

Title	認知フレームの分割と多重化が自動車内会話に及ぼす影響に関する研究
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A study on how in-car communications are affected by dividing and multiplexing cognitive frames

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A motor trip with family members or intimates is very popular entertainment. In such a motor trip, not only activities at destinations but also in-car communications among passengers and a driver are very important to develop deep and warm relationships. However, the in-car communications are more likely to be divided into several groups: front-seat group and back-seat group, or the driver and the other people. Thus, it is difficult to share a single topic among all in-car people.

Previous studies have considered that a difficulty of listening to other person's voice is one of the significant causes. This difficulty derives from road noises and the arrangement of seat in car. In contrast, the author hypothesized that the main factor of this division is “partitioning and multiplexing cognitive frames caused by differences of the passengers' eyesight.”

To validate this hypothesis, the author conducted experiments to record in-car communications under different conditions that provide subjects with different eyesight. Three experimental conditions were prepared. The first one is "the condition that all the passengers and the driver have normal eyesight", the second one is "the condition that the front-seat passenger's eyesight is limited by wearing a visor", and the last one is "the condition that the back-seat passengers can obtain forward view of the car by using monitor displays located on the back of the front-seats". These experimental conditions are decided based on results of some preliminary experiments.

By analyzing the recorded videos and voice data as well as by interviewing the subjects, the author investigated the effects of the eyesight of the passengers and the driver to the in-car communications and validated the hypothesis. As a result of the analysis, it was confirmed that it is difficult for the passenger with limited eyesight to participate the in-car communications, and that the back-seat passengers provided the forward view are more likely to participate the conversations between the front-seat people.