

Group Identity and Social Preferences (chapter X)

Marie Claire Villeval

▶ **To cite this version:**

Marie Claire Villeval. Group Identity and Social Preferences (chapter X). The Art of Experimental Economics - Twenty Top Papers Reviewed, 2021. halshs-03504316

HAL Id: halshs-03504316
https://shs.hal.science/halshs-03504316

Submitted on 29 Dec 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Chapter X: Group Identity and Social Preferences

by Yan Chen and Sherry X. Li.
American Economic Review (2009)

Reviewed by Marie Claire Villeval, CNRS, GATE.
Author Orchid ID: https://orcid.org/0000-0001-8578-5449

Abstract: Beyond a summary of the paper, this review of "Group Identity and Social Preferences" by Yan Chen and Sherry X. Li highlights its exceptional impact on our understanding of group-contingent social preferences. This paper has made an important theoretical contribution by introducing group identity in the Charness and Rabin (2002)'s model of social preferences. The core of the contribution is to show experimentally that social identity influences distributional preferences, reciprocity and welfare-maximizing behavior. In particular, charity increases and envy decreases when people are matched with an in-group compared to an out-group, and people are more likely to reward and less likely to punish an in-group than an out-group match. This paper has also contributed to the methodological debates about the use of minimal group identity in laboratory experiments. It has inspired many research programs on the role of group-contingent preferences in various dimensions of decision-making in society. It is also important to emphasize its policy implications regarding how group-contingent social preferences could be activated to improve efficiency and the quality of social interactions in our segmented societies. This research agenda is more relevant than ever.

I cannot visit a museum exhibiting paintings of Klee or Kandinsky without thinking immediately of Yan Chen and Sherry Li. Of course, the Klee-Kandinsky protocol used for inducing minimal group identity in the lab was introduced in 1971 by social psychologists, H. Tajfel, M. Billig, R. Bundy and C. Flament, decades before the publication of "Group Identity and Social Preferences" in the American Economic Review in 2009. But if my reference point on group identity is Yan and Sherry's paper, it is not because of an in-group bias in favor of economists! It is because their paper had a huge impact on any scholar interested in understanding the impact of group biases and social preferences on individual decision-making. This is only one of many possible indicators: since its publication, the paper has received more than 1380 citations (Google Scholar), an impressive achievement!

In the seventies, social psychologists developed a theory of social identity to explain the foundation of intergroup discrimination (Tajfel and Tuner, 1979). Social identity is a perception of the self that is grounded in the affiliation to a social group. People derive self-esteem from being identified with a community, as they value sharing common roots, values, and language. Categorization is also central in this theory, capturing the notion that humans put themselves and others into categories. The numerous empirical tests of the theory of social identity have revealed that in-group bias is an omnipresent feature of intergroup relationships (see surveys by Tajfel and Turner, 1986; Brewer, 1999; Abdelal *et al*., 2009; Balliet *et al*., 2014). Individuals bias their behavior in favor of the group they identify with or by discriminating against the group they do not identify with. However, in these psychological studies, subjects are not incentivized and protocols only involve other-other allocation tasks. Thus, being generous or punishing others is costless to the subjects.

By introducing monetary incentives and decisions that impact players' own payoffs in the experimental design, economists could have ruined such well-established results in psychology.

This is not what happened… Y. Chen and S.X. Li have first made a theoretical contribution by introducing identity in economic models of social preferences. By incentivizing decisions, by introducing self-other allocation games in which helping or punishing others entailed a personal cost, and by increasing the number of games, they have provided more robust evidence of the role of social identity in shaping preferences. By removing step by step each element of the protocol that could drive the results, not only were they able to identify the mechanism of categorization behind "group-contingent social preferences" (I borrow this expression from Charness and Chen, 2019), but they also made important methodological contributions. Finally, I would like to insist on how much this paper has been inspiring for further research programs on group-contingent preferences.

