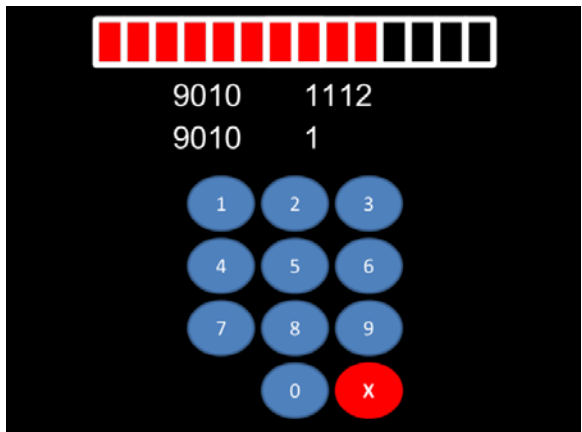


1 **APPENDIX**



2
3 Fig. A1. BAST driving simulator. The driver's cabin, the touch display with the secondary
4 task, and the representation of traffic and environment can be seen.



6
7 Fig. A2: The secondary task used in this study. On the top, the progress bar for the remaining
8 time (only in the block design group) is displayed, beneath the given and entered number
9 sequences, on the bottom the numeric keypad.

11 Table A1: Traffic situations and main performance requirements.

situation	description	main performance requirements
sharp bend	sharp bend on a rural road	lateral vehicle control
broken-down car	broken-down car on the driver's lane; choosing a gap for overtaking while traffic is upcoming	longitudinal / lateral control
curvy forest road	driving through a winding forest road with upcoming traffic for 2.7 km. Overall 19 bends, mean curvature radius = 380,52 m (SD = 279,11 m)	lateral vehicle control
construction site	driving through a construction site	longitudinal / lateral control
car-following	following a leading vehicle for 3 km; the leading vehicle has a predefined speed profile varying between 80 and 100 km/h	longitudinal control
traffic light	entering an urban area. A traffic light switches to red when approaching	response time
pedestrian crosses (1)	a pedestrian appears suddenly behind parked cars and crosses the road; immediate braking is necessary	response time

slow vehicle ahead following a slow car ahead which suddenly response time
brakes

pedestrian crosses again a pedestrian appears suddenly behind response time
(2) parked cars and crosses the road;
immediate braking is necessary

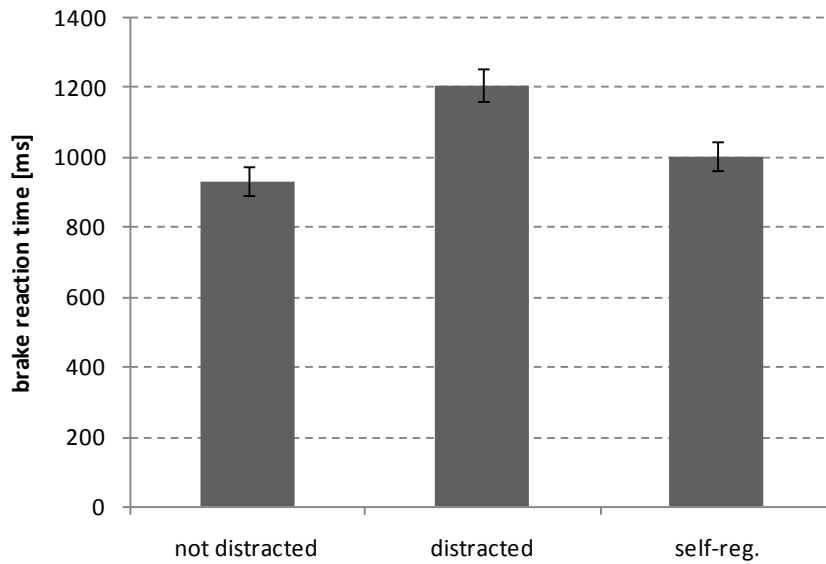


Fig. A3: Braking time in reaction to the pedestrian. Error bars represent the standard errors of the means.