



BICYCLE RESEARCH REPORT NO. 18

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J A KROPMAN: MOBILITY, BICYCLE USE AND SAFETY

Shorter journey time would increase bicycle use

The Key Facts

A survey of road users in Delft, Netherlands, has shown that better road conditions for cyclists are unlikely to persuade car users to switch to bicycles. However, any measures which enabled car users to choose freely would be more effective, as these would work against their objective or subjective reasons for using the car.

Contents

Most people in the Netherlands already use bicycles, but it is government policy to increase this use still further; so ways are being sought to achieve this aim. A study has been made of the motives for bicycle use in Delft for this purpose. Since half of all journeys not made by bicycle are car journeys (see Fig 1) car users are the most important target group for an increase in cycle use in Delft.

Measures which intend to influence a change in choice of transport mode can aim to increase the number of people who are free to choose the bicycle from among several other alternatives; this choice begins with the reasons for and against bicycle use.

The Delft analysis shows that up to now it has been mainly the public transport users, and not car users, who have freely chosen not to cycle without having any strong reason for doing so (see Fig 3). One-third of all the car users had subjective reasons for their choice of mode, and only 13% were free to choose. 52% of pedestrians had subjective reasons (14% free to choose) and only 30% of public transport users had subjective reasons (33% free to choose). Thus the potential of the bicycle can best be realized if objective and subjective obstacles for cars and public transport are removed, giving people complete freedom.

The second group of measures aims to influence bicycle use directly. The study showed that the most important reasons for not using bicycles were the negative perception of journey times by bicycle (44%) and pressing practical reasons (35%) - see Fig 2). Thus it seems that opportunities for faster cycling would be more effective than better cycleways and improved conditions for cyclists.



- Survey "Mobiliteit, fietsgebruik en veiligheid" (in Dutch), by Jan A Kropman, Institute for Applied Social Sciences (ITS), in: Proceedings of the Symposium "Perspectieven voor 15 miljoen fietsers" (Prospects for 15 million cyclists) on 21 November 1990 on the 15th anniversary of the Netherlands Cycling Association Fietserbond enfb, Woerden 1991, ISBN 90-79609-09-6
- Addresses ENFB, Postbus 2150, NL-3440 DD Woerden, Tel +31-3480=23119 (source).
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J. Kropman

Mobility, bicycle usage and safety

The theme of this conference can be taken quantitatively and qualitatively. More cycling, but also more amenities and safety. Since more cycling means making less use of other means of transport, the qualitative aspect of (the competitive position of the bicycle should be improved particularly.

The objectives of Government policies (to promote the bicycle and public transport, reduce car usage and improve traffic safety) are partly complementary and partly at odds with each other, as a consequence of the competition between the various means of transport. The means to boost cycling are limited, because, among other things, the Dutch already use (their bicycle intensively. We need to know why people. When going somewhere, choose not to use their bicycle. In Delft they have studied (the motives for bicycle usage. The most obvious target group at which to direct 'bicycle promotion' is the group which can choose freely whether or not to use the bicycle. The bicycles potential can then be increased by removing obstacles (objective and subjective ones) for bicycle usage. Research has shown that the most effective measure is to reduce the (travelling time by bike. Improving road and traffic conditions proved to have far less effect.

However, increasing the number of potential cyclists is not the same as actually getting more people to use their bikes. Then there is also the fact that the group of people who decide to leave their bicycle at home and favour another means of transport is bigger than the group who has actually started using their bicycle. So, the competitive position of the bicycle is rather weak and maintaining the present usage itself needs an active cycling policy.

Measures for improving traffic safety hardly contribute to an increase in the potential user group; only where children are concerned dangerous conditions are an obstacle. Traffic safety measures will be counterproductive with regard to bicycle usage, if they result in longer travelling times for the cyclist. Therefore, attention should be paid to these undesirable side effects.

In reality the contrast between the various means of transport turns out to be less absolute than is often implicitly thought. A considerable number of people sometimes uses their car and sometimes their bicycle for certain journeys. This fact offers a number of leads for a policy aimed at a further move towards a more intensive use of the bicycle.

There is also a clear relation with regard to the link between bicycle and public transport. A policy directed at improving public transport will not only attract motorists but cyclists as well to change over to public transport. And so, promotion of public transport as a means to reduce car usage can be used even more effectively by boosting the use of the bicycle at the same time.



Fig 1. Transport modes for journeys on a typical weekday for the inhabitants of an average-sized town (Delft) in %.

	<u>All Journeys</u> %	<u>Non-cycle Journeys</u> %
By bicycle	40	-
By car	30	50
On foot	23	39
By public transport	<u>7</u>	<u>11</u>
Total (100%)	5.552	3.362

Fig 2. Constraints on bicycle use. This also applies to percentages of the journeys. (N=3362=100%)
Objections to bicycle use for journeys on a typical weekday, in %:

*use of bicycle objectively impossible	12
*compelling practical reasons prevent cycle use	35
*negative perception of journey time by bicycle	44
*negative perception of road and traffic situation	1
*negative perception of comfort of cycling	17
*negative attitude to cycle use	19

Fig 3. Constraints on freedom of choice regarding use of the bicycle, for various transport modes (in%).

	<u>Objective constraints</u>	<u>Subjective constraints</u>	<u>Those choosing freely</u>
All journeys	44	40	16
Journeys by car	54	33	13
Journeys on foot	34	52	14
Journeys by public transport	37	30	33