In-group Favoritism in Distribution, Reciprocity and Welfare-Maximizing Preferences

Economists have taken up the topic of group identity by means of two different approaches. They first developed preference-based theoretical models, reconceptualizing the notion of group identity. In Akerlof (1997), preferences are affected by exogenous social norms and individuals gain utility by conforming to these norms. Extending this model, Akerlof and Kranton (2000, 2005) proposed a theory of group identity and self-identification in which utility depends on conformity to prescriptions and violations of the norm prescribed by group identity cause disutility. The alternative approach of identity is instead cognitive, based on individuals' beliefs. In Benabou and Tirole (2011), individuals invest in beliefs and identity management, depending on their confidence of being moral persons. This affects in turn their pro-sociality.

Y. Chen and S.X. Li's contribution is in line with the preference-based models of identity initiated by Akerlof and Kranton rather than with the belief-based approach. By contrast with these models, however, their focus is not on conformity to social norms. They modelled group-contingent social preferences by incorporating group identity in the two-person model of social preferences of Charness and Rabin (2002). They extended this model by varying the relative weight put on a match's payoff in the individual's utility function, depending on whether this match shares or not the same group identity. By doing so, they contributed to endogenize the norms that were exogenous in Akerlof and Kranton (2000) (Charness and Chen, 2019). Teaching this paper in economic classes is thus a good way to introduce the beliefs- vs. preferences-based theories of social identity.

Beyond this group-contingent social preferences model, the main reason why this paper has to be incorporated in this volume is its major empirical contribution on how and why group identity changes the weight people put on others' payoffs. In the same period, other economists tested the impact of group identity but they focused on other dimensions, such as trust (Hargreaves Heap and Zizzo, 2009), redistribution (*e.g.*, Luttmer 2001; Klor and Shayo, 2010), patience and risk attitudes after priming ethnic identity (Benjamin *et al*., 2010), coordination (Charness *et al*., 2007; Efferson *et al*., 2008), contributions in public goods games after priming gender identity (Cadsby and Maynes, 1998; Croson *et al*., 2003), discrimination (Fershtman and Gneezy, 2001; Hoff and Pandey, 2006), cooperation in prisoner's dilemma games (Goette *et al*. 2006; Charness *et al*., 2007) or in teams (Montmarquette *et al*., 2004; Eckel, and Grossman, 2005), altruism and third-party punishment (Bernhard *et al*., 2006). Instead, Y. Chen and S.X. Li focused on social preferences with an ambitious perspective encompassing distribution, reciprocity and welfare-maximizing preferences.

This is a fundamental paper also because it identified which aspect of group identity (categorization, attachment, communication, …) modifies social preferences and to which extent efficiency is impacted. To that purpose, the experimental design of Y. Chen and S.X. Li consists of four stages. In the first stage subjects were assigned to groups. Inspired by the method of Tajfel *et al*. (1971), subjects had to review five pairs of paintings, one painted by Klee and the other by Kandinsky, and to report their preferences in each pair. Based on their preferences they were then assigned either to the Klee group or to the Kandinsky group. The second and third stages of the experiment were used to enhance group attachment and measure a possible identity bias. In the second stage, subjects had to identify which artist painted each of two new paintings. Before entering their answers individually, they had the possibility to exchange information and opinions during ten minutes with the members of their own group via an online chat. The third stage consisted of five periods of an other-other allocation game where subjects had to decide how to allocate tokens between two other participants under three scenarios. The number of tokens to be allocated increased across periods. The scenarios varied whether the allocation had to be made between two in-groups, two out-groups, or between an in-group and an out-group.

The core of the experiment (and its major difference with the previous literature) is the sequential allocation games implemented in the fourth stage. In the main treatment, each subject played from seven to ten games out of 24 sequential two-person games. These games included 5 dictator games and 16 response games taken from Charness and Rabin (2002) which varied the conflict of interests between pair members. The other three games were variations of a game of Charness and Rabin (2002) used to test player B's cost sensitivity. There were three types of response games: according to the game, players B could help or sanction players A' entry decisions at no cost, they incurred a cost to help, or they sacrificed to sanction. These games helped characterize charity (generosity driven by advantageous inequality aversion), envy (punishment motivated by disadvantageous inequality aversion), reciprocity, and efficiency concerns. Each game was played under the strategy method: subjects had to make decisions in two scenarios varying whether the match was an in-group or an out-group.

