

Lay Theories of Essentialism

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This article investigates the essentialist perception of social categories and differentiates it from two closely related concepts, namely entitativity and natural kind-ness. We argue that lay perceptions of social categories vary along three dimensions: natural kind-ness, entitativity, and essentialism. Depending on whether membership in social categories is forced or chosen, people develop different theories and associate different types of characteristics. Perceived control upon membership in the categories influences perceptions of entitativity and natural kind-ness but has no direct impact on the attribution of essentialism to the groups.

KEYWORDS entitativity, natural kind-ness, subjective essentialism

IN the last few decades, literature on social categorization has put forward the role of lay theories for the understanding of groups' perception (Levy, Stroessner & Dweck, 1998; Plaks, Stroessner, Direck, & Sherman, 2001; Yzerbyt, Rocher & Schadron, 1997; for a review, see Yzerbyt, Judd & Corneille, 2004). Many scholars now use the term 'subjective essentialism' to describe lay beliefs and theories about underlying properties of social groups. Specifically, subjective essentialism refers to lay theories stating that members of a given group, over and above their similarity of surface, share with one another deep underlying features that characterize them and differentiate them from members of other groups (Haslam et al., 2000; Rothbart & Taylor, 1992; Yzerbyt et al., 1997). These deep underlying features assumed to be common to all group members define what is called 'the essence' of the group. Importantly, in the present contribution, we depart from previous work on essentialism in that perception

of natural kind-ness is not equated with subjective essentialism but is only one component of essentialist lay theories as is entitativity.

Essentialist lay theories have been shown to affect group relations at a variety of levels. To cite only a few, essentialist theories have been shown to impact prejudice (Haslam, Rothchild, & Ernst, 2002), to accentuate perceived differences between groups (Yzerbyt & Buidin, 1998), to increase infra-humanization tendencies (Demoulin et al., 2002), to promote dispositional attributions (Yzerbyt, Rogier, & Fiske, 1998), to justify social inequalities (Verkuyten,

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2003). In light of the undeniable impact of essentialist lay theories upon intergroup relations, it is crucial for the concept to be analyzed in depth. Indeed, although essentialism is now widely used in social psychology texts, confusions remain with respect to its definition. Indeed, Haslam, Rothschild and Ernst (2000, p. 113) recently noted 'despite its growing popularity, the concept of essentialism suffers from a lack of definition, owing in large part to the diversity of domains in which it has been put to work'.

Broadly speaking, references to essentialist lay theories can be found in two different, yet related, areas of research. On the one hand, scholars interested in the difference between natural kind and artifactual objects have stressed the positive relation between essentialism and natural kind-ness perceptions. The more a social category is perceived as 'natural', the more it will be essentialized. On the other hand, scholars interested in the perception of groups' entitativity also demonstrated the positive link between essentialism and entitativity. The more a group is perceived as 'entitative', the more it will be essentialized.

First, we review the recent literature on subjective essentialism, natural kind-ness, and entitativity and examine how these three concepts have been related. We then propose and test a series of hypotheses about the links between forced and chosen social categories, on the one hand, and essentialism, entitativity, and natural kind-ness, on the other.

Subjective essentialism and natural kind-ness

Within psychology, Allport inaugurated the term 'essentialism' more than fifty years ago in his classic discussion of prejudice (1954). It was only three decades later that Medin (1989) reinstated the concept in his work on categorization. For Medin, psychological essentialism refers to people's tendency to 'act as if things (objects) have essences or underlying natures that make them the things they are' (Medin, 1989, p. 1476). According to this view, categories are organized around theories about the

deeper features of the category members. These theories provide the causal linkage from the deeper features to the surface characteristics, and, in doing so, explain why things look the way they do. For example, we may categorize individuals as males and females on the basis of such surface features as height, facial hair, and clothing, but we tend to believe these features are cues to some deep underlying masculine and feminine essences (Medin, 1989).

A few years later, research by Gelman and Wellman (1991) showed that lay people hold essentialist theories about living kinds from a very young age onward but that they do not proceed to the essentialization of human artifacts. Whereas natural kind objects exist independently of human needs and desires, artifacts have been created by human beings and are defined in terms of the functions they serve in the human world (Gelman, 1988; Rothbart & Taylor, 1992). The finding that social perceivers primarily essentialize natural kind objects led many scholars to closely link the two concepts of 'subjective essentialism' and 'natural kind-ness'. Indeed, referring to an object or an animal as having an 'inner essence' is often considered as a hallmark for a natural kind category, differentiated from an artifactual one. For an object to be essentialized, it has to be perceived as a natural kind, and vice versa.

Turning to social objects, Rothbart and Taylor (1992) noted that because social groups are artifacts (i.e. human social constructions) rather than natural kinds they should normally not be attributed an underlying reality. However, these authors argued, people often (mis)attribute essences to social groups, that is, they tend to assume that group members share with one another something deep inside that differentiates their group from other groups in their social environment. This is despite the fact that social groups are in fact mere conventions (Hirschfeld, 1996). Coining the term subjective essentialism, Yzerbyt et al. (1997) similarly argued that the attribution of essences to social groups derives from an erroneous treatment of social categories as natural kind ones. Moreover, these authors spelled out numerous links between subjective essentialism

and key social psychological phenomena such as the fundamental attribution error, stereotyping, prejudice, and discrimination (see also Yzerbyt & Rogier, 2001; Yzerbyt et al., 1998).

Subjective essentialism and entitativity

The term 'entitativity', initially proposed by Campbell (1958) refers to the degree to which a particular group is perceived as a coherent unit, as having the nature of an entity. Reviewing a series of properties as potential bases for the perception of entitativity, Hamilton and colleagues (Hamilton & Sherman, 1996; Hamilton, Sherman, & Lickel, 1998) proposed that, although many group characteristics are susceptible to strengthening one's perception of group entitativity (e.g. similarity, proximity, common goals), most of these are neither necessary nor sufficient. According to these authors, collections of individuals manifesting cues of organization (e.g. established norms) and structure (e.g. leaders and followers) among their members should most likely be perceived as entitative units. In a series of recent studies, Lickel and colleagues (Lickel et al., 2000) supported this perspective, showing that entitativity (i.e. groupness) is highly correlated with the perception of interaction, common goals, common outcomes, group members' similarity, and importance of the group for its members. Adopting a somewhat different perspective, other authors suggested that two general classes of group attributes contribute to the perception of entitative groups, namely similarity (homogeneity, surface similarity, proximity) and organization (common goals, interaction, common fate) (Dasgupta, Banaji, & Abelson, 1999; Gaertner & Schopler, 1998; Wilder & Simon, 1998; Yzerbyt, Corneille, & Estrada, 2001).

