

Adaptation to diversity: Individual and societal processes

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With the historic rise in global migration in recent decades and the dispersion of diverse groups into new communities worldwide, greater levels of contact are occurring between social groups than ever before. It is in this context that Ramos et al. (1) rightfully note the potential for humans to adapt to—and thrive in—diverse environments, and usefully suggest that our natural inclination toward homophily may be "less compatible with the social diversity typical of modern societies." In a compelling manner, the authors employ different time scales in their analysis to illustrate how people and societies adapt to social diversity over time. They show that, in the short term, societal diversity is not directly linked to contact between groups, although it is associated with lower levels of trust; but over the long term, increasingly diverse societies can propel contact between groups, which corresponds with greater levels of trust. This process of adaptation can only be observed through comparing models across different time scales, enhancing our recognition of dynamic processes that occur in diversifying societies that continue to change over time. As such, Ramos et al. highlight that not only do people and societies need time to adapt as they change, but we, as researchers, must be attuned to and inclined to measure these changes to have more thorough and accurate understandings of societal transformations.

Individual Processes of Adaptation

Considerable research suggests that analogous processes occur at the individual level. We may initially be inclined toward suspicion, uncertainty, or animosity in relation to other groups, yet these tendencies can change through greater contact with other groups (2, 3). Such shifts have been noted in numerous cross-sectional studies (4) and, increasingly, in longitudinal studies that examine contact effects over time (5). Multisession experimental studies where people are randomly assigned to interact with a cross-ethnic or same-ethnic partner also show similar trends (6). In one study, Latino and white participants with high scores on an implicit prejudice measure displayed a

peak in cortisol reactivity (relative to baseline) after a first interaction with a cross-ethnic partner, indicating greater stress responses at the initial stages of intergroup contact; however, their stress responses attenuated such that during subsequent interactions with the cross-ethnic partner, their cortisol reactivity was comparable to that of participants who were paired with a same-ethnic partner or who scored low on implicit prejudice (7). Along with Ramos et al.'s (1) study, this literature demonstrates how—both attitudinally and physiologically—people are capable of adapting effectively to intergroup encounters.

Such adaptations often have far-reaching effects that people carry with them into new situations and across stages of life. In the study referenced above (7), participants scoring high on implicit prejudice and randomly paired with a cross-ethnic partner were more likely to initiate novel interactions with members of other ethnic groups following the experimental sessions, relative to those paired with a same-ethnic partner. Thus, although people may initially find cross-group interactions stress provoking, even a few positive experiences with an outgroup member can begin to shift their feelings toward future cross-group interactions. Relatedly, people who experience greater interethnic contact in childhood are more likely to choose to live and work in ethnically integrated environments when they become adults (8), and ethnically diverse schools and classrooms enhance the extent to which children select peers from other ethnic groups as potential friends (9).

This body of work is consistent with broader theorizing regarding how attitudes and relations between groups shift as people adapt to diverse environments, and as people gain greater intergroup experience. At a basic level, we respond more favorably to stimuli that have become more familiar to us through repeated exposures, and particularly when there are no aversive events or experiences linked to those exposures; repeated exposures allow individuals to distinguish between people and environments that are safe from those that are not, thereby forming "the basis for

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social organization and cohesion" and providing "basic sources of psychological and social stability" (ref. 10, pp. 227–228). When applied to the realm of intergroup relations, it is therefore understandable that people would tend to favor their own groups, while maintaining a certain degree of social and psychological distance from people in other groups (11). But as they begin to engage in contact with members of an outgroup, a process of deprovincialization often occurs (12), by which they not only develop more favorable attitudes toward the specified outgroup, but also experience a broader reconfiguration of their attitudes toward more general acceptance of intergroup difference.