This describes the original treatment. Group-contingent social preferences were identified by comparing behavior in this treatment with a control that included only the self-other allocation games without inducing group identity. I will mention the five other treatments when discussing the methodological contribution of the paper. In total, the experiment was run with 566 subjects from the University of Michigan. The structure of the experiment -the four stages and the five treatments- makes this paper a perfect tool to explain the principles of the experimental methodology to students. The beauty of its design lies both in the large diversity of games used to characterize group-contingent social preferences and in the diversity of treatments that helps identify the mechanism underlying these preferences by omitting each stage step-by-step. It is indeed crucial to identify which mechanisms trigger the phenomenon under study.

This elegant design delivers clear-cut results. First, the data replicated those from experiments in social psychology: the other-other allocations revealed significant in-group favoritism, showing the importance of identification and comparisons. Subjects allocated significantly more tokens to the in-group than to the out-group match in mixed pairs, whereas no difference was found in homogenous pairs. This is important to replicate previous findings under stricter conditions, as it gives also more strength to the novel results.

Second, in the self-other allocation games used to measure distributional preferences, subjects put more weight on their match's payoff when they shared the same group identity. Maximum

likelihood estimates revealed that when matched with an in-group, charity increased (by 47%) whereas envy decreased (by 93%), compared to an out-group match. The magnitude of the effects is large. Third, positive and negative reciprocity were also affected by group identity. In response games where the first mover's entry signaled good intentions, second movers were more likely (by 18.6%) to reward an in-group than an out-group, although envy reduced positive reciprocity. In games where entry signaled selfish intentions, they were less likely (by 12.8%) to punish an in-group, especially with charity concerns, and punishment was less cost sensitive than with an outgroup match. Such leniency toward in-groups is to highlight because one could have anticipated higher expectations from an in-group match and thus, a higher willingness to retaliate when being let down.

If people put more weight on the payoff of an in-group than on the payoff of an out-group, was this neutral in terms of efficiency? News are not so good here. Group identity increased the concerns for social welfare maximization in homogenous groups but not in heterogenous ones. As a result, when group identity was induced, earnings in homogenous groups in terms of identity were higher on average than in the absence of identity, but this did not compensate for the loss of earnings in heterogenous groups. The fact that people were not better off in heterogenous groups when identity was made salient compared to a neutral environment has policy implications for organizations. It may be efficiency-enhancing for an organization to highlight a common culture, but if one wants to promote diversity, it might be better not to make it too salient. This dimension has been further investigated in Chen *et al*. 2014: in organizations with a diverse workforce, priming a common identity (the organization identity) rather than a fragmenting identity (like ethnic identities) is efficiency-enhancing.

Methodological Contributions

When investigating the impact of group identity on decision-making, one often hesitates about procedures: Should one enhance group attachment by allowing subjects to communicate with their in-groups and perform a preliminary joint exercise? Should one use a between-subject or a within-subject design to compare attitudes towards in-groups and out-groups while avoiding experimenter demand effects? Should one assign individuals to groups based on their preferences (about paintings or any topic orthogonal to the preferences and beliefs under investigation) or is it sufficient to randomly assign subjects to groups identified by any neutral attribute? Is it better to use a natural group identity (as in, *e.g*., Bernhard *et al*., 2006a, 2006b; Goette *et al*., 2006; Hoff and Pandey, 2006; Goette *et al*., 2012) or to induce artificial identity? By muting some of the possible channels behind group-contingent social preferences, the different treatments in Chen and Li (2009) help address these questions.