More to the point of the present paper, several researchers investigated the link between entitativity and essentialism (Yzerbyt et al., 1997). Indeed, a number of results support the idea that group entitativity facilitates the emergence of essentialist lay theories. Specifically, observers confronted with a highly entitative group more readily inferred the

presence of stable dispositions (Abelson, Dasgupta et al., 1998; Crawford, Sherman, & Hamilton, 2001; Dasgupta et al., 1999; Rogier & Yzerbyt, 1999; Yzerbyt et al., 1998; for a review, see Yzerbyt & Rogier, 2001). More recently, Yzerbyt and colleagues examined the reverse path, that is, the influence of subjective essentialism on perceived entitativity of the groups (Yzerbyt et al., 2001; for a review, see Yzerbyt, Estrada, Corneille, Seron, & Demoulin, 2004). Using several different paradigms, these authors showed that essentialist theories about groups influence the perceived degree of entitativity such that a higher ascription of underlying theory induces a greater perception of the groups as entitative.

Essentialist lay theories

Recently, Haslam and colleagues (2000) investigated the extent to which essentialism generalizes across a broad array of social categories as well as the underlying structure of the different essentialist theories that have been put forward in social psychology. They asked participants to rate 40 social categories on nine scales representing different dimensions of essentialist beliefs in the literature (McGarty, Haslam, Hutchinson, & Grace, 1995; Rothbart & Taylor, 1992; Yzerbyt et al., 1997). Echoing the existing theoretical and empirical efforts in what had been heretofore separate lines of inquiry, Haslam et al.'s findings suggested that essentialist theories are organized along two dimensions, one referring to natural kind-ness and the other to entitativity. Natural kind-ness refers to the degree to which a social category is sharply bounded, unalterable, and historically persisting. Category members share necessary properties. Entitativity refers to the degree to which a social category is perceived as homogeneous, informative, and construed around an underlying core. According to this line of work, both natural kind-ness and entitativity are features that encourage perceivers to ascribe an essence to a given group.

Another important result of Haslam and colleagues' study is that some social groups are perceived as highly natural whereas others are

more readily defined in terms of their entitativity. Specifically, Haslam and colleagues (2000, p. 120) found that 'traditionally stigmatized categories (. . .) were essentialized in one of these two ways (natural or entitative), but not in the other'. They further noted that gender, race, and ethnicity domains qualify as natural kinds whereas sexual orientation, religious, and political groups exemplify entitative categories. This finding is also consistent with Rothbart and Taylor's (1992) proposition that social categories vary in the extent to which they are perceived as informative and alterable.

The present work builds upon Haslam and colleagues' line of research (2000, 2002) by considering two extensions to their studies. First, these authors investigated dimensions of essentialism without including a measure that directly addresses the belief in an underlying essence. Indeed, in their studies, what could be seen as a direct measure of the essence of a social category was restricted to one item, 'inherence', that was included in the factor analysis and not considered apart from so-called 'dimensions' of essentialism. We think it is important to disentangle the 'belief in an underlying essence' from the perception of natural kind-ness and entitativity. Indeed, in our view, essentialist theories are either consequences or antecedents related to perceptions of groups as natural kinds and entitative. Therefore, rather than including 'inherence' as yet another dimension in the list of beliefs, we propose to use that item as a direct measure of respondents' essentialism. Even more critically, this criterion should be assessed by means of more than one item in order to come up with a valid and reliable indicator of essentialism.

Second, as stated above, Haslam and colleagues found that some social groups are characterized as natural kinds whereas others are appraised as being entitative. These authors did not, however, provide an explanation for why and how certain groups are likely to be better described in terms of their entitativity, and why and how others are instead associated with a high level of natural kind-ness. Understanding ascriptions of natural kind-ness and

entitativity is important especially if one considers the results recently reported by Haslam and Levy (in press). These authors investigated sexual orientation essentialism and found that different dimensions of essentialism had differential conflicting associations with prejudice. In the present paper, we argue that, although people are prone to develop essentialist theories on a wide range of different social categories, the content of those essentialist theories varies systematically with the type of group the perceiver is considering. In particular, we will focus on the degree of control that group members have with respect to their membership to determine which component of essentialism observers associate with these groups. We will stress the importance of differentiating between social categories whose membership is imposed upon group members (FSC, forced social categories) and social categories whose membership is dependent upon group members' personal choice and control (CSC, chosen social categories). As we will argue, although variations in the level of essence ascribed is not directly dependent on the type of social category (FSC and CSC) one evaluates, the way essentialist theories are constructed will vary systematically with the assumed degree of permeability such that FSC will be more likely to be perceived as highly natural and moderately entitative, whereas CSC will be perceived as highly entitative but only moderately natural.

Forced and chosen social categories

Recently, Lickel and colleagues (2000) proposed to investigate lay theories people hold about groups in their environment and found that lay perceivers have intuitive theories about several types of groups that differ in their properties. Using a variety of different methodologies and investigating a large range of social aggregates these authors demonstrated that people classify groups into four clusters: intimacy groups, task groups, social categories and loose associations. Importantly, these types of groups appeared to differ in terms of perceived entitativity with intimacy groups showing highest entitativity, followed by task groups,

social categories, and loose aggregates. Because the type of groups most studied in the literature on essentialism are social categories, we decided to restrict the present work to these groups. Indeed, we propose that, in spite of similar levels of essentialism, a finer distinction among social categories can account for differences in perceptions of their natural kind-ness and entitativity.

Social categories can be distinguished along a number of features. In particular, we argue that a most important feature characterizing social categories is whether group members can or cannot choose to leave or join the category under consideration. FSC are categories for which the decision to join or leave the category is limited if not impossible (e.g. ethnicity, gender). Usually, people are born members of the category. Sometimes, membership is adopted very early in life (e.g. Belgian, French-speaking). For some categories, membership is simply imposed upon people (e.g. young people, old people). In contrast, CSC are categories for which membership is much more perceived as being a matter of personal choice (e.g. going to one university rather than to another, becoming a psychologist or a teacher, voting left-wing or right-wing).

