WHEN YOU CROSS THE ROAD DEPENDS ON CAR DESIGN AND SIZE

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34th Workshop of the International School of Ethology, Erice, Sicily, Italy, 17th – 22nd June 2015

RESEARCH QUESTIONS
• Does car design have a bearing on the behaviour of pedestrians?
• Is the minimum accepted distance when crossing the street bigger for cars with dominant appearance than for cars with friendly appearance?
• Is the speed of dominant cars overestimated compared to friendly cars?

INTRODUCTION
• Sensitivity for facial features even in non-human and inanimate objects, such as cars1)
• Both car fronts and human faces lead to comparable N170 amplitudes in EEG2) 3) 4) and similar activation of the fusiform face area5)
• Car fronts elicit attributions of emotions, personality traits and attitudes1)

METHOD
• Virtual reality (VR) environment with a road and a zebra crossing with centre island
• Head-mounted display
• 4 cars with high power design, 4 cars with low power design, chosen from Windhager et al. (2008)1)
• Vehicles passing by individually

RESULTS
Block 1: Crossing time
• Cars passed by with a speed of 50 km/h without stopping
• Participant’s task: Cross the road at the latest moment (starting position: Pavement or centre island)

Block 2: Speed estimations
• Cars passed by with a speed of 45, 50, or 55 km/h respectively
• Participant’s task: Estimate the speed of the car (position: Pavement or centre island)

Participants
• 60 subjects (30 female), mean age 23.1 years

DISCUSSION
• Car design seems to have an influence on road crossing behaviour
• Big cars compared to small cars: S’s crossed the road earlier but estimated the speed to be lower?
• Decision to cross on average at a distance of 34 metres, image too small?
• Results in Block 2 can be explained by size-speed bias6), according to which large objects seem to be moving more slowly than small objects

REFERENCES

This research was funded by SNF Project No. PP00P1_139072.