

Subjective Logic

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1 Introduction

- Probabilistic logic.
- Subjective logic as probabilistic logic with uncertainty and subjectivity.
- How can be applied to polarization and main question of this investigation.
- Summary.

2 Opinion representation

- Elementary definitions
 - Domain and Hyperdomain
 - Belief mass distribution (prior) and uncertainty
 - Projected probability distribution (posterior)
- Binomial opinion and example
- Multinomial option and example
- Hypernomial opinion and example

3 Computational trust

This is an overview. Nothing formal. (Maybe it will be if I have time.)

- Definition of trust. (Influence)
- Trust transitivity. (Update function)
- Belief fusion. (Overall update function)

4 Next questions

When as was reviewing the book, I found something that I may have got wrong about trust transitivity. I'm not sure if the example I told at the meeting is possible in SL.

- Suppose that an agent A trusts an agent B (ω_B^A), and B trusts X (ω_X^B). Can the cardinality of the domain of ω_X^A be greater than 2. (At the meeting, assumed yes. Now I'm not sure.)
- Is there a way (an operator) to consider the trust of an agent A when they obtain another trust opinion (from trust transitivity)?
 - If yes, can this operator have the same properties as the rational belief update?
 - If not, can we create an operator that has the same properties as the rational belief update?