More than two decades ago, Tajfel (1978) distinguished between external and internal criteria of group membership. External criteria are those membership criteria assumed to exist and/or to be imposed on individuals by some external element (e.g. the 'Nature', external lay or scientific observers, other groups, etc). Internal criteria are the ones used by group members and correspond to the psychological reality of such a classification for the people inside the group. Tajfel also noted the importance of assessing the correspondence between external and internal membership criteria. Similarly, we could argue that membership in FSC is determined by external criteria, that is forced criteria, and that membership in CSC is dependent upon internal criteria, that is, chosen criteria. Because membership in forced and chosen social categories likely depends upon different criteria, we hypothesized that essentialist lay theory content should differ

between those types of groups. Specifically, we argue that, although the inference of an underlying reality is potentially applicable to both types of social categories, perceptions of natural kind-ness and entitativity should differ as a function of whether membership in the category is forced or chosen.

Membership in FSC is, by definition, imposed on people by external criteria. Whatever direction the members of those groups will take in their life, they will always be associated (at least by others) with that group. FSC being independent of the choices of the individual members that compose them, such categories should be perceived as very stable in time and, possibly, unalterable. Consequently, FSC should primarily be defined in terms of 'natural kinds'. These are perceived as natural kinds that exist independently of humans' needs and desires (Rothbart & Taylor, 1992). In addition, their level of entitativity should be perceived as moderate. Indeed, as FSC are composed of a lot of different people, the perceived degree of coherence should not be very high.

In contrast, membership in CSC is perceived as being elected by group members and dependent of internal criteria. Individuals somehow pre-exist to the group and the group is formed by the association of these individuals that shared something in common even before they joined the group. As a consequence, as all these individuals are perceived as intrinsically similar (e.g. similar tastes, similar traits), they should be perceived as providing a rich source of inductive potential and as forming very coherent units. Consequently, the groups should be perceived as highly entitative, entitativity being linked to features such as similarity, common goals, common fate, and inductive potential. In contrast, the perceived level of natural kind-ness should be moderate. Indeed, CSC are perceived as variable in time and space, and are always susceptible to modification and redefinition depending upon the individuals composing the groups. In addition, CSC will be more easily perceived as reflecting human needs and desires, and more readily be compared to artifactual objects than to natural kinds.

Importantly, although essentialism will vary as a function of the extent to which social categories are perceived as natural and entitative, essentialism is not directly dependent on the type of group one evaluates. Indeed, all social categories (being forced or chosen) can potentially be essentialized, it is the content of those essentialist theories that varies with the type of group.¹

Hypotheses

The above model allows formulating a series of hypotheses. The first is that two major clusters of properties exist along which groups tend to be evaluated. On the one hand, groups are perceived along an 'entitativity' factor corresponding to dimensions such as 'common goals', 'common fate', 'similarity', 'interaction', 'groupness', 'informativeness' and 'importance' (Lickel et al., 2000). On the other hand, groups are evaluated along a 'natural kind' factor corresponding to dimensions such as 'discreteness', 'immutability', 'stability', 'necessity', and 'naturalness' (Haslam et al., 2000). This hypothesis mimics Haslam et al.'s (2000) earlier proposition even though we introduced a few changes in the measure of essentialism. Specifically, dimensions reflecting the entitativity concept were added in order to more closely reflect the two general classes of attributes linked to the concept, that is, similarity and organization (Dasgupta et al., 1999; Gaertner & Schopler, 1998; Lickel et al., 2000). Also, unlike Haslam and colleagues, the dimension of 'inherence', or underlying reality, will not be included. Indeed, as we have argued, this dimension corresponds for us to the definition of subjective essentialism (see above; Medin, 1989) and, as such, will be analyzed separately.

Our second hypothesis holds that categories for which membership is forced (FSC) will be distinguished from categories for which membership depends on group members' personal choice (CSC). In other words, the way lay people respond to FSC and CSC on the dimensions of essentialism should be fundamentally different and should be reflected in a cluster analysis based on such dimensions.

Our third hypothesis is that FSC and CSC should differ in their levels of entitativity and natural kind-ness. Specifically, whereas we expect the essence of FSC to derive mainly from their perceived naturalness and FSC in general to be only moderate in entitativity, CSC should be formed around individuals sharing an underlying reality with one another and perceived as high in entitativity and moderate in naturalness.

Finally, our fourth hypothesis asserts that the degree of perceived underlying reality associated with the groups (measured by the 'inherence' dimension of Haslam et al. [2000] in Study 1, and a scale composed of five different items in Study 2) should not differ as a function of the kind of group one is judging. Specifically, both FSC and CSC groups can be potentially essentialized to the same extent. In other words, although membership control is a suitable feature allowing differentiation between two major types of social categories, it will turn out to be no predictor of the actual level of underlying reality attributed to each category. However, subjective essentialism should be predicted by both perception of naturalness and entitativity. To the extent that this hypothesis is true, subjective essentialism could no longer be equated with the sole perception of groups as natural kinds.

Study 1

Method

Participants Thirty persons completed a questionnaire in exchange for €10. All participants were selected on the basis of nine criteria. Participants were *White* (1) *Belgian* (2), *European* (3), *French-speaking* (4) *females* (5) in their *twenties* (6). They were *students* (7) in *psychology* (8) at the *Catholic University of Louvain at Louvain-la-Neuve, Belgium* (9). This particular list of criteria allowed ensuring that 9 of the 24 social categories would correspond to participants' ingroup and 9 other categories to participants' outgroup. We could not control in advance for participants' group membership in the six remaining social categories (i.e. Catholic, Protestant, Musicians, Sportsmen/

women, Right-wing, and Left-wing) without further narrowing the sample. For this reason, we simply asked participants for their membership in those six categories at the end of the questionnaire at the same time that we measured whether participants perceived themselves as members and non-members in the preceding groups. Because the ingroup versus outgroup status of category did not produce any significant results, this variable will not be discussed further.

Social groups Twenty-four social groups were selected such that half of them would be FSC groups, that is, categories in which people enter by birth or groups for which membership is forced in some way, and the other half, groups in which people enter by choice.² Moreover, within the constraints of the experimental design, half of the groups were selected to be participants' ingroup and the other half participants' outgroup. As explained above, however, we lacked the necessary control for 6 of the 24 groups on this last variable.

