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## How social interactions lead to polarized relations?

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In the age of social media there is more and more need to understand how do people create relations using those. The objective here was not only to look if relations are being created as a consequence of social interactions, but also to separate emergence of positive and negative relations. The knowledge we can gain here could benefit a wide spectrum of applications - from purely scientific to business.

In this work we used a dataset from Epinions website. In this dataset users of the website can create articles, rate them and declare trust or distrust towards other users. The consequence of giving somebody a distrust rating is to reduce the probability to see their articles in the future. In the model users are treated as agents in a network. They can be connected via signed edges which represent existence and polarization of their relations.

The focus of this work was put on the period where the declaration of trust was not yet established, as the impact of recommendation algorithm had to be avoided. We found that for any relation to be created, two agents/users need to interact more with each other. It might be counterintuitive if we think of negative relations as a consequence of avoiding the other person.

This research is one of the first steps in our more thorough work directed at understanding the topic of polarized relations and interactions.

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**Primary author:** PAWLIK, Maciej (Faculty of Physics, Warsaw University of Technology )

**Presenter:** PAWLIK, Maciej (Faculty of Physics, Warsaw University of Technology )

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