

Does This Recession Make Me Look Black? The Effect of Resource Scarcity on the Categorization of Biracial Faces

Psychological Science
23(12) 1476–1478
© The Author(s) 2012
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0956797612450892
http://pss.sagepub.com


Christopher D. Rodeheffer, Sarah E. Hill, and Charles G. Lord

Texas Christian University

Received 2/27/12; Revision accepted 5/10/12

Prosperity makes friends; adversity tries them.

—Publilius Syrus (Lyman, 1856, p. 73)

In-group biases are a ubiquitous feature of human social life (e.g., Brewer, 1979; Halevy, Bornstein, & Sagiv, 2008; Mullen, Dovidio, Johnson, & Copper, 1992; Tajfel, 1982). One explanation offered for these biases is that they arise from resource competition between groups (e.g., Kurzban & Neuberg, 2005; Schaller, Park, & Faulkner, 2003; Sherif, 1966). In this view, hostility toward the out-group is predicted to occur when people's access to a resource is constrained (Pettigrew & Meertens, 1995; Takemura & Yuki, 2007; Wildschut, Pinter, Vevea, Insko, & Schopler, 2003) or when they seek to justify an existing resource advantage (Sidanius & Pratto, 1993). In the studies reported here, we extended this logic to test a novel prediction about in-group boundary formation—specifically, whether resource scarcity decreases the inclusiveness of racial in-groups.

The cost of having unrestricted in-group boundaries may be relatively low during times of abundance. During times of scarcity, however, individuals may narrow their definition of belongingness to include only those whose group membership is unambiguous (Miller & Maner, 2012). We conducted two experiments in which people were primed with cues to scarcity or abundance and were then asked to categorize biracial faces as being Black or White. We predicted that willingness to include racially ambiguous individuals as part of their racial in-group would be lower in participants primed with scarcity cues than in participants primed with abundance cues.

Study 1

Seventy-one White undergraduates (18 male, 53 female) participated in Study 1 for course credit and underwent a priming procedure similar to that used by Hill, Rodeheffer, Griskevicius, Durante, and White (2012). In the scarcity condition, they

viewed a slide show consisting of captioned pictures of economic hardship (e.g., a picture of an empty office with captions about a dearth of good jobs); in the abundance condition, they viewed a slide show consisting of captioned pictures suggesting prosperity (e.g., a picture of a thriving office with captions about there being plenty of good jobs). Participants in both conditions then viewed photographs of 20 biracial faces (10 male, 10 female). For each face, participants were asked, "If you had to choose, would it be more accurate to describe this biracial individual as Black or White?" The faces were created by averaging one White and one Black face using a face-averaging software program (made available by the Face Research Lab at the University of Glasgow Institute of Neuroscience and Psychology, www.faceresearch.org; see Benson & Perrett, 1993). The original Black and White faces used to make the composite faces were taken from the Radboud Faces Database (Langner et al., 2010; the database can be accessed at www.rafd.nl). All were forward-facing neutral profiles.

The number of faces participants categorized as Black was entered into an independent-samples *t* test, with priming condition as the grouping variable. As predicted, participants in the scarcity condition categorized more faces as Black ($M = 9.35$, $SD = 2.80$) than did those in the abundance condition ($M = 7.82$, $SD = 3.15$), $t(69) = 2.16$, $p = .034$, $d = 0.51$.¹

Study 2

In Study 2, we sought to replicate the results from Study 1 using a different priming procedure. We also included a control group that saw neither a scarcity nor an abundance prime, to determine whether the results from Study 1 were driven by

Corresponding Author:

Christopher D. Rodeheffer, Department of Psychology, Texas Christian University, Fort Worth, TX 76129
E-mail: c.rodeheffer@tcu.edu

changes in perceptions of resource scarcity, resource abundance, or both.

Eighty-one White undergraduate students (32 male, 49 female) were randomly assigned to one of three priming conditions: resource scarcity, resource abundance, or a no-prime control. Participants in the resource-scarcity and -abundance conditions completed five analogy problems, three of which contained words intended to prime the appropriate perception of resource availability. For example, participants in the scarcity condition were asked to solve “sweat:summer :: debt:_____,” and participants in the abundance condition were asked to solve “payday:money :: harvest:_____.” Participants in the control group completed five neutral analogy problems. All analogy problems were presented in multiple-choice format. Next, participants completed the same racial categorization task used in Study 1.

The number of faces participants categorized as Black was analyzed using a one-way analysis of variance, with priming condition as the independent variable. Results revealed a significant effect of condition, $F(2, 78) = 5.11, p = .008, \eta_p^2 = .12$. Probing this effect (Tukey’s HSD, $p < .05$) revealed that participants primed with cues to scarcity categorized more biracial faces as Black ($M = 9.78, SD = 2.60$) compared with participants primed with neutral cues ($M = 7.39, SD = 3.02$) and those primed with cues to abundance ($M = 7.62, SD = 3.43$; see Fig. 1). Categorization performance did not differ significantly between the control and abundance conditions.

