

## **Evaluating the explanations of a Support Agent – Online experiment**

**Authors: Ilir Kola, Catholijn M. Jonker, M. Birna van Riemsdijk**

### **Introductory page:**

*Please read this carefully before you start.*

Support agents in the form of mobile apps that help users by facilitating some of their daily tasks are becoming a reality. Such support agents should not only make suggestions, but also explain the reasons behind these suggestions. In this study, you will be asked to evaluate the content of explanations that a support agent might give to back up a suggestion. You will be presented in total with four hypothetical situations in which you have to provide your opinions. There are no right or wrong answers to the questions. We expect the study to take approximately 10 minutes, and the results will be used for research purposes.

The survey will end with a control question to check if you have read the whole survey.

Your participation in this study is entirely voluntary and you can withdraw at any time.

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by only asking you about your gender and age, which makes identification close to impossible.

We strongly suggest that you complete this study from a laptop. Before you start, please switch off phone/e-mail/notifications so you can focus on the survey.

Thank you!

### **Presentation with use case:**

In this survey you will be presented with Alice. Alice is a very busy person due to her multiple work and social commitments. In order to manage her busy schedule, Alice uses a support agent.

A support agent is a piece of software which helps her deal with her busy schedule, for example by providing advice about how to resolve scheduling conflicts. During a specific week, Alice is particularly busy and has to cancel some of her previously arranged commitments. You will be presented with different pairs of meetings, from which Alice has to pick one in each pair. We will ask you what advice you would give to Alice, as well as what you think about the explanations that the support agent would give to her to back up its suggestions.

Please note that we are interested in your opinion about the agent's *explanations* rather than about which meeting the agent suggests to Alice to attend.

**Presenting pair of scenarios:**

During this busy week, Alice has planned the following meetings:

Meeting 1: [meeting 1 text]

Meeting 2: [meeting 2 text]

Based on the information provided in the descriptions of the meetings above, please indicate which meeting you would be more inclined to suggest to Alice to attend

Answer options:

*Significantly more inclined towards Meeting 1*

*Slightly more inclined towards Meeting 1*

*Equally inclined towards either meeting*

*Slightly more inclined towards Meeting 2*

*Significantly more inclined towards Meeting 2*

What reasoning led you to make this suggestion? (open text answer)

**If subject suggestion matches agent suggestion:**

Meeting 1: [meeting 1 text]

Meeting 2: [meeting 2 text]

The support agent suggests to Alice to attend Meeting X. The agent provides the following explanation for why it suggests attending Meeting X:

[agent suggestion and explanation text, based on condition group]

Please rate your level of agreement with the following statements (answer options: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree):

- The explanation provided about the reasons why the agent suggests Meeting X is satisfying;
- The explanation provided about the reasons why the agent suggests Meeting X has sufficient detail;
- The explanation provided about the reasons why the agent suggests Meeting X seems complete;
- The explanation provided about the reasons why the agent suggests Meeting X is in line with what I consider when making similar decisions;
- The explanation provided about the reasons why the agent suggests Meeting X is likely to convince Alice to accept the suggestion.

**If subject suggestion does not match agent suggestion:**

*Meeting 1: [meeting 1 text]*

*Meeting 2: [meeting 2 text]*

You said you are more inclined to suggest Alice to attend Meeting Y. The support agent suggests to Alice to attend Meeting X. The agent provides the following explanation for why it suggests attending Meeting X:

[agent suggestion and explanation text, based on condition group]

Please rate your level of agreement with the following statement (answer options: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree):

The explanation provided about the reasons why the agent suggests Meeting 2 offers convincing arguments.