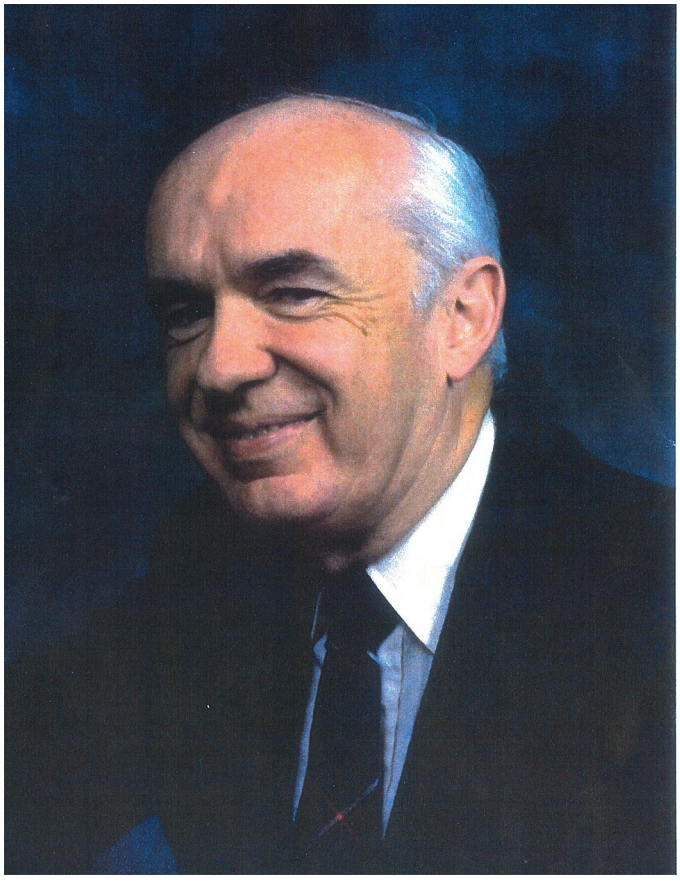

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# In Pursuit of Three Theories: Authoritarianism, Relative Deprivation, and Intergroup Contact

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## Abstract

Throughout my career, I have pursued three theories related to intergroup prejudice—each with a different mentor. Each theory and its supporting research help us to understand prejudice and ways to ameliorate the problem. This autobiographical review article summarizes some of the advances in these three areas during the past six decades. For authoritarianism, the article advocates removing political content from its measurement, linking it with threat and dismissive-avoidant attachment, and studying how authoritarians avoid intergroup contact. Increased work on relative deprivation made possible an extensive meta-analysis that shows the theory, when appropriately measured, has far broader effects than previously thought. Increased research attention to intergroup contact similarly made possible a meta-analysis that established the pervasive effectiveness of intergroup contact to reduce prejudice under a wide range of conditions. The article closes by demonstrating how the three theories relate to each other and contribute to our understanding of prejudice and its reduction.

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## GETTING STARTED

My discovery of social psychology remains a vivid memory. It was a crisp February morning in 1950 when I began an introductory course in the subject at the University of Virginia. There were then no social psychologists in the psychology department. But the course was ably taught by a leading expert in hearing, Willard Thurlow.

The course text was the venerable *Theory and Problems of Social Psychology* (Kretch & Crutchfield 1948). It featured two intriguing chapters on prejudice—one on racial prejudice and a second on "how to eliminate this prejudice among our people." Because of my deep concerns about southern race relations, this subject was of enormous interest to me. Since my initial ambition to be an architect had not worked out (I could not draw!), I knew immediately that I had found the field in which to specialize.

Two books impressed me. Gunnar Myrdal's (1944) 1,500-page *An American Dilemma* provided a sociological perspective on the South's racial situation. And *The Authoritarian Personality* (TAP; Adorno et al. 1950) provided a psychological perspective. But while Myrdal's tome accurately reflected my experiences growing up in racially segregated Richmond, Virginia, the theory of the authoritarian personality seemed incomplete to me. I knew many Virginians—foremost among

them my soft-spoken, equalitarian father—who largely conformed to the region's racial norms but did not at all fit the authoritarian mold. TAP contained no southern samples and simply assumed that greater authoritarianism explained the white South's elevated racism.