Conclusions

Out-group prejudice continues to be a widespread feature of human social life (see, e.g., Shapiro & Neuberg, 2008). It is therefore imperative to deepen current understanding of the processes by which people form in-groups (e.g., Kurzban & Neuberg, 2005). In two experiments, we found that times of economic hardship may limit the inclusiveness of people’s racial in-groups: Cues to scarcity led people to categorize fewer biracial individuals as belonging to their in-group,

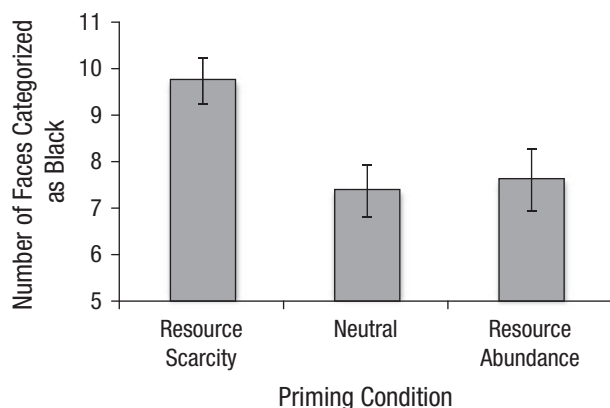


Fig. 1. Mean number of faces categorized as Black as a function of priming condition in Study 2. Error bars represent ± 1 SEM.

whereas cues to abundance had no such effect. Our findings extend the existing literature on in-group biases (e.g., Brewer, 1979; Halevy et al., 2008; Mullen et al., 1992; Tajfel, 1982) and out-group prejudice (e.g., Ackerman et al., 2006; Cottrell & Neuberg, 2005; Navarrete & Fessler, 2006; Navarrete et al., 2009) and contribute to the growing body of literature on the effects of resource scarcity on human psychology (e.g., Hill et al., 2012; Griskevicius, Tybur, Delton, & Robertson, 2011). Future studies should examine the effects of resource-availability cues on racial categorization in samples of other races (e.g., Black) to ensure that our results are generalizable across racial groups, as suggested by our hypothesis.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Note

1. Participant’s and target’s sex did not interact with priming condition in Study 1 or Study 2, so these variables were not included in the reported analyses.

References

- Ackerman, J. M., Shapiro, J. R., Neuberg, S. L., Kenrick, D. T., Becker, D. V., Griskevicius, V., . . . Schaller, M. (2006). They all look the same to me (unless they’re angry): From out-group homogeneity to out-group heterogeneity. *Psychological Science, 17*, 836–840.
- Benson, P. J., & Perrett, D. I. (1993). Extracting prototypical facial images from 637 exemplars. *Perception, 22*, 257–262.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin, 86*, 307–324.
- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to “prejudice.” *Journal of Personality and Social Psychology, 88*, 770–789.
- Griskevicius, V., Tybur, J. M., Delton, A. W., & Robertson, T. E. (2011). The influence of mortality and socioeconomic status on risk and delayed rewards: A life history theory approach. *Journal of Personality and Social Psychology, 100*, 1015–1026.
- Halevy, N., Bornstein, G., & Sagiv, L. (2008). “In-group love” and “out-group hate” as motives for individual participation in intergroup conflict: A new game paradigm. *Psychological Science, 19*, 405–411.
- Hill, S. E., Rodeheffer, C. D., Griskevicius, V., Durante, K., & White, A. (2012). Boosting beauty in an economic decline: Mating, spending, and the lipstick effect. *Journal of Personality and Social Psychology, 103*, 275–291.
- Kurzban, R., & Neuberg, S. (2005). Managing ingroup and outgroup relationships. In D. M. Buss (Ed.), *Handbook of evolutionary psychology* (pp. 653–675). New York, NY: Wiley.
- Langner, O., Dotsch, R., Bijlstra, G., Wigboldus, D. H. J., Hawk, S. T., & van Knippenberg, A. (2010). Presentation and validation of the Radboud Faces Database. *Cognition & Emotion, 24*, 1377–1388.

- Lyman, D. (1856). *The moral sayings of Publius Syrus, a Roman slave: From the Latin*. Boston, MA: L. E. Barnard. Retrieved from http://books.google.com/books?id=_QQSAAAAIAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- Miller, S. L., & Maner, J. K. (2012). Overperceiving disease cues: The basic cognition of the behavioral immune system. *Journal of Personality and Social Psychology*. Advance online publication. doi:10.1037/a0027198
- Mullen, B., Dovidio, J. F., Johnson, C., & Copper, C. (1992). In-group-out-group differences in social projection. *Journal of Experimental Social Psychology*, 28, 422–440.
- Navarrete, C. D., & Fessler, D. M. (2006). Disease avoidance and ethnocentrism: The effects of disease vulnerability and disgust sensitivity on intergroup attitudes. *Evolution & Human Behavior*, 27, 270–282.
- Navarrete, C. D., Olsson, A., Ho, A. K., Mendes, W. B., Thomsen, L., & Sidanius, J. (2009). Fear extinction to an out-group face: The role of target gender. *Psychological Science*, 20, 155–158.
- Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in western Europe. *European Journal of Social Psychology*, 25, 57–75.
- Schaller, M., Park, J. H., & Faulkner, J. (2003). Prehistoric dangers and contemporary prejudices. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (pp. 105–137). Hove, England: Psychology Press.
- Shapiro, J. R., & Neuberg, S. L. (2008). When do the stigmatized stigmatize? The ironic effects of being accountable to (perceived) majority group prejudice-expression norms. *Journal of Personality and Social Psychology*, 95, 877–898.
- Sherif, M. (1966). *Group conflict and cooperation: Their social psychology*. London, England: Routledge & Kegan Paul.
- Sidanius, J., & Pratto, F. (1993). Racism and support of free-market capitalism: A cross-cultural analysis. *Political Psychology*, 14, 381–401.
- Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, 33, 1–39.
- Takemura, K., & Yuki, M. (2007). Are Japanese groups more competitive than Japanese individuals? A cross-cultural validation of the interindividual intergroup discontinuity effect. *International Journal of Psychology*, 42, 27–35.
- Wildschut, T., Pinter, B., Vevea, J. L., Insko, C. A., & Schopler, J. (2003). Beyond the group mind: A quantitative review of the interindividual-intergroup discontinuity effect. *Psychological Bulletin*, 129, 698–722.