Measures The questionnaire was composed of 14 dimensions on which the various groups had to be rated. Consistent with our model, one dimension tested the attribution of essence (underlying reality). The underlying reality item was derived from Haslam and colleagues' (2000, p. 118) inference item: 'Some categories have an underlying reality; although their members have similarities and differences on the surface, underneath they are basically the same. Other categories also have many similarities and differences on the surface, but do not correspond to an underlying reality'.

Five dimensions were taken from Haslam and colleagues (2000) in order to evaluate the extent to which the group was perceived to be a natural kind (discreteness, immutability, stability, necessity, and naturalness) and seven dimensions, taken from Lickel and colleagues (2000) and Haslam et al. (2000), aimed at measuring perceived entitativity of the groups³ (common goals*, common fate*, similarity, interaction*, groupness*, informativeness, and

importance*).⁴ Finally, one question assessed the evaluative status of the categories (Haslam et al., 2000).⁵ All 14 dimensions were rated on scales ranging from 1 to 7, individually anchored at their extremes. Participants rated all categories on each dimension before proceeding to the next dimension. Most participants completed the questionnaire within 40 minutes.

Results

Structural relations among essentialist variables

The 24 (groups) \times 12 (dimensions) correlation matrix for each of the 30 participants was computed and transformed into z scores, using the Fisher-z transformation formula. The mean z-values across all 30 subjects were then estimated before transforming the scores back into correlations. To determine the structural relations among the variables, a principal component analysis (PCA) was performed on the pattern of intercorrelations of the 12 dimensions taken from Haslam et al. (2000) and Lickel et al. (2000). The PCA revealed three factors with an eigenvalue greater than 1. Together, these three factors explained 56.98% of the total variance (26.60%, 21.70%, and 8.68%, for the first, second, and third factor, respectively). Five dimensions loaded highly and uniquely on the first factor (necessity, immutability, stability, naturalness, and discreteness) and two on the second (importance and similarity). In addition, two dimensions loaded highly on both the first and the second factors (informativeness and common goals) and two dimensions loaded highly on both the second and the third factors (groupness and common fate). Finally, one dimension loaded moderately, and in different directions, on all three factors at the same time (interaction).

Consistent with our prediction (Hypothesis 1), the first factor combines all dimensions linked to 'inalterability' and replicates previous results obtained by Haslam and his colleagues (2000) on the natural kind factor. The second dimension combines all elements classically depicted as signs of entitativity. Importantly, these elements cover the two clusters of dimensions

Table 1. Principal component analysis of essentialism dimensions

Dimension	Study 1		Study 2	
	Factor 1	Factor 2	Factor 1	Factor 2
Immutability	.81			.72
Naturalness	.78			.73
Common goals	-.69	.45		.77
Necessity	.61			.47
Stability	.60			.58
Discreteness	.52			.55
Similarity		.72	.58	
Groupness		.64	.60	
Importance		.59	.66	
Informativeness	.49	.58	.70	
Common fate		.49	.62	
Interaction			.61	

Note: Only factor loadings higher than .45 are reported.

linked to entitativity: similarity and organization (Dasgupta et al., 1999; Gaertner & Schopler, 1998; Yzerbyt et al., 2001). The last factor is also composed of two elements of entitativity. Due to the small variance explained by this factor and to the lack of theoretical prediction behind it, this factor will not be alluded to any further. Table 1 shows the loadings of all dimensions on the first and the second factors.

Two scores were computed that corresponded to the two first factors of the PCA. The 'natural kind' score was computed by averaging participants' answers on the five dimensions of 'immutability', 'stability', 'necessity', 'naturalness', and 'discreteness' ($\alpha = .93$). We excluded the 'common goals' dimension from the natural kind-ness scale for two reasons. First, theoretically, common goals are associated more with entitativity than natural kind-ness. Second, the addition of the 'common goals' dimension to the natural kind-ness scale substantially weakened the internal consistency of the scale (α dropping from .93 to .71), whereas its addition to the entitativity scale strengthens the alpha value of this scale (from .76 to .82). The 'entitativity' score was computed by averaging the results on the six dimensions of 'similarity', 'informativeness', 'groupness', 'importance', 'common goals', and 'common fate' ($\alpha = .82$). This scale reflects all facets of

entitativity as described by Dasgupta and colleagues (1999). Because of the lack of association of the 'interaction' dimension with any of the three factors, we dropped this variable from subsequent analyses.

All subsequent analyses were performed on the mean ratings of the 24 social categories for each dimension. Each mean rating was based on the responses of the 30 participants.

Cluster analysis of groups To investigate the relationship among the 24 groups, we conducted a hierarchical cluster analysis. The input of the analysis was participants' ratings of the groups on the 11 properties that loaded highly on the two first factors of PCA results (necessity, immutability, stability, discreteness, naturalness, common goals, common fate, informativeness, importance, groupness, and similarity). The cluster method that was used is the between-group linkage and the measure is based on squared-Euclidean distances. A good two clusters solution was reflected both in the dendrogram and the distance coefficients. Specifically, a sudden gap is observed between the distance coefficients of stage 22 (12.03) and 23 (28.60) indicating the appropriateness of two clusters solution. No other important jump in distance coefficient was observed.

Consistent with our prediction (Hypothesis

2), the data revealed that participants used these 11 dimensions to differentiate between two kinds of groups. Specifically, a first cluster included all groups defined as CSC, that is, groups for which membership generally depends upon personal control and choice (e.g. Catholics, students). The second cluster includes all groups defined as FSC, that is, groups for which membership is largely independent of personal control and choice (e.g. women, old people).

Entitativity and naturalness In order to examine the extent to which the two factors, i.e. entitativity and natural kind-ness, characterize the two types of groups, we computed a 2 (Group: FSC vs. CSC) \times 2 (Factor: Entitativity vs. Natural kind-ness) analysis of variance (ANOVA) with the first factor varying between groups and the second varying within groups. Results revealed the presence of a significant main effect of Factor ($F(1, 22) = 27.14, p < .001$). The mean level of natural kind-ness ($M = 4.60$) was higher than the mean level of entitativity ($M = 4.00$). The main effect of Group was also significant ($F(1, 22) = 11.52, p < .005$). The mean level for FSC ($M = 4.55$) is higher than the mean level for CSC ($M = 4.04$). More importantly, and consistent with Hypothesis 3, the interaction between Group and Factor came out highly significant ($F(1, 22) = 104.52, p < .001$). The two groups were associated with different levels of entitativity ($t(22) = 4.71, p < .001$), as well as with different levels of natural kind-ness ($t(22) = 7.53, p < .001$). Specifically, FSC were rated more as natural kinds ($M = 5.44$) and as having lower entitativity ($M = 3.66$) than CSC ($M_s = 3.76$ and 4.34 , for natural kind-ness and entitativity, respectively). Moreover, whereas the FSC's score on naturalness was higher than its score on entitativity ($t(11) = 9.32, p < .001$), the reverse was true for CSC ($t(11) = 4.47, p < .002$) (see Figure 1).

