

# Development of a Driving Aptitude Test Program Corresponding to the Driving Characteristics of Elderly Drivers

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**KEY WORDS:** Elderly person, Risk recognition, Driving aptitude test, Psycho-physiological measurement [C2]

The aging of drivers in Japan is a major issue not only for general drivers but also for professional drivers such as bus, taxi, and truck drivers. In this paper, we overview the items developed for an driving aptitude test for the elderly professional drivers. In order to fill in the gaps in psycho-physiological measurements related to driving in the current driving aptitude test, several novel tasks are created for the executive function tests (trail making test (TMT) (Fig. 1), Executive function tests 1-4 (Figs. 2-5)), Clock Drawing Test (CDT, Fig. 6), Multi-stimulus Vision Tester Binocular (MVT-B, Fig. 7), Driving risk perception test (Fig. 8), and Metacognition test (Fig. 9). We are now examining the effects of aging on each task, the correlations between tasks, and the relationship with driving skill indices. We will then develop a driving aptitude assessment test battery by selecting tasks based on the task difficulty and the time required to complete the tasks.

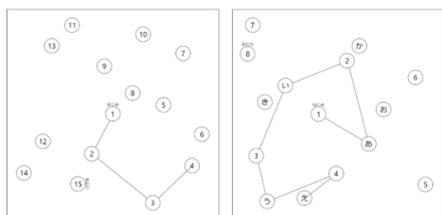


Fig. 1 Trail Making Test

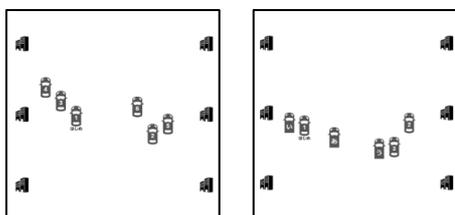


Fig.2 Executive function test 1

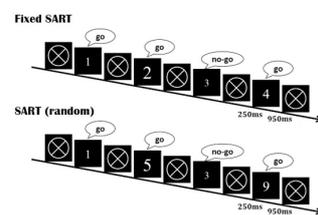


Fig. 3 Executive function test 2

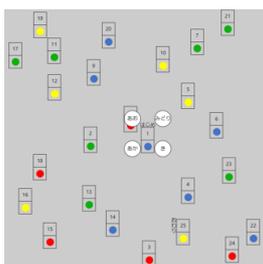


Fig. 4 Executive function test 3 (3A)

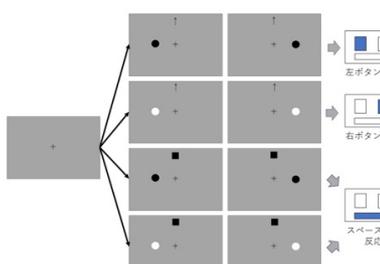


Fig. 5 Executive function test 4 (4B, 4C)

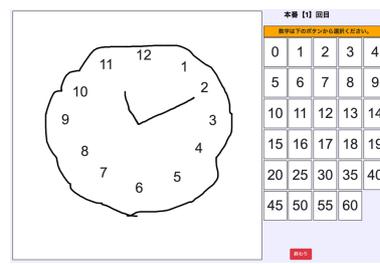


Fig. 6 Clock drawing test (CDT)

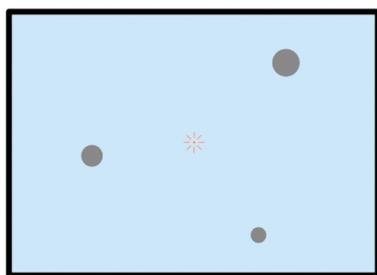


Fig. 7 Multi-stimulus Vision Tester Binocular (MVT-B)

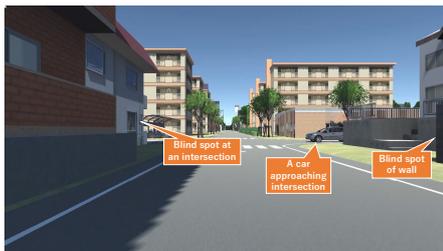


Fig. 8 Driving risk perception test

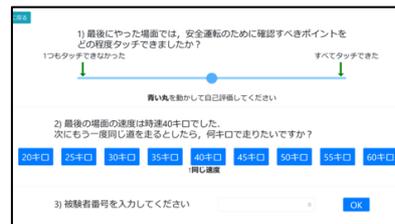


Fig. 9 Metacognition test