In social psychology, minimal groups respond to the following principles: subjects are randomly assigned to non-overlapping artificial groups, group members are anonymous and do not interact, and there is no link between economic self-interest and in-group favoritism (Tajfel and Turner, 1986). As they acknowledge, Y. Chen and S.X. Li deviated from several of these principles: decisions were monetarily incentivized; the assignment to groups was not random but based on paintings preferences; subjects could chat with their group members; they had not only to allocate money in other-other pairs but also in self-other pairs. The test was thus more demanding since in some games subjects had to suffer a personal monetary cost or forego a personal gain to help or sanction another player. Still, results held.

The Klee-Kandinsky method to induce group identity is usually enjoyed by the subjects, but it is time consuming and group assignment is based on preferences. Would using random

allocation to groups identified by any meaningless feature be sufficient to induce group-contingent social preferences? The paper is informative on this point. In additional treatments group assignment was random. No significant difference was found in any games. Therefore, the authors recommend a random allocation procedure since it increases the chance of forming similar groups. It may also avoid possible cultural effects in the evaluation of paintings.

Is it crucial to let in-groups communicate in a problem-solving task (solving puzzles, finding a name for the group, coordinating) to enhance group attachment? In one treatment the chat between group members was withdrawn. They find that, in one of the 24 games, chat leads to significant difference in group-dependent decisions; by comparison, self-reported group affinity is significantly higher with chat than without. Based on these results, they recommend that "To enhance and strengthen group identity, a problem-solving stage, such as an online chat or puzzle-solving, can increase group attachment and might have a moderate effect on behavior." (p.452). Other papers have found that minimal group alone may not be sufficient to change behavior (*e.g.*, Eckel and Grossman, 2005; Charness *et al.*, 2007) and that a team-building exercise can be more effective in improving coordination and cooperation (*e.g.*, Chen and Chen, 2011; Charness *et al.*, 2014).

To test whether it matters to make other-other allocation choices to strengthen group identity before the main task, another treatment removed both the chat and the other-other allocation stage. The resulting differences in behavior were hardly significant and went in the direction of increased group identity effects when this stage was omitted. The authors did not determine whether this results from crowding out or from the fact that artificially induced group identity is short-lived but they suggested that this task could be omitted.

The main treatments implemented a within-subject design: the same subjects made allocation decisions when matched with an in-group and with an out-group. However, the reference to different categories might be interpreted as a signal of the experimenter's expectation of discrimination. Therefore, in additional treatments subjects had only out-group or only in-group matches. No significant differences were found with the initial results. This rejects the suspicion of an experimenter demand effect driving the different decisions in in-group and outgroup matches when using a within-subject design.

An Inspiring Line of Research

In the decade following its publication, Y. Chen and S.X. Li's paper has been replicated and it has continued to inspire research. Several authors have explored further the impact of group identity on distributional preferences (*e.g.*, Fehr *et al.*, 2013; Grosskof and Pearce 2017; Kranton *et al.*, 2018) and on reciprocity (*e.g.*, McLeish and Oxoby, 2011; Gneezy and Fessler, 2012; Currarini and Mengel, 2016). The literature has also dramatically broadened its scope. It has investigated other sources of naturally occurring or artificially induced group identity, the heterogeneity of biases, and a larger range of strategic and non-strategic games, from cooperation, coordination and competition among individuals to trust, gift-exchange and reciprocity in principal-agent relationships. Costa-Font and Cowell (2015), Lane (2016), Pechar and Kranton (2018), Charness and Chen (2019) and Li (2020) provide recent surveys of the literature on group identity. It is now more clear when group identity affects decision-making and when it does not. In particular, while minimal group identity generates in-group favoritism and out-group discrimination in non-strategic settings, it may not be strong enough -if not reinforced- to change decisions in strategic settings (such as in contests or public goods games). The salience of group affiliation is thus an important vector.

