**Let’s talk structure: the positive consequences of structural representations**

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How should we represent social categories? A common representation that has been extensively studied in essentialism, which characterizes a category in terms of an internal category essence (which can be cashed out in a variety of ways, including biology), and that this category essence causes typical category properties. Essentialism has been documented to have negative consequences, such as group-based generalization (stereotyping), normativity (what is currently the case should be the case), and amplified between-group differences.

The **primary aim** of this project is to argue that structural representations, which characterize a category as situated in a larger context, could lead to more positive consequences than essentialism. This project aims to differentiate structural representations from essentialism in terms of their consequences, and to make the case that structural representations tend to lead to more positive consequences than essentialism.

The **secondary aim** of this project is to assess whether cultural representations, which characterize a group in terms of their beliefs and values, can be considered a form of essentialism. In psychology, essentialism has been typically cashed out in terms of shared biology. However, sociologists and scholars of race have long pointed out that attributing group properties to a “culture of poverty” (e.g. the group does not value education, hard work) is problematic in similar ways to essentialism, and recent work in psychology (Bailey et al., 2021) has argued for a broader conception of essentialism in terms of shared beliefs and values as well. Directly comparing the consequences of attributing typical group properties to biology (the paradigmatic form of essentialism), vs to culture, can clarify the relationship between cultural representations and essentialism.

In **Study 1**, an initial proof of concept, we examined the consequences of attributing a neutral group difference (different group diets) to a biological, cultural, or structural cause. We chose to use a fairly minimal context with novel groups, neutral group properties, and established measures of generalization and normativity from the literature to provide an initial straight-forward contrast between our three causes that can be related to prior literature.

In **Study 1a**, adults (n=167) heard generic statements that two novel groups ate different berries (“Zarpies eat pogoberries. Vawns eat okinberries.”). Adults then heard that a target group’s diet either had a biological (allergies, digestive ability), cultural (taboo), or structural (food availability in environment) cause. The particular biological and cultural explanations used were crafted to match the restrictive nature of the structural explanation. All three explanations explain why the group does not have another property and has the target property instead, and are based on plausible real-life reasons for group diet. Those who learned a structural cause were more hesitant to generalize outside the structural context, more likely to consider it possible and acceptable for a group member to eat something different, and suggested targeting the structural context (food availability in environment) rather than the group when asked to intervene on the property. These results provide initial evidence that structural representations temper group-based generalizations, decrease normativity, and suggest structural rather than group-based interventions.

In **Study 1b**, a version adapted for 5-8yo children, children showed similar preliminary results to adults. Given that children at this age readily infer the normativity of group diet from a group label and a generic statement like the ones provided (Roberts et al., 2017), the fact that children in the structural condition *did not* infer normativity is particularly remarkable, and suggests that structural representations in this case may have blocked normative inferences. It is also heartening that children were able to come up with structural interventions in the structural condition: this finding aligns with causal reasoning literature that children use their knowledge of a causal system to develop interventions, and suggests that the main difficulty in getting children to endorse structural interventions is in representing a group and property in terms of social structure, rather than coming up with the intervention itself.

Much of the literature on essentialism has been concerned with neutral properties in relatively innocuous contexts, but in the real-world, many group properties and differences to be explained are highly valanced and hierarchical. As a result, **Study 2** examined the consequences of these different causes for valanced properties and hierarchical group differences in a richer context. In this study, we examined the consequences of attributing a hierarchical group difference (different group occupations: low-wage and dangerous job vs well-paid and relatively safe job) to a biological (group’s bodies well-suited), cultural (group’s traditions, beliefs, values are well-suited), or structural (group faces economic discrimination) cause.

Study 2 differs from study 1 in three ways. First, the target property in study 2 is valanced (there is clearly a better job and a worse job), which causes the group difference to be hierarchical (one group is in a more privileged position, one group is in a less privileged position). Second, study 1 raises the concern that the particular biological and cultural explanations chosen could have induced stronger normativity relative to the structural explanation, because the biological and cultural explanations put explicit negative utility on the alternative property, while the structural explanation is neutral about the utility of the alternative property. To address this concern, in study 2, the biological and cultural explanations were presented as positive reasons why the group has the target property, as opposed to negative reasons why the group does not have the alternative property. Third, given the hierarchical group difference in study 2, we chose to use a slightly different measure of normativity and added in a few additional measures to probe attitudes about the group difference. In study 1, since the target group’s property was neutral, normativity was measured using attitudes about a non-conforming group member. In study 2, since the target group’s property is negatively valanced, we concluded a more appropriate measure of normativity in a hierarchical context would be to measure attitudes about the acceptability of the present group disparity. We also added in two additional measures: a measure of perceived between-group differences, since essentialism often enhances perceived between-group differences, and endorsement of three different potential narratives about the target difference between the groups, since narratives about group preference or economic efficiency are often used to justify real-world group disparities.

Preliminary results from study 2 suggest similar results to study 1: adults in the structural condition were slightly more hesitant to generalize outside the structural context, were less likely to consider the present group disparity acceptable, and suggested targeting the structural context (job opportunities) rather than the group when asked to intervene on the property. In addition, the new measures introduced suggest that adults in the structural condition, compared to the other conditions, saw the groups as overall less different from each other, and were less likely to accept a group preference narrative or economic efficiency narrative, and more likely to accept a narrative about lack of choice, to explain the present disparity.

The acceptability results are particularly remarkable given that adults in all three conditions learned about the *exact same* disparity where one group works a low-wage dangerous job, and other group works a high-wage safe job. Nonetheless, adults given a biological or cultural reason for the disparity felt entirely neutral about the disparity, while adults in the structural condition felt the disparity was unacceptable. Together with the intervention results, these findings suggest that structural representations can motivate adults to intervene on group disparities, and to do so in ways that target oppressive social systems rather than the group itself.

Overall, these results differentiate structural representations from other representations, and suggest that structural representations may be positive to promote.