

# Embodied Morality: The influence of body on moral judgement

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## Introduction

In everyday life people have to make decisions, which can be classified as moral or immoral. In previous studies (Marczyk & Marks, 2014) the aspects of moral decision making were explored by asking the participants about their opinion in hypothetical, morally fuzzy dilemmas - e.g. Trolley Dilemma. As it was suggested the direct inclusion of body-based schemata into the processes of judgements and decision-making (Wilson, 2006; Anderson, 2003; Damasio, 1999; Varela, 1991), we explore the human judgement in the simulated virtual situations. With the use of computer-generated Virtual Environments (VEs) we try to highlight human moral decision-making process in immersive, reality simulating way. In such VEs, the inclusion of situational and body aspects can be measured and analyzed as the determinants of decision-making process. The aim of this study is to examine the real-time interaction of a person with the morally ambiguous situations in two different experimental conditions. We expect the real-simulated situations as emphasizing the approach of moral intuitions in the process of decision-making.

## Method

Participants were given into the morally ambiguous situations, where a group of people are in danger of life. Participants are allowed to use a large one-handed lever (experimental group) or computer keyboard (control group) when they decide to act and save four or five people by killing one another.



no action

action



Figure 1. The examples of Tasks 5 - traditional trolley dilemma

## Participants

60 students from various fields of study except philosophy were recruited into the experiment. The students of philosophy were expected to be in general familiar with the Trolley dilemma and their answers would be the matter of rational choice. The participants were rewarded by the small gift after experiment.

## Experimental design

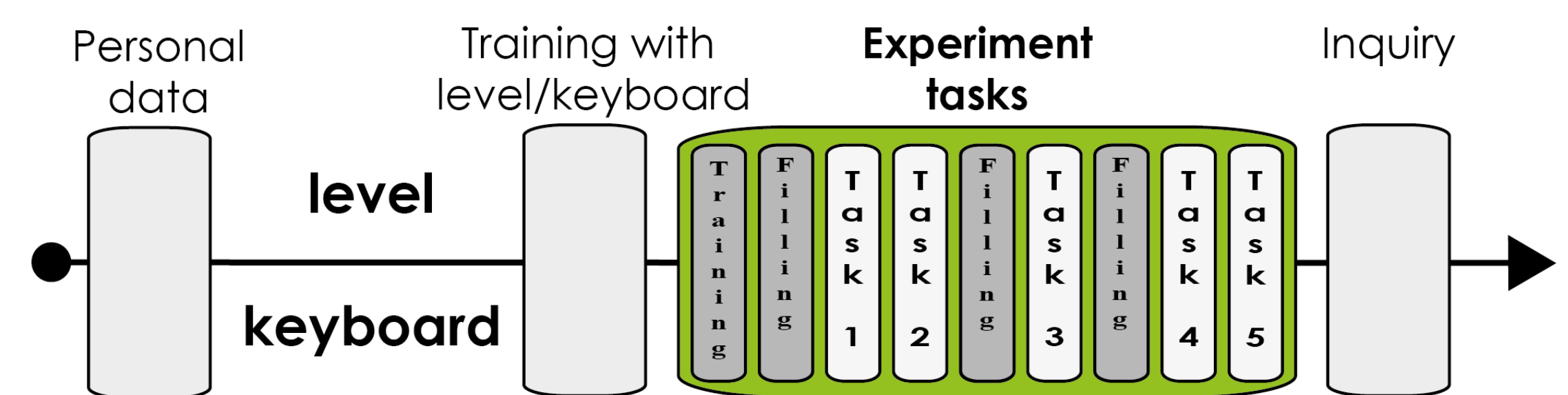


Figure 2. The between subject research design with two experimental conditions

## Apparatus

Specific **computer application** was created for the purpose of the study: optional control interface and data collecting

**Motion Capture** system (MoCap) was engaged to measure the participants motor activity

The **video recording** was made from each interview which was made after each session to explore the process of interaction with the UI

