Research on Drivers"" Judgment of Distance Between Passenger Car and Outside Objects

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ABSTRACT

Most drivers may experience the same difficulty in the city to go through a narrow lane or to park the car quickly in a parking space along the roadside. At this situation, drivers ’ judgment of the distance between the car and the outside objects is very important. However, because of the hindering of car body structure, most drivers may not be able to have a correct distance judgment. In order to improve such a situation, this research aims to find how exterior form of passenger car influences drivers ’ distance judgment. Twenty subjects were asked to test five cars. The experiments include the judgment regarding the safe distance between the car and the object in the front, the safe distance between the car and the object behind, as well as the safe width for the car to pass through a narrow lane. The results show that the shapes of car do influence the judgment of the safe distance. Drivers judge the distance using the cue of the hood and the trunk lid. The more clear features of the shape near the front and rear ends of the car, the more accurate distance judgment the drivers may have.

Keywords : Passenger car ; Car ; Vehicle ; Shape ; Styling ; Distance ; Perception ; View field

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