Essentialism Of crucial importance for our purpose, we needed to verify whether FSC and CSC were attributed similar levels of underlying reality. Indeed, we argued that essentialism, that is the attribution of an underlying reality,

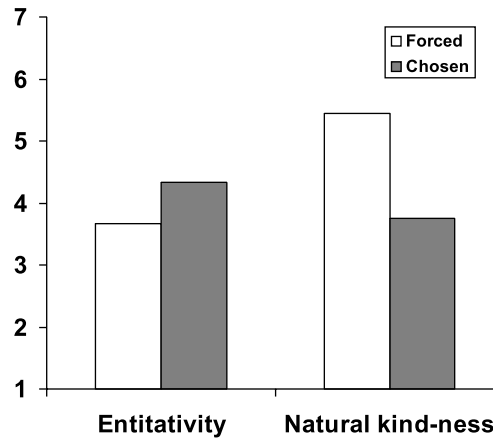


Figure 1. Mean levels of entitativity and natural kind-ness as a function of the type of group (Study 1).

should not be restricted only to natural or to entitative groups. To assess whether essentialism characterizes one of the two types of groups or both types of groups to the same extent, we computed an independent t test with the type of group as the independent variable and scores on the 'underlying reality' measure as the dependent variable. Results revealed that FSC and CSC did not differ in the extent to which people essentialized them. Specifically, the mean level of underlying reality of FSC ($M = 3.88$) did not differ from the mean level of CSC ($M = 3.85$) ($t(22) < 1, ns$). Consistent with our prediction (Hypothesis 4), the tendency to infer the presence of an underlying essence to the group did not depend on the type of group being evaluated. In other words, the permeability of a group is not a good predictor of the amount of underlying reality that will be associated with it.

In addition to testing that both types of group relate to the same extent to essentialism, it was also important to show that both entitativity and naturalness relate to essentialist perceptions of groups. Underlying reality was regressed on both naturalness and entitativity factors. As predicted, underlying reality was significantly predicted by entitativity and natural kind-ness ratings ($F(2, 21) = 31.80, p < .001$). Crucially, controlling for entitativity

ratings, natural kind-ness uniquely predicted underlying reality attributions ($\beta = .70$; $t(22) = 5.57$, $p < .001$). Similarly, controlling for natural kind-ness ratings, entitativity uniquely predicted attributions of underlying reality to the groups ($\beta = .97$; $t(22) = 7.73$, $p < .001$).

Discussion

This first study sends a most encouraging message regarding our idea that social categories may differ with respect to the degree with which they are seen as possessing attributes revolving around the notion of natural kind-ness versus properties associated with entitativity. Whereas natural kind-ness was preferentially attached to what we called forced social categories, entitativity was primarily linked to groups we labeled chosen social categories. Moreover, in line with our analysis of the available literature, we found that both types of groups were potentially seen as possessing some degree of essence. In fact, natural kind-ness and entitativity, as two factors organizing the main dimensions associated with essentialism, were jointly and independently predictive of the degree of essence ascribed to a group.

Armed with these encouraging findings, we wanted to conduct a second study in order to replicate the results of Study 1 while also introducing a few modifications. First, in order to generalize our initial results, we decided to examine another set of groups, with some groups that were different than the ones used in the Study 1. Second, we used a larger sample of respondents ($N = 73$) in order to address the potential limitation that too few participants may have been included in Study 1. Third, and most importantly, whereas Study 1 only relied on one item to assess essentialism, we wanted our second study to rest on a more reliable and valid index of essentialism. To this end, Study 2 included a set of four new items directly tapping essentialist lay theories.

Study 2

Method

Participants A total of 73 persons volunteered to complete the questionnaire in exchange for

e5. Contrary to what happened in Study 1, any person who was interested to take part in the study was allowed to fill in the questionnaire.

Social groups Twelve social groups were selected such that half of them would be FSC groups, that is categories in which people enter by birth or groups for which membership is forced in some way (i.e. Asians, Moroccans, Flemish, Blacks, Orphans*, and Old people), and the other half CSC groups, groups in which people enter by choice (i.e. Athletes*, Physicians, Members of an extreme right political party in Belgium—the Vlaams Belang*, Musicians, Philatelists*, and Professors).⁶ Given that the ingroup versus outgroup distinction did not give rise to any significant effect in Study 1, this variable was dropped in the present experiment and only outgroups were presented to the participants.

Measures The questionnaire comprised a total of 17 items on which the 12 groups had to be rated. The same seven dimensions that were used in Study 1 to evaluate perceived entitativity of the groups were included (i.e. common goals, common fate, similarity, interaction, groupness, informativeness, and importance). Also, the same five dimensions used in Study 1 to evaluate perceived natural kind-ness of the groups were included (i.e. discreteness, immutability, stability, necessity, and naturalness). In addition, a more reliable measure of essentialism was included in the present study. Specifically, instead of a single item we chose to present our participants with five items tapping subjective essentialism with respect to social categories. The five items are presented in the appendix.

All 17 items were rated on scales individually anchored at their extremes. Participants rated all categories on each item before proceeding to the next item. Most participants completed the questionnaire within 30 minutes.

Results and discussion

Structural relationships among essentialist variables The 12 (groups) \times 12 (dimensions)

correlation matrix for each of the 73 participants was computed and transformed into z scores, using the Fisher- z transformation formula. The mean z -values were then estimated to produce a matrix that is the mean of the matrices of all 73 subjects. This resulting matrix was then transformed back into correlations. As in Study 1, a PCA was performed on the pattern of intercorrelations of the 12 dimensions linked to entitativity and natural kind-ness. The PCA revealed the presence of two factors with eigenvalues greater than 1. Together these factors explained 51% of the total variance (28% and 22% for the first and the second factors, respectively). Consistent with our first hypothesis, all 7 entitative dimensions loaded highly on the first factor and all 5 natural kind-ness dimensions loaded highly on the second one. This pattern fully replicates the results obtained in Study 1 (see Table 1).

