### THREATS FROM CAR TRAFFIC TO THE QUALITY OF URBAN LIFE: PROBLEMS, CAUSES, AND SOLUTIONS

# THREATS FROM CAR TRAFFIC TO THE QUALITY OF URBAN LIFE: PROBLEMS, CAUSES, AND SOLUTIONS

Edited by

TOMMY GÄRLING Göteborg University, Sweden

and

LINDA STEG University of Groningen, The Netherlands



United Kingdom – North America – Japan India – Malaysia – China Emerald Group Publishing Limited Howard House, Wagon Lane, Bingley BD16 1WA, UK

Copyright © 2007 Emerald Group Publishing Limited

### **Reprints and permission service**

Contact: booksandseries@emeraldinsight.com

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. No responsibility is accepted for the accuracy of information contained in the text, illustrations or advertisements. The opinions expressed in these chapters are not necessarily those of the Editor or the publisher.

### **British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-0-08-048144-9



Awarded in recognition of Emerald's production department's adherence to quality systems and processes when preparing scholarly journals for print



## PREFACE

When thinking about current growth trends in motorized traffic and in particular private car use, there are many reasons to be worried about the future, even the near future. The ever-increasing documentation of negative effects on the environment, most importantly the transport sector's adverse effects on global climate change, is one reason for serious concern. Not enough seems to be done. Some have argued that the political system is non-linear – when the situation becomes *really* severe, politicians will react forcefully. This may or may not be an over-optimistic view.

There must be reasons why the public does not react strongly. The private car is instrumental for many important and desirable activities that people have time to engage in. And they gain even more time from using the car, at least as long as it remains a fast mode of daily travel. However, we know that this is no longer always the case. That people continue to use the car may therefore appear strange. Apparently, other factors account for this: freedom of choice, resistance to change a habit, affective attachment to the car, and the pleasure to drive. A diluted responsibility for undertaking required changes is an additional important factor.

In particular, in urban areas the negative effects of private car use are felt. Noise pollution, air pollution, pedestrian traffic accidents, infringement on land use resulting in the destruction of historic, cultural, and restorative qualities are among the most severe negative threats to the quality of urban life. A primary cause is the immense growth in urban populations, car ownership, and car use.

How can urban-life quality be restored? In any solution private car use must most likely be restrained, although not banished. Is increasing the price a solution? Regulation? Information and education?

We were lucky to manage to recruit scholars as authors of the chapters in this book, who are experts on various aspects of (i) what the threats are from car traffic, (ii) which the determinants of car use are, and (iii) what possible policy measures for curtailing car use can be implemented. This guaranteed a broad coverage of both positive and negative aspects of private car use in urban areas. We hope readers coming from one of the many disciplines represented by the authors of chapters in this book will appreciate this broad coverage. At the same time, we are particularly pleased that all chapters take a behavioural perspective on the problems as well as their solutions. This is needed as a contrast to other perspectives that tend to dominate. After all, it is ordinary people who are both drivers benefiting from the car (excluding the benefits to the car producers) *and* are exposed to the negative effects. We hope that this message will get through to policy makers in the transport sector. vi Preface

We would like to thank all authors for their work and the following persons who were willing to thoroughly review chapter drafts and did so in a timely manner: Staffan Hygge, Lena Nilsson, Dan Strömberg, Bert Van Wee, Erik Verhoef, Bertil Vilhelmson, and Emile Quinet.

Tommy Gärling Linda Steg

October, 2006

### **CONTRIBUTORS**

Gary L. Allen Department of Psychology, University of South Carolina, Columbia, SC, USA

Kay W. Axhausen Institute of Transport Planning, Swiss Federal Institute of Technology, Zürich, Switzerland

Anke Blöbaum Workgroup of Cognition and Environmental Psychology, Ruhr-University Bochum, Bochum, Germany

### Karel Brookhuis

Department of Psychology, Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, The Netherlands; Delft University of Technology, Faculty of Technology, Policy and Management

#### Dick de Waard

Department of Psychology, Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, The Netherlands; Delft University of Technology, Faculty of Technology, Policy and Management

Philippe Domergue Conseil Supérieur du Service Public Ferroviaire (CSSPF), Paris, France

Satoshi Fujii Department of Civil Engineering, Tokyo Institute of Technology, Tokyo, Japan

Tommy Gärling Department of Psychology, Göteborg University, Göteborg, Sweden

*Birgitta Gatersleben* Department of Psychology, University of Surrey, Guildford, UK

Robert Gifford Department of Psychology, University of Victoria, Victoria, BC, Canada

Reginald G. Golledge Department of Geography, University of California, Santa Barbara, CA, USA

*Phil Goodwin* Centre for Transport and Society, University of the West of England, Bristol, UK

### viii Contributors

*Terry Hartig* Institute for Housing and Urban Research, Uppsala University, Gävle, Sweden

*Cecilia Jakobsson* Department of Psychology, Göteborg University, Göteborg, Sweden

Jeff Kenworthy Institute for Sustainability and Technology Policy, Murdoch University, Murdoch, WA, Australia

Peter Loukopoulos Institute for Human-Environment Systems, Swiss Federal Institute of Technology Zurich, Zürich, Switzerland

*Ellen Matthies* Workgroup of Cognition and Environmental Psychology, Ruhr-University Bochum, Bochum, Germany

Henk M.E. Miedema Department of Environment and Health, Netherlands Organisation for Applied Scientific Research (TNO), Delft, The Netherlands

Peter Newman Institute for Sustainability and Technology Policy, Murdoch University, Murdoch, WA, Australia

*Emile Quinet* Ecole Nationale des Ponts et Chaussées, Paris, France

Geertje Schuitema Department of Psychology, Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, The Netherlands

Linda Steg Department of Psychology, Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, The Netherlands

Stephen Stradling Transport Research Institute, Napier University, Edinburgh, UK

John Thøgersen Department of Marketing and Statistics, Aarhus School of Business, Aarhus University, Aarhus, Denmark *Barry Ubbels* NEA Transport Research and Training (member of Panteia), Rijswijk, The Netherlands

Bert Van Wee Delft University of Technology, Delft, The Netherlands

*Erik Verhoef* Department of Spatial Economics, Free University of Amsterdam, Amsterdam, The Netherlands

Bertil Vilhelmson Department of Human and Economic Geography, School of Economics and Law, Göteborg University, Göteborg, Sweden

Charles Vlek Department of Psychology, Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, The Netherlands