Linking Individual and Societal Processes of Adaptation

However, the analysis necessarily becomes more complex when considering the joint effects of diversity at the societal level and the effects of contact at the individual level. Indeed, depending on societal conditions, diversity may lead not only to contact between groups but also to a sharing of geographical space with other groups with whom minimal actual contact occurs—what may be referred to as intergroup exposure (13). Although contact between groups typically reduces intergroup threat and hostility, exposure to other groups is likely to exacerbate intergroup threat and hostility when groups have little contact with each other (14), and particularly when societal forces foster separation and competition between groups. As Ramos et al. (1) note briefly, there are many societal factors—including systemic inequality (15), norms and ideologies that support division (16), segregation and economic competition (17, 18), among others—that are likely to curb the degree to which diversity at the societal level would promote salutary outcomes of intergroup contact. It may be for this reason that some scholars have been pessimistic about the potential benefits of diversity, instead assuming that diversity would correspond with lower levels of trust and a withdrawal from civic engagement (19). By contrast, the present analysis (1) can help to explain why rapid societal transformations—whether induced by new waves of immigration or refugee settlements in new regions are especially likely to be perceived as threatening to host populations (20), whereas geographical areas with more established streams of diverse populations may be less unsettled by increasing diversity (21).

Overall, then, I generally concur with Ramos et al.'s (1) contention that it is problematic to assume that adaptation to socially diverse contexts will necessarily lead to negative outcomes, either for the individual or for society as a whole. At the same time, my views diverge somewhat from those of the authors, who frame their work as a test of "how both negative (i.e., reduced trust stemming from diversity) and positive (i.e., increased trust through intergroup contact) effects operate" and who suggest that "as societies become more diverse, individuals steadily reorient themselves by adopting outgroup-focused cognition and behaviors." Regrettably, I doubt that the process of intergroup adaptation is quite as seamless as the authors propose, that negative intergroup outcomes stem solely from societal-level processes, or

that contact experienced at the individual level will unfailingly lead to positive outcomes in a linear fashion. Rather, in diverse modern societies, I believe the roots of positive or negative intergroup relations can be observed at either level of analysis, and the valence of effects and the levels at which they occur should not be conflated. Indeed, the complex and multifaceted nature of intergroup relations suggests that they could involve experiences of rejection or acceptance at the individual level (22), just as easily

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as they could be shaped by widespread patterns of exclusion or inclusion at the societal level (23). Moreover, there is a wealth of research evidence on the experiences and effects of intergroup encounters from the perspectives of historically disadvantaged groups that has yet to be incorporated into the authors' framework. This research must be taken into account as we seek to develop a comprehensive understanding of the effects of societal diversity, as it shows how entrenched forms of discrimination and subjugation—enacted by individuals, social institutions, and the broader societies they inhabit—regularly limit life opportunities and outcomes for members of disadvantaged groups, along with continually sharpening intergroup tensions (24, 25).

Nonetheless, there are valuable lessons that can be gained from the work of Ramos et al. (1) and the work cited above regarding how the greater diversity of modern societies can more efficiently translate into positive relations among heterogeneous groups within those societies. First, as diverse groups increasingly occupy shared geographical spaces, we can be more deliberate in structuring opportunities for meaningful cross-group interactions (26) (for instance, collaborative projects that would enhance their communities and be of mutual benefit), rather than simply waiting passively for this process to occur gradually over time. We must also attend closely to and challenge explicitly those societal factors that inhibit the potential for social integration to flourishsuch as rising trends toward economic inequality and segregation, or more intentional efforts on the part of leaders to stoke the flames of division and fear—because lack of attention to these factors may inadvertently, and inaccurately, lead people to come away with the impression that diversity itself is the root cause of societal problems (27). A key challenge for future research, then, is to gain greater clarity regarding how these processes of adaptation to diversity, which co-occur at the individual and societal levels, are framed and shaped by the social conditions under which diverse groups encounter each other.

¹ M. R. Ramos, M. R. Bennett, D. S. Massey, M. Hewstone, Humans adapt to social diversity over time. Proc. Natl. Acad. Sci. U.S.A. 116, 12244–12249 (2019).

² C. C. MacInnis, E. Page-Gould, How can intergroup interaction be bad if intergroup contact is good? Exploring and reconciling an apparent paradox in the science of intergroup relations. *Perspect. Psychol. Sci.* 10, 307–327 (2015).

³ T. F. Pettigrew, L. R. Tropp, How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. Eur. J. Soc. Psychol. 38, 922-934 (2008).

⁴ T. F. Pettigrew, L. R. Tropp, A meta-analytic test of intergroup contact theory. *J. Pers. Soc. Psychol.* **90**, 751–783 (2006).

⁵ O. Christ, M. Hewstone, L. Tropp, U. Wagner, Dynamic processes in intergroup contact. Br. J. Soc. Psychol. 51, 219–220 (2012).