Two scales were then computed that corresponded to the two factors evidenced in the PCA. The 'natural kind-ness' scale was computed by averaging results on the five dimensions of 'immutability', 'stability', 'necessity', 'naturalness', and 'discreteness' ($\alpha = .88$). The 'entitativity' scale was computed by averaging the results on the 7 dimensions of 'similarity', 'informativeness', 'groupness', 'importance', 'common goals', 'interaction', and 'common fate' ($\alpha = .87$). This scale reflects all facets of entitativity as described by Dasgupta and colleagues (1999).

All subsequent analyses were performed on the mean ratings of the 12 social categories for each dimension. Each mean rating was based on the responses of the 73 participants.

Cluster analysis of groups To investigate the relationship among the 12 groups, we conducted a hierarchical cluster analysis. The same method of analysis was used as in Study 1. A good cluster solution was reflected in both the dendrogram and the distance coefficients. Specifically, a sudden gap was observed between the distance coefficients of stages 10 (11.94) and 11 (34.99) indicating the appropriateness of a two-cluster solution. No other important jump in distance coefficient was observed.

Consistent with our prediction (Hypothesis 2) and with results obtained in Study 1, the data revealed that participants used the 12 dimensions to differentiate between two kinds of groups: FSC and CSC. The first cluster included all groups defined as CSC (e.g. Athletes and Physicians) whereas the second cluster included all FSC groups (e.g. Orphans and Blacks).

Entitativity and natural kind-ness A 2 (Group: FSC vs. CSC) \times 2 (Factor: Entitativity vs. Natural kind-ness) ANOVA was computed with the last factor as repeated measure. Results revealed a significant effect of Factor ($F(1, 10) = 55.74, p < .001$). The mean level of responses on the natural kind-ness scale ($M = 2.98$) was lower than the mean level of responses on entitativity one ($M = 3.90$). This result is opposite to the one found in Study 1 and seems therefore to be dependent on the type of groups that were used in the studies. The main effect of Group did not reach significance. Importantly, and consistent with our prediction (Hypothesis 3), the interaction between Group and Factor was significant ($F(1, 10) = 103.17, p < .001$). Whereas FSC were rated as more natural ($M = 3.81$) than CSC groups ($M = 2.15$) ($t(10) = -8.76, p < .001$), CSC groups were rated as more entitative ($M = 4.33$) than FSC groups ($M = 3.47$) ($t(10) = 2.74, p < .03$). Moreover, whereas the FSC's score on naturalness was higher than its score on entitativity ($t(5) = 2.90, p < .04$), the reverse was true for CSC ($t(5) = -9.95, p < .001$) (see Figure 2).

Essentialism A PCA was computed on the correlation matrix of mean correlations across participants for the five dimensions meant to assess essentialist beliefs. The PCA revealed the presence of a single factor with an eigenvalue above 1, accounting for 43% of the total variance. Accordingly, a score was computed with the five dimensions related to essentialism about the groups ($\alpha = .92$). Similar to what we did in Study 1, we compared our participants' essentialism regarding FSC and CSC. Results revealed that the two groups did not differ from one another ($M_s = 2.94$ and 2.58 , for FSC and CSC groups, respectively).

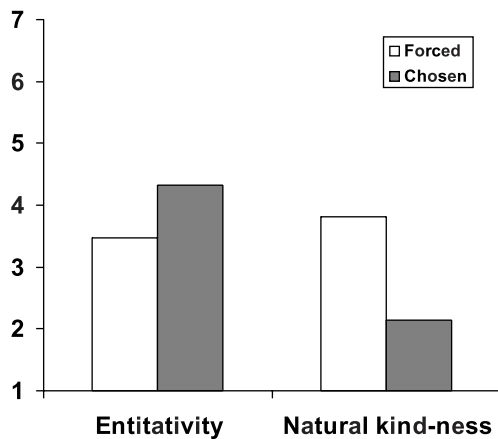


Figure 2. Mean levels of entitativity and natural kind-ness as a function of the type of group (Study 2).

As in Study 1, the essentialism score was regressed on both naturalness and entitativity factors. Clearly, essentialism was predicted both by entitativity and natural kind-ness ($F(2, 11) = 24.16, p < .001$). Controlling for entitativity ratings, natural kind-ness allowed an improvement in our prediction of essentialism with respect to the groups ($\beta = .99; t(11) = 6.66, p < .001$). Similarly, controlling for natural kind-ness, entitativity uniquely predicted essentialism with respect to the groups ($\beta = .71; t(11) = 4.81, p < .001$).

General discussion

Social scientists have long been interested in the way lay people perceive social categories, but it is only recently that researchers have argued for a psychological essentialist theory of categorization (for a collection, see Yzerbyt, Judd, & Corneille, 2004). Departing from classical and probabilistic views of categories (Medin, 1989; Medin and Ortony, 1989) proposed an essentialist appraisal of the social world by lay perceivers. The core idea of psychological essentialism is that 'people act as if things (e.g. objects) have essences or underlying natures that make them the thing they are. Furthermore, the essence constrains or generates properties that may vary in their

centrality (...) theories (...) embody or provide causal linkages from deeper properties to more superficial or surface properties' (Medin, 1989, p. 1476).

An increasing number of social psychologists now rely on subjective essentialism to examine lay perceptions of social groups (Haslam et al., 2000; Yzerbyt et al., 2004; Yzerbyt, Rocher, & Schadron, 1997). Unfortunately, this growing interest has created the impression among many scientists that the concept is ill-defined (Haslam et al., 2000) or inconsistent. Essentialism has often been related to and sometimes assimilated with other closely related concepts such as entitativity (Yzerbyt et al., 2001) and natural kind-ness (Hirschfeld, 1996; Rothbart & Taylor, 1992).

In the present paper, we propose to integrate and differentiate the three related notions of entitativity, natural kind-ness, and subjective essentialism. Specifically, we suggest that the evaluation of essentialist thinking should be restricted to the attribution of an underlying essence to the group. The more people believe that, besides superficial differences, deep inside group members are all the same and share with one another some underlying characteristics, the more they essentialize the category. In such a perspective, essentialism is no longer restricted to the perception of natural kinds or to the perception of entitativity and can therefore be differentiated from these two concepts.