Y. Chen and S.X. Li themselves have explored other dimensions through which group identity affects social interactions, increasing our knowledge of the conditions in which group bias improves cooperation and welfare. Chen and Chen (2011) have shown how group identity contributes to equilibrium selection through a change in the potential function. Theoretically, group identity should facilitate coordination on higher equilibrium effort levels, which is confirmed experimentally in the minimum-effort game. Group identity also contributes to solve the moral hazard problem in principal-agent relationships with hidden action (Jiang and Li, 2019). Instead of inducing artificial group identity, Chen *et al*. (2014) primed subjects' natural identities either through names revealing ethnicity (fragmented identity), or through their university affiliation (common identity). While the fragmented ethnic identity reduced effort in the minimum-effort game, priming the common identity increased cooperation in the prisoner's dilemma game. Li *et al*. (2017) found, however, more contrasted results, suggesting that the effect of common identity on individuals' contributions to local charities is sensitive to the environment. Also, Li and Liu (2019) showed that the positive impact of group identity on cooperation with in-groups in infinitely repeated prisoner's dilemma games is conditional on a high probability of future interactions. This suggests a role of group identity in the ability to build long-term partnerships.

More than ten years after Chen and Li (2009)'s paper was published and despite the vast literature on the topic that followed, many questions are still not definitely answered. First, in line with Akerlof and Kranton (2000) Y. Chen and S.X. Li developed a preference-based interpretation, while Benabou and Tirole (2011) advocated a belief-based approach but on purely theoretical grounds. There is relatively little empirical evidence of the role of beliefs on group identity (*e.g*., Ockenfels and Werner, 2014; Le Coq *et al*., 2015; Coffman *et al*., 2017). A systematic confrontation of these approaches by designing novel experiments capturing both preferences and motivated beliefs in the management of identity would be helpful.

Second, we still know relatively little about the multiple dimensions of group identity (*e.g*., Chen *et al*., 2014) and about the extent to which group identity is sensitive to individual traits. For example, Kranton *et al*. (2018) identified recently groupiness as a crucial individual trait influencing the size of the in-group bias. There may be multiple group identities in the same person that coexist, peacefully or not. Which dimensions of group identity are more salient depending on the environment and how do individuals manage this coexistence?

Third, many studies adopt a static view of group identity. However, people may change groups over time, either by force (*e.g*., Bauer *et al*., 2014), because of social mobility (Suchon and Villeval, 2019), or because they select their group and the associated norms of behavior. The mechanisms behind the endogenous selection of the dominant group identity, notably through the selection of peers and reference group, have been so far insufficiently explored (*e.g*., Chiang *et al*., 2019; Shayo, 2019).

Finally, it would be helpful to investigate more systematically how institutions and organizations can favor the welfare-enhancing effects of group identity without encouraging parochialism. Team competition is one of the possible triggers (Ai *et al*., 2016; Chen *et al*., 2017; Charness and Chen, 2019; Charness and Holder, 2019), but there may be others. This research program is more relevant than ever in our highly segmented societies torn between more individualism and higher risks of community ghettoization.

References

Abdelal, R., Herrera, Y.M., Johnston, A.I., McDermott, R. (eds), 2009. Measuring identity: a guide for social scientists. Cambridge: Cambridge University Press.

Ai, W., Chen, R., Chen, Y., Mei, Q., Webb, P., 2016. Recommending teams promotes prosocial lending in online microfinance. Proceedings of the National Academy of Sciences 113 (52), 14944-14948.

Akerlof, G. A., 1997. Social distance and social decisions. Econometrica 65, 1005-1027.

Akerlof, G.A., Kranton, R.E., 2000. Economics and Identity. The Quarterly Journal of Economics 115 (3), 715-753.

Akerlof, G.A., Kranton, R.E., 2005. Identity and the Economics of Organizations. Journal of Economic Perspectives 19 (1), 9-32.

Balliet, D., Wu, J., De Dreu, C.K.W., 2014. Ingroup favoritism in cooperation: A meta-analysis. Psychological Bulletin 140(6), 1556-1581.