⁶ L. R. Tropp, E. Page-Gould, "Contact between groups" in APA Handbook of Personality and Social Psychology: Group Processes, M. Mikulincer, P. R. Shaver, J. F. Dovidio, J. A. Simpson, Eds. (American Psychological Association, Washington, DC, 2014), pp. 535–560.

- **7** E. Page-Gould, R. Mendoza-Denton, L. R. Tropp, With a little help from my cross-group friend: Reducing anxiety in intergroup contexts through cross-group friendship. *J. Pers. Soc. Psychol.* **95**, 1080–1094 (2008).
- 8 P. B. Wood, N. Sonleitner, The effect of childhood interracial contact on adult antiblack prejudice. Int. J. Intercult. Relat. 20, 1–17 (1996).
- 9 M. T. Hallinan, S. Smith, The effects of classroom racial composition on students' interracial friendliness. Soc. Psychol. Q. 48, 3-16 (1985).
- 10 R. B. Zajonc, Mere exposure: A gateway to the subliminal. Curr. Dir. Psychol. Sci. 10, 224-228 (2001).
- 11 H. Tajfel, Social psychology of intergroup relations. Annu. Rev. Psychol. 33, 1–39 (1982).
- 12 T. F. Pettigrew, Generalized intergroup contact effects on prejudice. Pers. Soc. Psychol. Bull. 23, 173-185 (1997).
- 13 D. S. Massey, N. A. Denton, The dimensions of residential segregation. Soc. Forces 67, 281–315 (1988).
- 14 R. D. Enos, The Space Between Us: Social Geography and Politics (Cambridge University Press, Cambridge, 2017).
- 15 J. Kende et al., Equality revisited: A cultural meta-analysis of intergroup contact and prejudice. Soc. Psychol. Personal. Sci. 9, 887-895 (2018).
- 16 D. Bar-Tal, Sociopsychological foundations of intractable conflicts. Am. Behav. Sci. 50, 1430-1453 (2007).
- 17 J. Dixon, C. Tredoux, B. Clack, On the micro-ecology of racial division: A neglected dimension of segregation. S. Afr. J. Psychol. 35, 395-411 (2005).
- 18 L. D. Bobo, Prejudice as group position: Microfoundations of a sociological approach to racism and race relations. J. Soc. Issues 55, 445-472 (1999).
- 19 R. Putnam, E Pluribus Unum: Diversity and community in the twenty-first century. Scand. Polit. Stud. 30, 137–174 (2007).
- 20 P. F. Kotzur, L. R. Tropp, U. Wagner, Welcoming the unwelcome: How contact shapes contexts of reception for new immigrants in Germany and the United States. J. Soc. Issues 74, 812–832 (2018).
- 21 E. Anderson, The Cosmopolitan Canopy: Race and Civility in Everyday Life (Norton, New York, 2011).
- 22 L. E. Hayward, L. R. Tropp, M. J. Hornsey, F. K. Barlow, Toward a comprehensive understanding of intergroup contact: Descriptions and mediators of positive and negative contact among majority and minority groups. *Pers. Soc. Psychol. Bull.* 43, 347–364 (2017).
- 23 Department of Economic and Social Affairs of the United Nations Secretariat, "Leaving no one behind: The imperative of inclusive development. Report on the World Social Situation 2016" (Rep. ST/ESA/362, United Nations, New York, 2016).
- 24 D. R. Williams, S. A. Mohammed, Discrimination and racial disparities in health: evidence and needed research. J. Behav. Med. 32, 20-47 (2009).
- 25 J. Dixon, L. R. Tropp, K. Durrheim, C. Tredoux, Let them eat harmony: Prejudice reduction strategies and attitudes of historically disadvantaged groups. Curr. Dir. Psychol. Sci. 19, 76–80 (2010).
- 26 T. F. Pettigrew, L. R. Tropp, When Groups Meet: The Dynamics of Intergroup Contact (Psychology Press, New York, 2011).
- 27 E. Knowles, L. R. Tropp, The racial and economic context of Trump support: Evidence for threat, identity, and contact effects in the 2016 Presidential Election. Soc. Psychol. Personal. Sci. 9, 275–284 (2018).