In addition to proposing the above distinction, we argue that perceivers appraise social categories along two general clusters. Specifically, FSC have to be distinguished from CSC. FSC refer to groups in which membership does not generally fall under group members' control and choice. Membership criterion is assumed to be external. In other words, membership in FSC is imposed on people by birth (e.g. gender, race), early in infancy (e.g. national heritage), or is subject to temporal constraints (e.g. young and old people). In contrast, membership in CSC depends on personal choice, that is, people can easily decide to leave the group. In other words, membership criterion is perceived as internal.

Because both types of groups are socially and psychologically defined by a consensus as groups as opposed to loose aggregates (Tajfel, 1978), people should associate both of them with an underlying reality, an essence that defines the groups at a very deep level of perception. Indeed, the consensus about a group's existence should lead people to subjective essentialism independently of whether membership's criterion was at first internal or external. Although FSC and CSC should not differ in the extent people essentialize them, we would expect their respective relationships with the related concepts of essentialism, i.e. natural kind-ness and entitativity, to diverge. Specifically, FSC are primarily defined in terms of their inalterability, and, consequently, are perceived as highly 'natural' groups. In contrast, CSC are mainly appraised in terms of similarity and organization among members and, hence, associated with a high entitativity. Importantly, both FSC and CSC are perceived as 'essential' groups, that is, both categories have comparable levels of underlying reality.

Two studies were conducted to test the four hypotheses that we derived from the above theoretical propositions. Results supported all four predictions. First, perceptual properties of the groups can be summarized into two general dimensions. Whereas an entitativity factor was found to associate characteristics such as common goals, common fate, similarity, and informativeness, a natural kind-ness factor comprised properties such as stability, inalterability, naturalness, discreteness, and necessity. These two dimensions closely resemble the ones obtained by Haslam and colleagues (2000). The originality of the present studies was that we included more of the dimensions classically associated with entitativity. Indeed, although, Haslam and colleagues (2000) named their second factor 'reification' or 'entitativity', they failed to integrate in their questionnaire the dimensions of common goals and common fate that have been demonstrated to be essential features of groups' entitativity (Dasgupta *et al.*, 1999; Gaertner & Schopler, 1998; Lickel *et al.*, 2000).

A second hypothesis supported in our study

was that lay perceivers differentiate social categories whose membership is imposed (FSC) from social categories whose membership is chosen (CSC). Indeed, although all groups used in our experiments corresponded to the definition of 'social category' (Krech & Crutchfield, 1948; Wilder & Simon, 1998), the categorization criterion was such that membership to half of the groups would be perceived as dependent on one's personal choice and control, whereas membership to the other half would be perceived as imposed on category members. Consistent with our hypothesis, results show that people are very much able to differentiate between FSC and CSC. In both studies, a two-cluster solution was found that exactly mapped on our a priori distinction between FSC and CSC groups.

Consistent with our third hypothesis, people also relied differently on entitativity and naturalness when evaluating the two kinds of groups. Specifically, whereas FSC were rated highly on the natural kind-ness factor but only moderately on the entitativity one, the reverse was true for CSC.

Finally, and most importantly, both types of groups were characterized by a similar level of underlying essence. Specifically, the essence associated with a group did not depend on the nature of its membership. This result is crucial in that it underlines the importance of distinguishing between the three related concepts of essentialism, natural kind-ness, and entitativity. In contrast to what some researchers may have suggested (Rothbart & Taylor, 1992), not all 'essential' categories are perceived primarily as natural kinds. Some 'not-so-natural' social categories such as 'psychologists' or 'musicians' can as well be associated with an underlying reality, an essence that makes group members what they are and what they are not. Importantly, both perception of entitativity and of naturalness predict the ascription of essence to the groups. That is, over and above the effect of entitativity, perception of natural kind-ness predicted subjective essentialism. Similarly, over and above the effect of natural kind-ness, perception of entitativity predicted subjective essentialism.

To summarize, essentialism refers to lay people's belief that, although group members may differ from one another at the surface level, group members very much resemble one another 'deep inside'. In this sense, essentialism corresponds to the deepest, genotypic, level of groups' perception (Yzerbyt et al., 2001). The ascribed essence would however be derived from different features depending on whether membership in the category is forced or chosen. Forced social categories are perceived as very natural and moderately entitative. In contrast, chosen social categories are perceived as very entitative and only moderately natural. Despite these differences in levels of naturalness and entitativity, it is worth insisting that both FSC and CSC are characterized by the *two* types of dimensions and that the two dimensions predict subjective essentialism. If it may not be surprising that FSC are considered somewhat entitative, it is highly interesting to note that CSC also tend to be naturalized. Stated otherwise, if social categories are perceived as having a similar degree of underlying reality, they tend to be seen as natural even though the latter characteristic will depend on the control one has over membership in the category. This observation corresponds to Tajfel's (1978) proposition of fit between internal and external criteria of categorization. From the moment an underlying reality is ascribed to the groups, all groups become psychologically and socially real and, consequently, are associated with some level of entitativity, on the one hand, and some level of naturalness, on the other hand.

The finding that all social categories tested in the present study are essentialized raises the following question: 'Why do people develop essentialist theories about their social environment?' Elsewhere, Demoulin et al. (2002) have argued that essentialism has to be understood as a 'search for explanation' process. To reduce the complexity of their social environment, people organize it into a number of categories. These divisions are further reinforced by the fact that people perceive differences among categories in their daily interactions. For example, social categories can differ physically

(e.g. Black and White people, males and females) or in the way group members dress up (e.g. skinheads and hippies) or behave (e.g. policemen and gangsters). To the same extent that people try to find explanations for individuals' or groups' behaviors, they also try to find explanations for interindividual and intergroup differences. Indeed, people hardly tolerate uncertainties, and therefore, engage in a 'search for explanation' process. Similarly, to the same extent that behaviors of individuals tend to be explained in terms of situational or dispositional constraints (for a review, see Ross & Nisbett, 1991), differences between individuals or between groups can be explained in terms of situational or dispositional attributions. In this perspective, subjective essentialism corresponds to a dispositional explanation of between-group differences (Yzerbyt et al., 1997; Yzerbyt & Rogier, 2001). In other words, although people could explain some group differences by situational factors, subjective essentialism predicts that people will assume that the perceptual, phenotypic, differences correspond to very deep, genotypic, variations between groups, namely the essences of the groups.