Something was missing when the theory was applied to the white South. The answer was supplied by Myrdal's landmark volume. The South's tortured racial history—slavery, a lost war, poverty, and intense racial segregation—had shaped discriminatory norms to which Southerners of both races had had to conform for decades. To be sure, authoritarianism played a role, but so did conformity to entrenched racially discriminatory norms that characterized southern society. Both the personality and social structural levels of analysis are necessary to understand intergroup prejudice—a theme that underlies virtually all my work throughout my career.

Thurlow was the first of my three mentors who encouraged my interests. Somehow he knew that Gordon Allport was writing a book on prejudice. So he recommended that I apply to Harvard University for doctoral work. Such timely mentoring can redirect your life, and I remain grateful for Thurlow's guidance. Unaware of how arrogant it appeared, I mentioned in my Harvard application to the Social Relations Department that I wanted to work with Allport on prejudice; otherwise I was not interested in attending. Fortunately, Allport was in charge of graduate admissions, and my naive impertinence did not prove fatal. Harvard's social psychology doctoral program gave me the singular opportunity to work with Allport, a warm mentor and influential psychologist (Pettigrew 1969, 1990, 1999, 2015a), as well as Samuel Stouffer, an inspiring sociological social psychologist (Pettigrew 2015b). Fortunately, my graduate years, 1952–1956, covered the period that Nichols (1998) has called the "peak years" of Harvard's old Social Relations Department.

In 1952, race relations was not a privileged specialty. I was the object of concern among my fellow doctoral students. They urged me to choose another field, as race relations offered few jobs and little research support. But my southern experiences with racial injustice had fired my desire to be a social psychologist, so these limitations seemed irrelevant. The scene changed in 1954 when the US Supreme Court ruled against racial segregation in public schools. Suddenly, my peers became interested in the topic, and their concerns diminished.

The three theories that have guided my career all relate to prejudice. The first two—authoritarianism and relative deprivation—explain and predict prejudice. The third theory—intergroup contact—constitutes social psychology's most important contribution to reducing prejudice.

## AUTHORITARIANISM

I entered Harvard with my thesis topic already selected—the role of authoritarianism in southern race relations. Both Allport and Stouffer encouraged me to pursue this topic. It was an exciting time to be working with them. Not only was Allport (1954) writing his classic book on prejudice, but Stouffer was developing his important work on American attitudes toward the virulent Senator Joseph McCarthy—*Communism, Conformity and Civil Liberties* (Stouffer 1955).

Both teachers shaped my doctoral thesis (Pettigrew 1958, 1959). From Allport, I learned how to cast my contentions in sharper conceptual focus. From Stouffer, I learned how to test them on probability samples with survey methods. In the summer of 1955, I set out with Charles Lamont, my undergraduate assistant and undaunted friend, to sample door-to-door white racial opinions in small towns in the South and North. To deter trouble, I put Virginia license plates on my old Chevrolet. And Stouffer got official interviewer certification papers from a national survey agency for us to identify ourselves to local police departments.

In the most deep-South community sampled—Moultrie, Georgia—the tension was palpable. In May 1955, the Supreme Court had followed its historic desegregation ruling with a vague "all

deliberate speed" order. The white South, quite deliberate but rarely speedy, interpreted this order as a sign of weakness. Resistance groups called White Citizens' Councils—basically middle-class Ku Klux Klans—soon mobilized in such towns as Moultrie.

As a consequence, the survey schedule had to minimize recognition of its purpose. Following Stouffer's advice, we asked the white respondents what they considered to be the most important problem facing the nation. With the school desegregation issue so salient, most respondents named it as the most important. If they did not, we asked for the second most important problem—if need be, the third. By then, the entire sample had named racial issues. Thus, we introduced the racial attitude questions as a subject they themselves had raised.

