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Brookhuis, K.A.

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Book review: Anders af Wåhlberg: Driver Behaviour and Accident Research Methodology; Unresolved Problems

Karel Brookhuis¹

Department of Clinical and Neuropsychology, Faculty of Behavioural and Social Sciences, University of Groningen; Section of Transport and Logistics, Faculty of Technology, Policy and Management, Delft University of Technology

Anders af Wåhlberg has apparently written this book starting from a negative attitude. He has his own ideas about what is acceptable in traffic psychology research and what is not. Throughout the book he sets his face against the established order such as the rather standard way of using accident statistics, against self-reports, well-known and widely accepted relationships such as exposure and accidents, against traffic conflict studies, and even experimental studies in simulators and instrumented vehicles.

Accident statistics nowadays, based on extensive (mostly police) accident reports, have evolved from short texted information in pretty uninformative headings on difficult forms, to balanced digital information sources that turn out to be of unmatched value (e.g. Evans, 2003). afWåhlberg, however, grossly discards that value and seeks to set out for culpability issues as the major source of information concerning the basics of accidents. In line with this thinking is his defence of accident-proneness, revived from the past. To my idea it would be more fruitful to integrate personal characteristics and inclinations such as sensation seeking within the field of personality psychology, in stead of bringing up high correlations in high-number accidents statistics which always produce significant effects. His arguments for accident proneness, with the aid of linear regression techniques, are not very convincing, and rather odd-looking. Even more puzzling is his attack on the so-called low-mileage bias. It has been reported a number of times that accident rate per distance covered is related to driving experience. In other words, drivers that drive a lot tend to have a lower accident rate than drivers that do not drive much. afWåhlberg argues pretty cynically against this proposition with the argument that "... the usually over-learned and automatic skill of driving must deteriorate rather fast if the amount of driving is reduced ...". However, while this argument would apply to the very basic skills, which indeed do not deteriorate rather fast since they are over-learned by nature such as handling the wheel and pedals, it does not apply to other skills. The less frequent events, situations and matching actions are not so quickly internalized and automated because it needs repetitive occurrence within a reasonable time frame before controlled processing shifts to automatic processing (Shiffrin and Schneider, 1977), or, before rule-based actions turn into skill-based actions (Rasmussen, 1985). The less frequent the event or situation the more likely a high-mileage driver would profit in that sense.

¹ Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands, T: +31503636772, E: k.a.brookhuis@rug.nl

I found the book rather difficult to read, or perhaps I should say rather difficult to finish. His lengthy defense of using the outcome of accidents in terms of who-dun-it, supported by rather complicated (meta)analyses, is not very exciting unless you like an in-depth treatise about methodology. The sometimes utterly negative treatment of what other (well respected) traffic psychologists consider useful techniques and measures is partly responsible for that. He is rather bitter about the establishment that has not accepted some of his submitted manuscripts that offend rather than reason closely. I had the honour of reviewing one of his, admittedly thoroughly written, manuscripts. The rather hostile lecture against the DBQ (Driver Behaviour Questionnaire) overshadowed his arguments. Naturally we should be receptive to arguments against weak methodologies, some of us are perhaps a bit too much inclined to be sloppily applying methods and analyses that are not warranted given the questions raised or objectives pursued.

The most disappointing aspect of the book is that it justly discusses the validity of a wide variety of premises and assumptions that are usually adopted in driving behaviour studies but offers no decent alternative to study safety of driver behaviour. It can not be that all the attacked research efforts (in the western countries) are totally unrelated to the grossly improved traffic safety in the past 40 years. Since research efforts in traffic and transport were substantially increased starting in the seventies, among others, traffic safety enhanced tremendously. For example, in the Netherlands the number people killed in traffic dropped from more than 3000 to less than 1000 in 40 years time. Perhaps a more distant view would help afWåhlberg to climb out of the details and numbers that he seems to be entangled in.

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