Bauer, M., Cahlíková, J., Chytilová, J., Želinský, T., 2018. Social contagion of ethnic hostility. Proceedings of the National Academy of Sciences 115 (19), 4881-4886.

Bénabou, R., Tirole, J., 2011. Identity, morals and taboos: Beliefs as assets. The Quarterly Journal of Economics 126, 805-855.

Benjamin, D.J., Choi, J.J., Strickland, A.J., 2010. Social identity and preferences. American Economic Review 100 (4), 1913-1928.

Bernhard, H., Fehr, E., Fischbacher, U., 2006a. Group affiliation and altruistic norm enforcement. American Economic Review 96 (2), 217-221.

Bernhard, H., Fischbacher, U., Fehr, E., 2006b. Parochial altruism in humans. Science 442-24.
Brewer, M.B., 1999. The Psychology of Prejudice: Ingroup Love and Outgroup Hate? Journal of Social Issues 55 (3), 429-444.

Cadsby, C.B., Maynes, E., 1998. Gender and free riding in a threshold public goods game: Experimental evidence. Journal of Economic Behavior and Organization 34, 603-620.

Charness, G., Rigotti, L., Rustichini, A., 2007. Individual behavior and group membership. American Economic Review 97 (4), 1340-1352.

Charness, G., Cobo-Reyes, R., Jiménez, N., 2014. Identities, Selection, and Contributions in a Public-goods Game. Games and Economic Behavior 87, 322-338.

Charness, G., Chen, Y., 2020. Social Identity, Group Behavior and Teams. Annual Review of Economics 12 (1), https://doi.org/10.1146/annurev-economics-091619-032800.

Charness, G., Holder, P., 2019. Charity in the Laboratory: Matching, Competition, and Group Membership. Management Science 65 (3), 1398-1407.

Chen, Y., Li, S.X., 2009. Group identity and social preferences. American Economic Review 99 (1), 431-457.

Chen, R., Chen, Y., 2011. The potential of social identity for equilibrium selection. American Economic Review 101 (6), 2562-2589.

Chen, Y., Li, S.X., Liu, TX, Shih, M., 2014. Which hat to wear? Impact of natural identities on coordination and cooperation. Games and Economic Behavior 84, 58-86.

Chen, R., Chen, Y., Liu, Y., Mei, Q., 2017. Does team competition increase pro-social lending? Evidence from online microfinance. Games and Economic Behavior 101, 311-333.

Chiang, C.-F., Liu, J.T., Wen, T.-W., 2019. National identity under economic integration. Journal of Population Economics 32 (2), 351-367.

Coffman, K.B., Exley, C.L., Niederle, M., 2017. The Role of Beliefs in Driving Gender Discrimination. Harvard Business School Working Paper 18-054.

Costa-Font, J., Cowell, F., 2015. Social identity and redistributive preferences: A survey. Journal of Economic Surveys 29 (2), 357-374.

Croson, R., Marks, M., Snyder, J., 2003. Groups work for women: Gender and group identity in the provision of public goods. The Negotiation Journal 24 (4), 411-427.

Currarini, S., Mengel, F., 2016. Identity homophily and in-group bias. European Economic Review 90, 40-55.

Eckel, C.C., Grossman, P.J., 2005. Managing diversity by creating team identity. Journal of Economic Behavior and Organization 58 (3), 371-392.

Efferson, C., Lalive, R., Fehr, E. 2008. The Coevolution of Cultural Groups and Ingroup Favoritism. Science 321 (5897), 1844-1849.

Fehr, E., Glätzle-Rützler, D., Sutter, M., 2013. The development of egalitarianism, altruism, spite and parochialism in childhood and adolescence. European Economic Review 64, 369-383.

Fershtman, C., Gneezy, U., 2001. Discrimination in a Segmented Society: An Experimental Approach. The Quarterly Journal of Economics 116 (1), 351-377.

