence in tobacco smoke of substances carcinogenic to the lungs of men has not been and cannot be proved by statistical associations or by painting the skin of mice of certain specific strains with highly concentrated extracts of tobacco smoke. They therefore focus attention on development of more exact and more direct methods of assaying the cancer-inducing powers of suspected substances. In this direction may be found contributions not only to the smoking question but also to the total problem of bio-assay of other substances.

FEAR OR CALM DELIBERATION?

Generally speaking, the public believes in dicta from scientists or public health groups. Doubt, suspicion, fear, and mental tension can be created and maintained by one type of presentation of a situation. Balance, poise, a judicial attitude, and calm deliberation can be engendered by another. For at least four years there have been repeated, sensational, and fear-arousing statements and resultant headlines on the theoretical lethal nature of tobacco smoke.

The repeated expression of these views, however, is no measure of their general acceptance by all who are concerned with the problems involved. For instance, the statistical evidence in support of the cigarette theory has not been accepted as proof of generalized conclusions about smoking by a number of distinguished statisticians, among whom may be mentioned especially Dr. Joseph Berkson, Section of Biometry and Medical Statistics of the Mayo Foundation for Medical Education and Research in Rochester, Minnesota.

There are certain unfeared but fundamental contradictions in different statistical papers from which points of agreement have been selected for presentation by advocates of the "cigarette guilt" theory.

For example, the implication of the American school of cigarette theorists is that inhalation and, therefore, direct contact of smoke with lung tissue is an important factor in the origin of lung cancer. On the other hand, certain British investigators state that it would appear that inhalation is a "negligible" factor. If this is the case, direct contact is not an important element. In any attempt to identify a suspected agent or agents, these two possibilities are an unsolved complication and are evidence of incomplete knowledge.

The clinical pathological data of one American Cancer Society grantee was hailed by the then

medical director of that society as "the very evidence skeptics demanded." These same data have not been so evaluated by a considerable number of trained clinical pathologists not affiliated with the American Cancer Society but familiar with much more data of a similar nature.

The reports of inducing skin cancer on some mice by smearing highly concentrated tobacco smoke condensates have been countered not only by similar experiments failing to result in cancer but by universally negative carcinogenic results reported by a number of investigators following the inhalation of cigarette smoke or its injection directly into the lungs of rodents.

Such contradictions in findings and interpretations could be continued at length, and indeed have been in many authoritative scientific publications, but these few are cited merely as evidence that the status of research into lung cancer involves many unresolved differences in concepts about possible causation and also about its relative incidence and increased frequency.

In accepting and carrying out the responsibility of developing a research program in tobacco use and health for the Tobacco Industry Research Committee, my colleagues on the Scientific Advisory Board and I believe the cause of scientific investigation is best served by adherence to our stated position that definitive conclusions or predictions of individual risks are unwarranted by the present state of knowledge in this complex field.

INDUSTRY ASSURES FREEDOM IN RESEARCH

Some people question, as might be expected, whether the tobacco industry is honest in its efforts to find the whole truth. The conditions under which Tobacco Industry Research Committee grants are made guarantee complete freedom, unhampered conduct of research, and uncensored publication of any and all results.

The tobacco industry was and is aware of the seriousness of the implications in the charges against smoking. The industry intends to support research until these charges can be proved or disproved by direct experimental evidence. Even cynics will admit that the industry cannot afford as a practical business matter to offer products which have been so definitely attacked without making every effort to find out the whole truth and, if and when any substance is identified and is shown to be harmful, to do its best to eliminate it. The industry is aiding research for scientific facts and will continue to do so. But it need not accept as final opinions based on incomplete evidence that is challenged by others. Nor does it feel able to "remove" from its products substances

the nature, presence, and existence of which are generally admitted to be unknown.

In these circumstances, the industry chose a course that is unusual, if not unique, for business-supported research. Scientists were given full responsibility for determining what research is needed and who should do it. The Scientific Advisory Board, of which I am chairman, has complete freedom in allocating the research monies, now amounting to some \$2.2 million, to investigators in leading U.S. research, medical, and educational institutions. The board considers proposals for projects on their scientific merits and the prospects of constructive findings. The board may also initiate research ideas and then seek out qualified scientists to develop and conduct the needed lines of investigation.

It is important for the public to remember that the members of the Scientific Advisory Board, in their approach to this research responsibility, take the position that smoking has not been proved guilty or guiltless in matters affecting human health. Their attitude is that statistical and indirect evidence does not prove its guilt as a causative agent. The open question of its innocence or its guilt can best be answered through unhampered research for the full facts.

THE RIGHT TO LEARN AND TO INFORM

The board members do not deny the right of any individual to state his belief in the guilt of smoking. Along with many independent research scientists, they do and will as scientists insist on maintaining their right to their own criteria for judgment and for the opportunity to inform the public concerning the reasons for their position.

They will do this until they possess evidence which they consider meaningful and conclusive on each and every research step. They will do this in spite of expensive and extensive pressure propaganda, and in spite of personal misinterpretations and attacks.

These statements of honest doubt, shared by many scientists, do not constitute a "controversy," and those who feel as does the Scientific Advisory Board will not be driven into admitting it to be such.

There has been no organized effort or campaign to claim that tobacco has been proved innocent, because those who, like the Scientific Advisory Board, desire a full and complete analysis of its effects are still in search of the answers. Similarly, there has been little widely publicized presentation of negative evidence relating to tobacco use, such

as there has been of reports by those who are already convinced that they have found proof of its guilt. This is not surprising, for it is satisfying to proclaim you have surrounded the enemy and that mopping up activities are all that is needed. But to state that strong enemy forces are still undetected and that a long hard campaign lies ahead is irritating to the generals who are claiming the victory.

It seems, however, to those who will have some responsibility for the continued campaign, that the public—the troops on the firing line—deserve to be told what the whole evidence is and of the likelihood that the battle is not won and then be allowed to decide for themselves what the dangers, real or imaginary, may be.

About fifteen years ago there were headlines and a propaganda flurry based on statistical evidence that direct exposure to sunlight was a causative factor in skin cancer. This point of view, which was widely accepted, received support from experiments showing skin cancer on the ears of rodents following exposure to ultraviolet light, a component of sunlight. In spite of this, no one asked for legislation to bring back the bathing regalia of the gay nineties, and no one attempted to educate children not to visit beaches or to wear sun suits, nor were farmers and sailors urged to carry umbrellas.

From the first charges that tobacco might be a causative factor in lung cancer and cardiovascular disease, there have been repeated efforts by some ardent laymen and some already convinced scientists to activate debate and controversy with those who desire further information before they feel ready to take the trip to Canossa.

It may be that some day—perhaps soon, perhaps years from now—we shall know what part or parts various factors play in the etiology of lung cancer in man. When we do, tobacco use may or may not prove to be one of them.

Today, while we are making real progress in lifting the cancer curtain, we should not be misled into thinking that one glimpse behind a raised corner of this curtain reveals to us all the knowledge that remains to be unearthed.

The public has been heavily propagandized along one definite theory of causation by those convinced by one level of information. Some of us demand a different order and level of knowledge before we accept causation or condone presentation of conclusions to the public. We claim merely the right to pursue knowledge through scientific research, the right to hold our point of view, and the right of the public to be aware of it.