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## *Informal Notes on Sociological Effects of Highways*

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•THE SOCIOLOGICAL effects of highways are many and diverse. They are both direct and indirect. It is virtually impossible to separate the user effects of a sociological nature from the non-user effects. There is a school of thought which asserts that effects of these kinds are actually transferred from user to non-user groups.

The first question that might be asked is: What are these sociological effects and can they be identified? In this connection, it might be indicated that the very fact of highway and motor vehicle use, in and of itself, is a sociological manifestation. The highway business considers origin-and-destination studies as a part of the highway planning process. In the past, they have been dealt with in an engineering environment largely. Actually, these define sociology in action.

The highway improvement process itself also involves certain impacts of a sociological character. Urban highway improvement especially results, of necessity, in a certain amount of displacement and relocation of residence. The Federal-Aid Highway Act of 1962 provides for the rendering of relocation advisory assistance to this class of persons and permits Federal reimbursement of the costs of moving such families, up to a maximum of \$200 each, if such costs are authorized to be paid under state law.

Also included in this general subject matter is the matter of highway aesthetics. Highway officials have become increasingly concerned with aesthetics and are seeking to build facilities that will be pleasing to the eye as well as functional in their operations. Higher standards of performance in this area are present today than ever before.

Control of billboards along defined corridors of the Interstate System is authorized by the Federal-aid laws, and a bonus of 0.05 percent is authorized to be paid to those states which voluntarily embrace the program. About half of the states have already enacted the necessary legislation, appropriate agreements have been executed, and some of the states have already received bonus payments.

Highway officials are presently emphasizing the preservation, to the maximum extent, of fish and wildlife habitats and historic monuments. They are participating in studies that hopefully will lead to the preservation of some of the best of the nation's wild rivers. Additionally, a study is under way to define and establish a national program of scenic roads and parkways through the vehicle of the Recreation Advisory Council.

All of these programs and developments might be considered to define elements of the sociology of highway transportation. There are also other elements. Perhaps we could get some better insight into them by reference to several works in this area. For example, some interesting implications for sociological transportation research have been posed by Meyerson (1):

What is the meaning of driving to the individual: does the suburban wife-mother become in large measure an unpaid chauffeur? Does ferrying her family about deny her time she believes would be spent more advantageously on other activities of her choosing, or does the resulting contact with other aspects of the community expand what might be a privatized, lonely existence? For the adolescent boy has driving the family car become a sign of maturity as the wearing of

long trousers used to be? Is driving regarded by the commuter as a skill in which pride of accomplishment may be measured, or is it a chore, denying the person time to spend, say, in reading the newspapers (which could be done on mass transportation facilities)?

To what extent are contacts with other persons minimized or maximized through transportation facilities? Does the automobile help to build family solidarity through shared experiences (in a confined space)? What types of conversations with how many persons can be carried on in one mode of transportation as contrasted with another? Do carpool riders build up a special feeling of identity and interaction with each other? Do people prefer to pool rides or to drive alone? How are reactions to minority groups likely to be structured—e.g., is there a qualitative difference in interaction on a mass transit vehicle and the attitudes engendered through private vehicle operation contact?

To what extent is commuting regarded as pleasant? What are the limits of tolerance in terms of commuting time, distance, noise, other irritants? Does commuting permit a transitional or adjustment period from one major role to another, say the shift from occupational role to parental role? (Sociological literature has indicated that individuals play many different roles—a person may be a plumber, a father, a Mason, a member of the school board, an Irishman, a taxpayer, a musician, a union member, a reader of a metropolitan newspaper.)

Another study (2) derived data concerning the impact of highway improvement on local governmental services, including education, fire and police protection, and libraries. This subject matter involves the sociology of the human being, if ever there is such a concept.

Up to this point, we have been talking mainly about highway transportation and sociology. We could extend the field considerably by indicating that all kinds of transportation are involved in the sociological impact. Transit, whether it be bus or fixed rail, also implies certain sociological consequences, some good and some bad.

A discussion of transportation, especially in its urban environment, necessarily involves many other related elements—elements which involve the human being in relation to other humans. For example, transportation cannot be discussed without almost immediately getting involved with land use. Therefore, we must talk not only about transportation but also about overall planning and all other activities which affect or are affected by transportation.

A complex of private activities are also involved. One of the university groups engaged in highway research recently completed a first study of the impact of highway transportation on the medical services industry (3). Three or four decades past, the doctor went to the patient. This was the era of the country doctor. The doctor paid the transportation bill directly, and the number of patients he could attend during the course of a day was defined by the efficiency of his transportation vehicle, the nature of the roads, and the elements. Today, due to the motorized vehicle and good roads, the doctor is domiciled generally in a clinic or complex of medical offices. The patient comes to him, and the patient pays the transportation bill. This means that the average doctor can now see 15, 20 or 25 patients a day, rather than the 4, 5 or 6 whom he formerly saw during the course of a day. Understandably, this fact, above all else present, has accounted for the fantastic increase in the income of the average medical practitioner.

Another matter which merits at least brief comment concerns the measurement of this sociological impact. In recent years, efforts have been made to quantify such effects, as well as their economic counterparts or associates. Some students of the problem have thrown up their hands in defeat, asserting that it was futile to seek quantifications.

The author does not share this defeatist attitude. If we persist, we will be able to derive reasonable measures of quantification of these elements. Quantification, however, does not necessarily refer to measurement in dollars. Quantification can be in other terms and can be put on a comparison basis. For example, if a city offers free concerts to its inhabitants, it would be almost impossible to measure the benefits

derived in dollars. But we might ascertain how many citizens attended each of the concerts and what percent this was of the total in the area. Other meaningful relationships could be developed which would certainly be helpful in evaluating the benefits of the concert series. The same thing could be done with sociological and economic data.

In conclusion, several other works on highway sociology should be mentioned, including one by Black and Black (4) and another by Thiel (5). Highway location studies in several states have also explored economics and sociology to a considerable extent. These include the Inner Belt studies in Boston (6), the Westside Freeway studies in California (7), and freeway studies in Tallahassee, Fla. (8).

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## *Who Makes the Trips? Notes on an Exploratory Investigation Of One-Worker Households in Chattanooga*

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•THE ANALYSIS of urban travel has usually centered on the residential unit and the amount of travel its members can be expected to generate on an average weekday. Households may be stratified according to number of members, income classification, the number of cars owned or regularly used by members, residential densities, and various other criteria. Trip generation models are often designed to relate to trip modes and purposes.

The trip generation models are used to prepare estimates of future travel demands, based on projected numbers of persons and households, cars owned, jobs available, etc. Much significance attaches to the travel generated for work purposes because weekday peak-hour travel contains a higher proportion of these movements. One of the imponderables of traffic forecasting is the significance that should attach to changing work habits. There is much speculation heard these days about shorter working days