PROSPECTION: ALCOHOL, DRUGS AND TRAFFIC SAFETY IN 1989

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The Scientific Program Committee has asked me to address this last plenary session on the theme of "Prospection" -- a look forward to T89. When the Committee invited me several months ago, it was under the assumption that I would be serving as host for our next International Conference on Alcohol, Drugs and Traffic Safety since the Boston University Schools of Medicine and Public Health had offered to sponsor T89 in Boston. As you may know by now, the International Committee yesterday voted unanimously to accept an invitation from the National Safety Council to hold T89 in Chicago. For my part, I will support this decision and will concentrate now on working hard toward assisting wherever possible in conducting a meaningful and stimulating International Conference in Chicago.

My crystal ball is from Boston, so it does not show Chicago as clearly. Nevertheless, since the scientific developments should proceed quite independently of the actual location of the International Conference itself, I will attempt to forecast the kinds of developments to be expected three years from now at T89 in Chicago.

First, I predict that we will see further differentiation and refinement in a number of research areas by 1989. By "differentiation", I refer to development from the one to the many, from the simple to the complex, from the homogeneous to the heterogeneous, as well as to identifying and determining differences between things easily confused. By "refinement", I refer to making improvements by adding or introducing subtleties or distinctions.

The plenary session chairmen have just presented a summary of those central themes which emerged from their sessions during this International Conference and which they in turn emphasize as the wave of the future. For example, we have heard about the need for further differentiation among the drugs; that is, among all the various categories of drugs, since we do not have just one category -- "drugs" -- as in the case with ethanol. Even though we have three different major alcoholic beverage types, the effect of the common element -- ethanol -- is taken to be essentially the same in all three types, although there may in fact be some interesting differences between them. For example, some controversy has been generated recently over the "alcohol equivalence of beer, wine, and distilled spirits on a standardized drink-by-drink basis.

We can expect both differentiation and refinement on this issue -- hopefully by T89 -- because of its particular relevance for public safety, e.g., for...
public information campaigns, for prevention, for enforcement, and for adjudication.

Our understanding of the role of drugs other than alcohol in traffic safety problems is much less developed. For example, we have heard that we need to have much more specific analysis for the presence and influence of drugs in the driving population. We will certainly hear more about this issue at T89 and perhaps by then will also learn about further refinements in the specific analysis of those drugs especially relevant for public safety.

We have also heard informally in the discussion areas outside the auditorium that drugs seem to be just a very tiny portion of the problem on the highways.

Some of the previous speakers have also emphasized that alcohol continues to be the primary drug of abuse as far as traffic safety is concerned. This statement may indeed prove to be true, given another three years of research prior to T89. On the other hand, this sort of statement may simply reflect our inability at this point in time to be specific about the influences of the various other drugs, as well as about their respective contributions to the traffic safety problems. We will see. This issue is a challenge; it is a gauntlet thrown to us by several of the speakers, and I predict that it will be one of the major themes for T89.

Finally, I see increasing differentiation and refinement in many of our specialty areas by T89. In the early stages of each research specialty, we tend to see the problems or the phenomena in terms of a black versus a white. But as we learn more about a particular phenomenon, we begin to be able to differentiate shades of gray between the black and the white.

We have seen this development in subfield after subfield within the various disciplines which were represented at this International Conference and which will be represented again at T89. We have seen increasing differentiation and refinement over the years in breath alcohol versus blood alcohol determination; in police enforcement work; in laboratory, simulator, and field experiments; and in identifying the characteristics of drunken drivers. And that is the way it should be. What is different now, however -- and can be expected to continue in the near future -- is the rate of increase. We are witnessing a greatly increased rate of differentiation and refinement and, I predict, can anticipate even further increases in this rate by T89.

Secondly, perhaps the single most important development for the structure of T89 will be the attention to a more conceptualized and more theoretical approach to the whole field of alcohol, other drugs and traffic safety. Relative to other disciplines, we suffer enormously from the lack of a cohesive theoretical approach. Part of the reason is that our problem area involves such a broad spectrum of specialities, ranging from the micro-analysis of toxicology to the macro-analysis of the behavioral and
social sciences. We need an internationally concerted effort to pull these various levels and points of view together, not in terms of a consensus, but rather in terms of conceptual models. In turn, they will provide us with the basis for generating hypotheses to be tested as part of a cohesive theoretical whole rather than in the isolation of individual studies scattered here and there around the world.

As has been the case to date, for example, the study of a particular issue may be funded in one country by the traffic safety agency, in another country by the police, in another country by the drug abuse agency, and in yet another country by the alcohol abuse agency.

Given this fragmented situation, we lack the ability even to compare the data from studies with such diverse orientations and emphases. We also lack the ability to obtain a cohesive whole which would not only represent a more efficient use of world resources, but would also provide the basis for stimulating further hypotheses and doing so as efficiently as possible in terms of our limited resources.

Several conceptual models have in fact been presented here in Amsterdam. Bravo! Let's have more of these, and in particular let's have some of them tested and validated by T89. In addition, we have heard here about one computerized mathematical model for the efficient use of empirical data to enable examining in a matter of weeks or months what otherwise would take years to decades to test in the field.

Thus, one could manipulate one specific (or general) deterrence measure after another in the computer model and thus pretest one hypothesis after another. One could also generate subsequent hypotheses which in turn could be tested in the field more efficiently than could be done without the benefit of the computer model pre-testing. Hopefully, we can look forward to further use of this computer model for the examination of additional traffic safety problems by T89.

Thirdly, we will see much more selectivity and focus regarding research issues and projects by T89. In the United States, for example, we have seen two major waves of activity in the area of alcohol and traffic safety. The first was the enormous impetus provided in the early 1970's by the National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation. The high level of activity in the field generated by the initiative from NHTSA began decreasing in the mid-1970's to a low volume trickle in the late 1970's, as it still is today.

At the height of this impetus, many investigators were attracted to the field of alcohol and traffic safety and numerous studies were conducted.

Now, however, that wave is past and many excellent investigators have moved to other research areas.
The second wave was generated around 1980 and stems from the grassroots movements such as MADD (Mothers Against Drunk Driving), SADD (Students Against Drunk Driving), and other similar organizations. These grassroots movements have successfully stimulated politicians, other decision-makers, and keepers of the action program and research funds to pursue the problems of alcohol and traffic safety further. Although most of this activity has had a public safety orientation, an increasing amount has also represented the public health point of view.

But the main question is whether or not the impetus of the second wave will continue and, if so, for how long. The study of previous social movements suggests that the influence of the second wave will not continue much longer.

With a view to the future, then, we will clearly have to become much more selective, much more efficient, and much more compelling in our arguments for the kinds of research that need to be done. In so doing, we would be wise to use conceptual models and computer models to aid us in efficiently targeting the highest pay-off problems rather than conducting variations on low pay-off themes. Thus, one of the main developments for T89 and for the future will consist of becoming increasingly selective in our choice of research priorities.

We must present our very best case for competing at a policy level and for coordinating our activities at the more social and political levels of influence.

In summary, I see three important developments that should await us at T89:
1. An increasing rate of further differentiation and refinement in a number of important research areas.
2. Increased attention to a more conceptualized and more theoretical approach to the field of alcohol, other drugs and traffic safety, including the use of computer models.
3. Increased selectivity in determining and supporting research activities in alcohol, other drugs and traffic safety.

Finally, as the last plenary speaker, may I take this opportunity to thank the Scientific Program Committee and the Organizing Committee for producing a truly amazing International Conference. It has clearly been one of the best in recent memory.