Whereas previous conceptualizations of essentialism promoted the view that essence was limited to biology (because of the connotation of forced belongingness to groups), the present perspective allows for a larger spectrum of 'essences' to be considered. As a case in point, an essence can be 'sortal' (Haslam, Bain, Douge, Lee, & Bastian, in press). Groups may have different essences because of language and religion or they may have a more uniquely human essence than others (Leyens et al., 2000, 2001). The latter three kinds of essence are obviously linked more to culture than to nature. This does not take away that saying that groups have such a sortal essence means that there is something inherent in these groups that distinguishes them from other groups. Recently, Haslam et al. (in press) have reported evidence suggesting that natural and sortal essences entail different consequences at the interpersonal level. These authors showed that people attribute more natural personality characteristics to themselves than to other

people with the exception of uniquely human characteristics. Conversely, research on infra-humanization (Demoulin et al., 2005; Leyens et al., 2000) shows that people attribute more uniquely human emotions to their ingroup than to outgroups but do not do so for natural (basic) emotions. These attributions would seem to be mediated by ascriptions of essences to the groups (Demoulin et al., 2002). It remains to be seen, however, which of the two components of essentialist lay theories really are responsible for the obtained effect.

The present contribution shows that Belgian respondents attribute essences to groups and that they do so on the basis of how natural and entitative they perceive these groups to be. Scholars have shown that, around the world, people have developed different kinds of theories about the mind and about others' behaviors (Lillard, 1998). An important follow-up to the present study would be to verify whether non-Western cultures also perceive groups in terms of their natural kind-ness and entitativity and whether these perceptions lead them to develop essentialist lay theories about surrounding groups. This is of crucial importance for intergroup relations in that cultural misunderstandings can result from different interpretation of groups' differences. To the same extent that some cultures may have developed a preference for dispositional attributions and others for situational ones (Miller, 1984), it could be that lay theories of essentialism differ in various cultural settings.

Notes

1. Remember that we exclusively decided to focus on social categories, that is, groups that would fall under Krech and Crutchfield's (1948) definition of 'class' or Wilder and Simon's (1998) definition of social groups. In this perspective, we do not hypothesize that loose associations or task groups would necessarily all be essentialized.
2. Although we acknowledge that some participants may perceive that they had been forced (e.g. by their parents) to, for example, study psychology, we still think that globally people perceive membership in those groups a matter of personal control and choice. Note that our participants did not have to respond with respect to their own membership in the category but rather for membership in the category in general.
3. The 'exclusivity' dimension (Haslam et al., 2000) aimed at testing entitativity was also introduced in our questionnaire. However, we discarded it for several reasons. First, we could not observe any variability in participants' responses on that particular question. Specifically, a high majority of participants rated all groups as 'not at all exclusive'. Second, Haslam and colleagues (2002), in a subsequent paper, removed the 'exclusivity' dimension for the same reasons. As they noted, exclusivity 'had failed to discriminate participants effectively' (p. 91).
4. Items with * were taken and adapted from Lickel et al. (2000). Wording for these items can be found in the appendix. All other items were taken from Haslam et al. (2000, pp. 117–118).
5. As this variable did not produce any significant results, it will not be discussed any further.
6. Groups with * were not used in Study 1.

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Appendix

Entitativity

Groupness: Some categories can qualify as ‘groups’, some categories qualify to a lesser extent. To what extent do the following categories ‘not qualify at all as groups’ or ‘can very much qualify as groups’?

Interaction: In some categories, people interact very much with one another. In some, there is almost no interaction between members of the category. To what extent do members of the following categories ‘not interact at all with one another’ or ‘interact very much with one another’?

Importance: Some categories are very important in the eyes of the people that are part of it. Some have no importance at all in their eyes. To what extent are the following categories ‘not at all important’ or ‘very much important’ for their members?

Common Fate: In some categories, members of the category share with one another common fate. In some categories, members are not linked by a common fate. To what extent do members of the following categories ‘not share common fate’ or ‘share common fate’?

Common Goals: In some categories, members of the category pursue common goals. In some categories, members are not linked by any common goals. To what extent do members of the following categories ‘not have common goals’ or ‘pursue common goals’?

Informativeness: Some categories allow people to make many judgments about their members; knowing that someone belongs to the category tells us a lot about that person. Other categories only allow a few judgments about their members; Knowledge of membership is not very informative.

Similarity: Some categories contain members who are very similar to one another; they have many things in common. Other categories contain members who differ greatly from one another, and don’t share many characteristics.

Natural kind-ness

Discreteness: Some categories have sharper boundaries than others. For some, membership is clear-cut, definite, and of ‘either/or’ variety; people belong to the category or they do not. For others, membership is more ‘fuzzy’; people belong to the category in varying degrees.

Naturalness: Some categories are more natural than others, whereas others are more artificial.

Immutability: Membership in some categories is easy to change; it is easy for group members to become non-members. Membership in other categories is relatively immutable; it is difficult for category members to become non-members.

Stability: Some categories are more stable over time than others; they have always existed and their characteristics have not changed much throughout history. Other categories are less stable; their characteristics have changed substantially over time, and they may not always have existed.

Necessity: Some categories have necessary features or characteristics; without these characteristics someone cannot be a category member. Other categories have many similarities but no features or characteristics are necessary for membership.

Subjective essentialism

Underlying reality (inherence): Some categories have an underlying reality. Although members have similarities and differences on the surface, underneath they are basically the same. Other categories also have many similarities and differences on the surface, but do not correspond to an underlying reality. (Studies 1 & 2.)

Membership explanation: In some cases, we feel that members of a category all possess something that convincingly explains membership in the category even if it is rather abstract. In some other cases, explaining membership in the category does not seem that easy. (Study 2)

Immateriality: Membership in some categories seems to be due to some immaterial thing that, even if it is hard to say what, is at the same time very real. For some other categories, we don't have the impression that we can spot some immaterial thing that explains membership in the category. (Study 2).

Deep explanation: Some categories have an explanative power. Something deep inside categories' members explains membership of these individuals in the category. For other categories, nothing deep inside the members can explain membership in the category. (Study 2).

Invisible link: For some categories, members seem to be linked with each other by some invisible thing. For other categories, nothing seems to link members with each other. (Study 2)

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