

The role of homophily in the emergence of social norms within social networks

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Background:

Almost all aspects of human life are not only guided by explicit rules or laws for appropriate contextual behaviour, but also a set of “informal rules” or behavioural guidelines, which influence peoples’ behaviour in social contexts. These **social norms** can be understood as a shared, implicit consensus within a social group about a) how one should ideally behave in a given situation (*prescriptive social norms*) or b) how most people are behaving in a given situation (*injunctive social norms*) (Jacobsen, Mortensen & Cialdini, 2011; Schultz, Nolan, Cialdini, Goldstein & Griskevicius, 2007).

Social norms have been shown to strongly impact a diverse set of societally relevant behaviours of individuals such as energy conservation (Allcott, 2011), littering (Cialdini, Reno & Kallgren, 1990), criminal behaviour (Keizer, Lindenberg & Steg, 2008), or prejudice and discrimination (Crandall, Eshleman, & O'Brien, 2002), and are thus relevant to understanding public conflicts about current societal issues. In addition, violations of social norms can also act as a strong trigger for interpersonal conflict or ostracism (“Black Sheep effect”; Abrams, Palmer, Rutland, Cameron & Van de Vyver, 2014).

More importantly, experimental studies have shown that the homophily has an effect in establishing social norms, since people are more strongly influenced by normative cues from similar individuals (Keizer, Lindenberg & Steg, 2008). But since social norms are not set in stone but are actively negotiated among group members while forming a common group identity (Voss, 2001), homophily also plays an important role in the emergence of social norms within networks (Chatman & Flynn, 2001; Yu, Zhang, Ren, Luo, 2013, Sen & Airiau, 2007).

Given the large potential of social norms in shaping social groups and influencing public and interpersonal conflict, our research project aims at exploring the impact of homophily in social networks on the emergence of social norms.

Outline:

In our research project, we aim to study the impact of homophily in the emergence of social norms within networks among actual humans, instead of simulated agents. Participants will be members of societal groups with clearly distinguishable group identities and demographics (e.g. religious Muslims and Christians of varying sex and age). The participants will be placed in a virtual network with each participant representing a node. Importantly, participants will only be able to see the demographic information of nodes connected to them in their immediate vicinity. With the instruction for participants to maximize connected networks of the same norms (Axelrod, 1986), the network will iterate two steps. First, participants will be asked to choose a

behavioural option related to an arbitrary social norm without pre-existing convictions (“What colour of shirt should people wear on Fridays? Green, Blue or Red?”). Second, people will receive feedback about the choices of their neighbouring nodes. Afterwards, people can adapt their choices to react to the feedback from the neighbouring nodes. Iteration will stop after connected networks of norms have converged. To test the impact of homophily on the emergence of norms, we manipulate the connectivity among nodes based on their demographics (Lee et al, 2017).

Hypotheses:

1. Participants will adapt their choices more strongly to neighbours who are demographically similar to them on multiple dimensions
2. Groups with strong social identification (e.g. Muslims and Christians) will converge on different norms
3. Individually perceived majority/minority within the immediate vicinity will influence whether choices from outgroup members will be imitated/adapted or not.
4. Network structures with more ties connecting people of differing demographics and social groups have a higher likelihood of converging on the same choice.

Resources:

We will use the platform <https://volunteerscience.com/> to acquire participants to participate in a gamified version of our experiment (e.g. awarding points based on the membership in the largest connected network with the same choice after conversion). Similar projects investigating public goods distribution in social networks and the perception of established gender norms are already hosted on the website.

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