what used to be technical questions into policy ones." "It's perfectly clear," says psychobiologist Richard F. Thompson, "that all the major problems this society faces are right in the center of ABASS interests. The major problems are social and behavioral. The government is just beginning to realize that."

And since all these massive problems leave individual disciplines flailing, an interdisciplinary approach to them seems the only alternative. That is why ABASS considers itself to be the right development at the right time.

It is clear the assembly does not want to waste its limited resources on nit-picking matters when all these cosmic questions are lowering on America. Consequently, according to Goslin, it is attempting to put more emphasis on questions that bear directly on substance rather than organizational and management processes—hence the burgeoning of area 3.

Particularly relevant to the cosmic questions is a committee (as yet sponsorless) now being organized by ABASS around "individual and social perceptions of risk." People's perceptions of risk are generally not in line with actual probabilities of disaster. Bell cites as an example the fact that despite the knowledge that their coast was storm-prone, only 20 percent of coastal dwellers in Massachusetts proved to have flood insurance when the recent blizzard hit. On the other hand, she observes, many people are very uptight about nuclear power even though the risk of a major accident is said to be vanishingly small. Bell adds that looking at things from a perception-of-risk angle may help policy-makers figure out why so many teen-age girls get pregnant even though they know about sex and contraception.

There are many other sweeping matters ABASS would like to examine if it can get the money. One is a study of the practices of federal regulatory commissions. Another is urban development. But these topics, however important, are too global to be of practical interest to any single client.

ABASS would undoubtedly like to put more of the heavy talent at its disposal into grander topics. But, as Handler says, "If they want to ask grand sweeping questions . . . they will have to earn their way until they are so firmly established that when they pound the table saying you must provide money that 'must' will have weight."

Says Goslin: "We have a long long way to go to get to the point where the physical sciences are."

—CONSTANCE HOLDEN

# Bicycling and Health: Braving Bad Air

A young, healthy man bicycles to his office in the city. It is hot and muggy outside and the pollution index rises steadily as the day wears on. At the end of the day, the man hesitates to ride home. Should he leave his bike at work and accept a ride home with his friend who drives an air-conditioned car? Just what are the effects on health of bicycling in hot, polluted air? According to a recent Department of Transportation (DOT) study, there may actually be no major adverse short-term effects on health as a result of bicycling in these conditions. So if the young man feels up to facing the hazards of traffic, he may as well bicycle home.

Drawing by Martha Bari

The DOT study was admittedly small in scale. It was supervised by Michael Waldman, Sharlene Weiss, and William Articola of Messer Associates, Inc., of Silver Spring, Maryland. With the help of Patrick Gorman and his staff at the George Washington University Medical Center, they selected ten healthy men between the ages of 23 and 39 to brave the rigors of Washington's heat and pollution during the evening rush hours from 23 May to 22 July 1977. Seven of the volunteers rode their bicycles; three rode in air-conditioned cars.

The study participants were assigned routes that ranged from one with high traffic density and tall buildings (which presumably bottle pollution) to one with low traffic density and only a few low buildings. Each route ended at the George Washington University Health Center, where the participants' conditions were examined by means of blood tests, exercise tests, pulmonary tests, and checks of symptoms such as coughs, wheezes, headaches, and eye irritation.

The investigators report that the bicyclists were more likely than the motorists to report symptoms of fatigue, sore throat, laryngeal irritation, and eye irritation. These symptoms were most common when the concentration of nitrates along the routes was high, and nitrates were as likely to be present on routes with high traffic density as on those with low density. At least two of these symptoms may not be direct effects of the heat and pollution, however. Sore throats may be more accurately termed dry throats the investigators suggest, because the bicyclists were instructed to breathe through their mouths. And eye irritation was sometimes caused by particles in the bicyclists' eyes.

The study participants who rode in air-conditioned cars tended to have more carbon monoxide in their blood than the bicyclists. This may be because the bicyclists were more mobile and able to avoid long waits in traffic jams. The performance of neither bicyclists nor motorists in exercise tests, tests of cardiovascular function, and tests of pulmonary function deteriorated after their ordeals in the traffic. The few minor symptoms reported (such as eye irritation) were "transitory in nature and disappeared quickly," the investigators say.

The study designers stress that their conclusions apply only to young healthy male non-smokers and that more research is needed. But, according to Leslie Baldwin of DOT, everyone associated with the study was surprised at how innocuous the short-term effects of heat and pollution seem to be.—GINA BARI KOLATA


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