

## The 'perception gap' in urban transportation

The problems associated with chaotic urban transportation systems in the United States promise heated controversy and agonized choices during the current decade and beyond. But among engineers, scientists and administrators involved with these problems a modicum of agreement, at least as to definitions, appears to be developing, if a National Academy of Engineering symposium on urban transportation last week in Washington was an indication. It appears that from now on, the controversies may be mostly at the level of legislatures, city councils and county commissions, and among the general public—rather than among the transportation professionals.

The agonized choices almost all can be reduced to decisions regarding the degree to which cities will allow the automobile to remain as the major mode of transportation and the degree to which they will insist on alternative systems, and how they will insist on these systems. The technology for the alternative systems appears to be far along; the problem is the institutional one of convincing people they should pay for and use them.

Among the professionals there appears to be agreement with the views expressed at the symposium by James M. Beggs, under secretary of transportation: ". . . Cars, en masse, create congestion, cause pollution, and consume inordinate quantities of real estate. An urban transportation system based on the private auto is, by its very nature, grossly inefficient. It does not have the capacity to satisfy urban mobility needs and, as we have learned all too well these past few years, it can have a serious negative impact on the quality of life in our cities."

But it was obvious at the symposium that there is an immense gap between this perception, shared though it may be by the professionals, and the perceptions of the average citizen for whom the automobile is still an extension of self. The only way to cope with this perceptual gap, suggested Mort Hoppenfeld of the Rouse Co., developers of Columbia, a planned city near Washington, is to "create community development entities—public and private and combinations of the two—which would be able to put to work a new way of thinking about cities."

Hoppenfeld made clear that he was not talking about the kinds of city planning that go on currently, but rather about the creation of entirely new urban systems which would integrate every aspect of life. For instance, he suggested that one of the most important features of a small local bus

system in a new planned community might be its arrangements for maximum social contact between bus driver and passengers. Thus, although the driver might be serving passengers of several social classes, they might all be part of the same community—and the driver would live there, too. Riding the bus, Hoppenfeld suggested, could have a high value to users beyond mere transportation. But the achievement of such integrated communities, he added, involves hurdling some obstinate institutional and jurisdictional barriers. Not even the professionals at the NAE ses-

sions could agree on how to overcome them. Hoppenfeld's recommendation that increased land values from new mass transit systems accrue to the public rather than to speculators was clearly rejected by some participants. And Archibald C. Rogers, vice president of the American Institute of Architects, also an advocate of integrated growth policies, strongly chided NAE and the National Academy of Sciences for a recent land use report they did which recommended that no national land use policy for urban development be established at this time. □

## Does schizophrenia get its start early in life?

A year ago, at the first annual meeting of the Society for Neuroscience, Virginia Johnson, a Los Angeles clinical psychologist, reported that patients given methyphenidate were able to recall experiences from the first few weeks of life (SN: 11/6/71, p. 313). Such experiential recall, she said, indicated that neonatal experiences were frequently related to psychopathological symptoms seen later in life. At the second meeting of the Society for Neuroscience, last week in Houston (see p. 264), Johnson suggested that certain of these early life experiences (schizexperiences) might be necessary conditioning factors in the development of schizophrenia.

Johnson's schizexperience concept is based on clinical histories reconstructed through medical records, experiential recall and on analysis of more than 25,000 hours of interviews with subjects representing a wide range of psychopathological syndromes.

The experiences that most often correlated with symptoms of schizophrenia tended to involve a deep or extended altered state of consciousness (ASC) shortly before or after birth. ASC refers to a state of consciousness that deviates from that of the alert, awake, normally functioning adult. The most common conditions contributing to ASC are traumatic or disease states characterized by prolonged confusion or deep coma during which habitual controls and organization of thought processes are impaired. Shock, acute pain, fever, concussion and anoxia are some variables that can result in ASC. The mental disorganization that accompanies these states is similar to the symptoms accompanying schizophrenia.

The symptoms characteristic of schizophrenia usually include the flat affect (inappropriate emotional response); distortion of communication (private meanings); and withdrawal or seclusiveness (impaired interpersonal relationships and loss of reality contact with the environment). Johnson has found that the specific behavioral patterns

manifested by schizophrenic subjects are determined by the nature of the original schizexperience or ASC. This, she says, is because the disorganization experienced during one of these states is imprinted on the memory and is thus subject to recall under the proper conditions. One or more of these dissociative, and sometimes catastrophic, experiences may establish prior learning, she says, that leads to the characteristic schizophrenic process.

The schizexperience, whatever the trauma responsible for it, also relates to the external stimuli present at the time of the trauma and therefore varies with the individual and the experience. This, she contends, accounts for the wide range of schizoid behavior. Without such prior schizexperience, she explains, schizophrenia will not occur.

As an example, Johnson mentions auditory hallucinations, one of the most common and widely accepted symptoms of schizophrenia. Johnson proposes that these hallucinations reflect an auditory memory conditioned at the time of the schizexperience. During the final weeks of pregnancy a child can hear. During the traumatic trip through the birth canal a child can hear even more clearly. It is possible, says Johnson, that under the proper conditions an auditory input could become part of a schizexperience. Thus, the schizophrenic hallucinations (they usually tend to repeat a stereotyped theme) could be voices heard in a prior learning experience shortly before or after birth.

Johnson admits that another attempt to explain the causes of schizophrenia would seem to be a useless endeavor. But at least with this theory, she says, there are certain recognizable high-risk factors that are known and can possibly be controlled for. Examples are conditions in the last trimester of pregnancy contributing to central nervous system dysfunction in the fetus, perinatal trauma resulting in ASC and complications in the immediate postnatal period such as emergency surgery, drug reactions and toxicity. □