Bachelor's/Master's thesis or other student works at the group of Human Factors Engineering, Chair of Consumer Behavior (D-HEST)

Investigating Walking Strategies and Decision Behavior in Virtual Reality

Walking strategies are controlled by intrinsic motivation of the user as well as by external factors affecting various aspects of one's behavior. Shops exploit both, intrinsic motivation and external controlled behavioral factors to let the customer spend more time and money in shops. For instance, shops use planograms to determine the placement of goods in shelves ("eye level is buy level") in order to increase sales. While external controlled behavioral factors are well understood, there is still a lack of literature concerning aspects of intrinsic motivation affecting consumers' behavior. For instance, the spontaneous decision to choose a particular direction in a bifurcation has been investigated in animals but little is known about such a decision in man. The aim of this student work is to set-up a virtual environment enabling to study decision behavior of consumers in a task, involving walking. The set-up shall include gamification enabling to perform experiments with a high rate of efficiency.

Figure 1: An example of a previously built virtual shop used for investigating shopping behavior (Siegrist M et al. Food Research International, 2019, 117, 50-59).

Tasks

- Familiarize with previous work on the topic
- Set-up a virtual environment enabling to study decision behavior in a task involving walking and including components of gamification
- Report achievements in a written report and in an oral presentation

Requirements

- Motivated to work with virtual reality
- Extensive experience in object-oriented programming with .NET / C#
- Experience in developing software with Unity3D
- Familiar with AR and VR technology

Support and contacts

The Human Factors Engineering group can provide a broad interdisciplinary technical and scientific support and has a solid experience in the many disciplines required to run the project.
For further information please contact: mmenozzi@ethz.ch or rosandro@ethz.ch
or call: 044 632 39 81 (M. Menozzi). Earliest start date is July,1st, 2019. No latest start date.