HOW TO REDUCE MY COMMUTING TIME (AND YOURS)
Herbert Mohring

Every adult American has had the unpleasant experience of being stuck in a traffic jam. Our highways seem, at times, to be caught in a dreadful gridlock. Demand for new highways is constantly growing and the search is on for ways of meeting this demand.   While the Minneapolis-St. Paul area is not yet as congested as, say Southern California, our traffic problems do seem to be getting worse.   What, if anything, can we or should we do about this problem? A favorite of modern day urban planners is to provide alternative modes of transportation such as buses or light rail systems. Such systems require very substantial subsidies with fares typically accounting for less than a quarter of operating expenses. In spite of substantial investments in alternative modes of transportation, public transportation use continues to decline in the United States.

Congestion on roadways is an inevitable consequence of the way we charge travelers. In choosing when and how to travel, every road user takes into account the delays they expect, but nobody considers the delays they impose on others. It is entirely rational and sensible for each user to ignore costs imposed on others. But these costs can be sizable. Think of a congested highway in which cars are traveling bumper to bumper. If we add a car in the middle, we delay all the cars behind that car by the time required for a single car to travel one car length.   This is a small cost for each delayed car but it is borne by every automobile that is delayed. In fact, we can roughly estimate the costs imposed on others by adding a single automobile to a congested roadway. This cost is the product of the number of automobiles behind the added automobile and the time required to travel a single car length.   Say we think of adding an automobile in the middle of the pack.   The time that that automobile takes to reach its destination is the is the product of the number of cans ahead of it and the amount of time to travel one car length. So, the cumulative delay imposed on others is exactly equal to the travel time of a typical automobile.

Each traveler takes into account the time required to travel for himself or herself but rationally ignores the equal time cost imposed on others. The solution is to confront people with the *true* costs of travel in congested time periods. Tolls are an obvious way of confronting people with the time costs. With modern technology, it is possible to use transponders to make collection easy.   A possible way of solving the congestion problem is to buy tolls at peak times of travel on specified lanes of highways or even the entire highway. It is important the tolls be higher for peak times travel than for non-peak time travel in order to induce people to change their travel times to do so. It might even make sense to, in the toll revenues, to subsidize non-peak time travel! Alternatively, toll revenues could be used to subsidize buses or other forms of mass transit.   Such subsidies are preferable to our current use of sales and property tax revenues to subsidize mass transit.

Congestion charges do invite heated (and often misinformed) debate. Sometimes they are regarded as unfairly taxing people who simply need to travel at peak time. This criticism is not particularly well-founded. The whole point of congestion charges is to make travel easier for those who simply need to travel at peak times. So, much of the tolls paid by such individuals is returned to them in the form of quicker and easier commutes.

Professor Herbert Mohring of the University of Minnesota has done much of the pioneering work in figuring out how large tolls should be. His best estimate is that an optimal toll on Interstate 35W would be of the rate of 20 cents per mile or about $2.00 to $3.00 for travel from the southern suburbs to Minneapolis. This is not a particularly onerous charge (it is less than the cost of parking in much of Minneapolis) and would go a long way to solving our congestion problem. (Some of his research can be found in a paper titled "Congestion" which appeared in pp. 181-222 of Jose A Gomez-Ibanez, William B. Tye, and Clifford Winston, Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer, Washington, DC: Brookings, 1999.)