Gneezy, A., Fessler, D., 2012. Conflict sticks and carrots: war increases prosocial punishments and rewards. Proceedings of the Royal Society B: Biological Sciences 279, 219-223.

Goette, L., Huffman, D., Meier, S., 2006. The impact of group membership on cooperation and norm enforcement: evidence using random assignment to real social groups. American Economic Review 96 (2), 212-216.

Goette, L., Huffman, D., Meier, S., 2012. The Impact of Social Ties on Group Interactions: Evidence from Minimal Groups and Randomly Assigned Real Groups. American Economic Journal: Microeconomics 4(1), 101-115.

Grosskopf, B., Pearce, G., 2017. Discrimination in a deprived neighbourhood: an artefactual field experiment. Journal of Economic Behavior & Organization 141, 29-42.

Hargreaves Heap, S.P., Zizzo, D.J., 2009. The value of groups. American Economic Review 99, 295-323.

Hoff, K., Pandey, P., 2006. Discrimination, Social Identity, and Durable Inequalities. American Economic Review 96 (2), 206-211.

Jiang, J., Li, S.X., 2019. Group Identity and Partnership, Journal of Economic Behavior and Organization 160 (C), 202-213.

Klor, E.F., Shayo, M., 2010. Social identity and preferences over redistribution. Journal of Public Economics 94, 269-278.

Kranton, R., Pease, M., Sanders, S., Huettel, S., 2018. Group and Not Groupy Behavior: Deconstructing Bias in Social Preferences. Mimeo.

Lane, T., 2016. Discrimination in the laboratory: a meta-analysis of economics experiments. European Economic Review 90, 375-402.

Le Coq, C., Tremewan, J., Wagner, A.K., 2015. On the effects of group identity in strategic environments. European Economic Review 76, 239-252.

Li, S.X., de Oliveira, A.C.M., Eckel, C., 2017. Common identity and the voluntary provision of public goods: An experimental investigation. Journal of Economic Behavior & Organization 142, 32-46.

Li, S.X., Liu, T.X., 2019. Group identity and cooperation in infinitely repeated games. Mimeo.

Li, S.X., 2020. Group Identity, Ingroup Favoritism, and Discrimination. In K.F. Zimmermann (ed), Handbook of Labor, Human Resources and Population Economics. Springer.

Luttmer, E.F.P., 2001. Group loyalty and the taste for redistribution. Journal of Political Economy 199, 500-528.

McLeish, K.N., Oxoby, R.J., 2011. Social interactions and the salience of social identity. Journal of Economic Psychology 32(1), 172-178.

Montmarquette, C., Rullière, J.-L., Villeval, M.C., Zeiliger, R., 2004. Redesigning Teams and Incentives in a Merger: An Experiment with Managers and Students. Management Science 50 (10), 1379-1389.

Ockenfels, A., Werner, P., 2014. Beliefs and ingroup favoritism. Journal of Economic Behavior & Organization 108, 453-462.

Pechar, E., Kranton, R., 2017. Moderators of intergroup discrimination in the minimal group paradigm: A meta-analysis. Mimeo.

Shayo, M., 2009. A Model of Social Identity with an Application to Political Economy: Nation, Class, and Redistribution. American Political Science Review 103(2), 147-174.

Suchon, R., Villeval, M.C., 2019. The effects of status mobility and group identity on trust. Journal of Economic Behavior & Organization 163, 430-463.

Tajfel, H., Billig, M., Bundy, R., Flament, C.L., 1971. Social Categorization and Inter-Group Behavior. European Journal of Social Psychology 1, 149-177.

Tajfel, H., Turner, J.C., 1979. An integrative theory of intergroup conflict. In: Austing, W.G., Worchel, S. (Eds.). The Social Psychology of Intergroup Relations. Monterey: Brooks/Cole, 33-48.

Tajfel, H., Turner, J.C., 1986. The social identity theory of intergroup behavior. In: Worchel, S., Austin, W. (Eds.), Psychology of Intergroup Relations. Chicago: Nelson Hall, 7-24.