Analysing traffic conflicts – comparing the Swedish Traffic Conflict Technique (TCT) and the Dutch Objective Conflict Technique for Operation and Research (DOCTOR)

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Solely relying on accident statistics when assessing accident risk on a specific location or in a specific traffic situation in most cases does not provide sufficient information to define accident risk or to reveal the underlying mechanisms of unsafe situations. Important shortcomings of these accident statistics are: - not all accidents are reported (report rate is related to the accident’s severity and road-user type), - accidents are rare events, making it difficult to relate accident probability to actual traffic accidents, - the preceding chain of actions of an accident in most cases is not reported, making it hard to develop insights into the causes of unsafe situations. In order to face these issues, several methods of conflict-analyses have been developed. These approaches are based on the idea that conflicting interactions in traffic (‘unsafe situations’, in which a collision would have occurred if one or both road-users had not changed speed and/or direction) are related to accident risk. Two well-known methods are the Swedish Traffic Conflict Technique and the Dutch Objective Conflict Technique for operation and Research (DOCTOR). Both methods use somewhat different indicators and definitions to define a conflict and its level of seriousness. Whereas these methods were already developed in the 70’s and 80’s they are regaining popularity, partly due to the fact that technical developments provide us with possibilities to make the application of these methods less time-consuming and data-processing more accurate. In the current paper, strenghts and weaknesses of both methods will be elucidated. Differences in findings when applying both methods will be illustrated by a study into roaduser behaviour on two locations in Aalborg (Denmark) and Oslo (Norway). Both locations (4-armed crossings) have a fairly comparable infrastructure, having a cyclist-lane on the main road and a zebra-crossing on each arm. In order to see whether cycling safety as well as cycling culture between the two locations differ, typical as well as critical interactions between motorized traffic and cyclists will be considered (based on camera-observations). Finally, future challenges for improving validity and reliability of conflict-analysis will be discussed.