Before you begin ...

About this study

Informed Consent

Study Name: Evaluating an agent-oriented language for Reinforcement Learning

Researchers: Sotirios Liaskos (PI)

Sponsors: National Science and Engineering Research Council of Canada (NSERC)

Purpose of the Research: Goal modelling languages are used in Information Technology for a variety of purposes ranging from analyzing business problems to justifying enterprise architectural decisions. We propose an extension to a standard goal modeling language to be used for modeling reinforcement learning agents. The extension contains concepts that are used for describing causal and temporal constraints in the domain that is being modeled.

But are the extensions appropriate? Are they chosen and represented in an way that facilitates the understanding of the modeled domain? In this project, we aim at exploring the quality of our extension by asking third-party participants rate various qualities of the proposed concepts, and perform labeling exercises aimed at exposing whether the concepts are comprehensible.

What You Will Be Asked to Do in the Research: In this experiment you will be asked to:

1. Watch a video presentation about a modeling language.
2. Read a short case description and perform a labeling exercise, in which you classify elements from the case to concepts of the language.
3. Answer questions in which you are asked to offer your evaluation of the concepts of the language with respect to various qualities.
4. Offer us some basic demographic information including sex, age and self-assessment of proficiency in English.

Your participation should not take more than 45 minutes. You may, further, be asked at a later time to come back and participate in an additional session. As a token of appreciation you will be offered £6.25 through the Prolific system for each participation session.

Risks and Discomforts: We do not foresee any risks or discomfort from your participation in the research.

Benefits of the Research and Benefits to You: Participation will help us understand how conceptual modelling languages can be made more intuitive to understand and work with. You will be exposed to a common agent-modeling language and experience how real-world agents and domains can be modeled using the language.

Voluntary Participation and Withdrawal: Your participation in the study is completely voluntary and you

may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of your relationship with York University either now, or in the future. If you stop participating, you will still be eligible to receive the promised inducement for agreeing to be in the project.

Confidentiality: No personally identifying information will be collected during this research and, as such, your name or other identifying information will not appear in any report or publication of the research. Confidentiality will be provided to the fullest extent possible by law. Specifically:

- Your (non-identifying) material will be searched for accidentally entered personally identifying information. Such information will be redacted from the material, and the material will be subsequently used without said information.
- Demographics (e.g., sex, age) will be examined for offering plausible personal identification clues and, in cases where this happens, that data that enables the clue will be removed.

Anonymous or anonymized information resulting from the above procedures, namely processed sex, age, self-assessment of proficiency in English, and test and questionnaire responses will be used in future publications of the PI and his research associates. They may further be subject to sharing with the research community via being made available for download as, for example, a supplement to research reports and publications. Being anonymous, none of this information will allow your personal identification.

The anonymous/anonymized data collected in this research project may be used by members of the research team in subsequent research investigations exploring similar lines of inquiry. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

Please note that at the end of the study, de-identified data may be deposited into one or more publicly accessible scientific repositories, such as York University Dataverse, so that data may be inspected and analyzed by other researchers. The data that will be shared on Dataverse will not contain any information that can identify you.

Data Retention: Pre-anonymized data will be stored in a secure computer 1and anonymized (as above) by the end of 2025, with potentially identifying information discarded in the anonymization process. Anonymized data will be retained indefinitely (see above).

Note on on-line instrument: The researcher(s) acknowledge that the host of the online survey in Psytoolkit.org may automatically collect participant data without their knowledge (i.e., IP addresses.) Although this information may be provided or made accessible to the researchers, it will not be used or saved without participant's consent on the researcher's system. Because this project employs e-based collection techniques, data may be subject to access by third parties as a result of various security legislation now in place in many countries and thus the confidentiality and privacy of data cannot be guaranteed during web-based transmission.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact **Dr. Sotirios Liaskos** either by e-mail (liaskos@yorku.ca). This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Manager, Research Ethics in the Office of Research Ethics, York University (e-mail ore@yorku.ca). This office oversees the ethical conduct of research studies and is not part of the study team. Everything that you discuss will be kept confidential.

Contact information

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Important technical requirements for your computer

You seem to use the following browser (version number in brackets): Firefox (135)
Your browser supports the requirements of this survey.

For this study, you must have headphones on. Put them on now and test the sound.

For this study, your computer must have sound, and the speakers must be on. Check your sound now.

[Test LEFT speaker/headphone] [Test RIGHT speaker/headphone]

Confirm you want to do this survey

Please confirm that you want to participate in this survey. Your information (including computer IP) will be stored and might be used for research.

☐ I consent to participate in the study "Evaluating an agent-oriented language for Reinforcement Learning" conducted by Sotirios Liaskos. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by consenting to participate.

☐ I understand that my de-identified data will be placed into an open research data repository.

Click this button to start survey

Important data protection information

When you start, this survey will store your answers and browser information on the PsyToolkit server.The responsibility for this survey rests entirely with the researcher(s) listed above. Click here if you do not want to participate now.