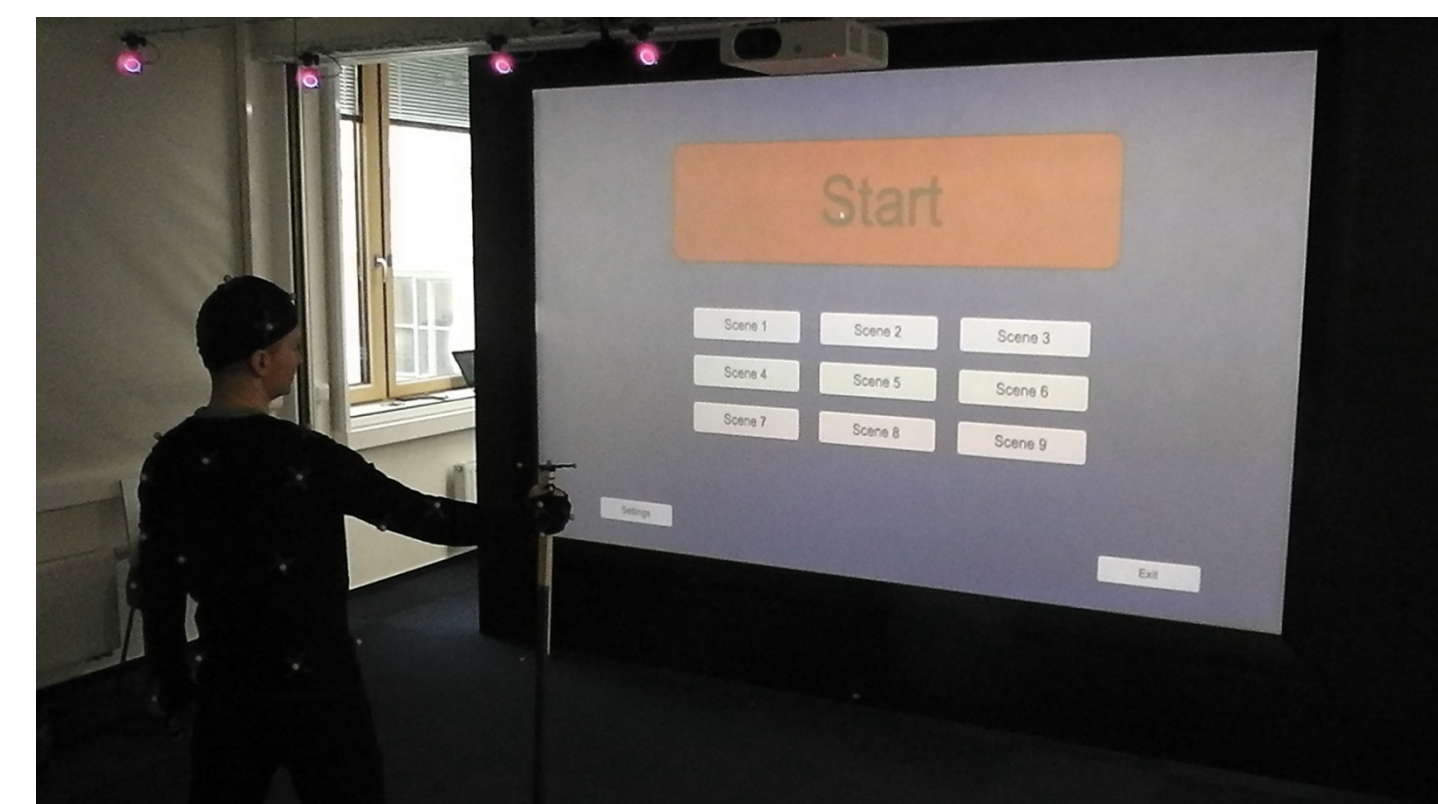


Figure 3. Participant with the lever and situated into the MoCap

## Data analysis

The **computer application** collects the answers about the users actions – action/no action – the total number of actions and reaction time is going to be compared between groups

The **MoCap** provides information about participants movement, especially about the controlling hand and upper part of the participants body – the total motor activity is going to be compared between groups

The **interview with the participants** was made to explore the participants motivation when making decision – qualitative analysis

## Discussion

The experiment represents the new approach in the research of moral decision-making including the body-based and situational context into the process of cognition. Virtual reality aspects of simulated environment and specific motor-based control device setting are expected to reveal the moral intuitions – the tendencies to act in the specific way. The more motor-inclusive control device – a lever – is expected to decrease the people rational judgement (to save more people by actively killing one another) and the computer keyboard is expected to increase the rationality of the choice, thus increase the rate of action of killing one person to save more of them.

## References

Marczyk & Marks, 2014  
Wilson, 2006;  
Anderson, 2003;  
Damasio, 1999;  
Varela, 1991