

FACTORS INFLUENCING BICYCLE ROUTE SELECTION

by

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Chapter 1

INTRODUCTION

Bicycles are potentially a viable answer to commuter demands for transit modes that can provide personal transportation while alleviating the congestion, pollution, noise, and expense of automobile transit. Bicycles need to be more effectively incorporated into the transportation network because they are energy efficient, inexpensive to operate and maintain, occupy a minimum of space in the urban environment, provide versatility that few modes achieve, are time competitive with the existing modes, and a bonus to one's health and welfare. Although bicycles are becoming increasingly popular, these qualities and others presently are not being realized as many people are deterred from bicycling because cyclists are forced to compete with motor vehicles for a piece of the road. Bicycle technology, current use, and public opinion survey results indicate that the bicycle is a viable form of adult transportation for short urban shopping, work, and recreation trips, but that there is a need for facilities that support bicycle travel.

This thesis concentrates not on the design of bicycle paths but rather the route selection behavior of the cyclist. It identifies the factors that influence the selection of a route by a bicyclist and the variability of those factors with respect to different trip purposes, user types, and socio-economic status. Hopefully the findings of this thesis will promote the design of bikeways that account for the cyclist's perception of route priorities beyond engineering considerations.

Popularity of Bicycles

In recent years the bicycle has become a more popular alternative mode of travel for multi-purpose, short distance, intra-urban trips in the United