Our results supported normative theory. The mean levels of authoritarianism were not significantly different between the southern and northern samples. As expected, the authoritarian scores predicted anti-black attitudes equally well in the two regions—showing its validity at the individual level of analysis. But at the macro level, the scores could not explain the great differences in prejudice between the regions. Middleton (1976) later followed up this work with a national sample, and he both replicated and extended these results.

In 1956, Allport obtained a grant for me to accompany him for a half-year visit to a social science center in Durban, South Africa. Although I could obtain only university student respondents, I replicated the American results with one difference. Afrikaners were on average more authoritarian as well as more prejudiced than other white South Africans. Nonetheless, conformity to rigorously enforced racist norms remained central (Pettigrew 1958). These and other findings have led me to embrace normative theory throughout my career (Pettigrew 1991a).

During the "cognitive revolution," interest in authoritarianism declined precipitously in North America. Only after Altemeyer (1981) introduced his right-wing authoritarianism (RWA) scales did interest return. But throughout these decades, I continued to include a measure of authoritarianism when studying prejudice of all types in the United States, South Africa, and Western Europe. And it never failed to be a major predictor of prejudice at the individual level of analysis. When Sidanius & Pratto (1999) introduced their measure of social dominance orientation (SDO), I began to include it also in my studies.

My success with authoritarianism measures is consistent with that of others around the world. Few relationships in social science are as stable and virtually universal as the link between authoritarianism and prejudice. This is not to claim that the relationship is invariant; normative and situational variables can substantially moderate the link (Baier et al. 2016; Pettigrew 1959, 2000; Reynolds et al. 2001; Sales 1973).

Despite its many conceptual and methodological problems, authoritarianism has proven to be a durable theory (Pettigrew 2016). But several problems have long troubled me. First, the F and RWA scales contain blatantly political content. Does this not confound the results with political conservatism? Second, how does authoritarianism develop, and how does it relate to other established personality syndromes? Third, what is the role of threat in authoritarianism? Could threat be a critical contextual component for the acting out of authoritarian behavior? Finally, how does authoritarianism influence such prejudice-reducing remedies as intergroup contact? Recent work sheds light on each of these concerns.

## Political Confounding

Given the overlap of the F and RWA scales with political conservatism, critics justifiably challenge the finding that authoritarianism routinely correlates positively with conservatism. Purely personality measures of authoritarianism are needed now to complement these political attitude assessments. This would eliminate the political content of RWA scales and address the debate

between those who view authoritarianism as a personality syndrome and others who view it as a political ideology. However, there is no necessary conflict between these two perspectives. Authoritarianism begins early in life as a personality orientation that later typically leads to a particular political ideology. Moreover, just because situational and societal factors influence authoritarianism does not mean it cannot be considered a personality variable. Other personality syndromes are also socially influenced.

Oesterreich (2005) has begun to address these issues in what, hopefully, will become a focus of future research. By using directly opposed statements (e.g., "I like changes" versus "I don't like changes") from which to choose, Oesterreich balanced his personality scale of authoritarianism. His 23-item scale attained a 0.84 alpha with a large representative sample of German voters. These items cover a range of authoritarian personality characteristics: insecurity ("I feel uncomfortable in new and unfamiliar situations"), conformity and submission ("I have no problems following orders, even when I am not convinced of their necessity"), a focus on strength ("I admire dominant people"), a need for closure ("I am irritated by people who call well-established things into question"), and resistance to new experience ("I don't like to be confronted with new ideas").

The success of this attempt to measure authoritarianism with purely personality indicators is signified by its solid relationships with such correlates of authoritarianism as prejudice and right-wing extremism (Oesterreich 2005). The further development of such personality-based indicators of authoritarianism would greatly benefit future research.

## The Development of Authoritarianism

Twin studies have revealed a significant level of heritability in authoritarianism (Ludeke & Krueger 2013, McCourt et al. 1999), and Altemeyer (1996) found strong correlations between the authoritarianism levels of young adults and their parents.

But what about the relationships between authoritarianism and other established personality features that could shed light on the development of authoritarianism? The fact that security issues are critical for authoritarians suggests links between authoritarianism and attachment theory. Indeed, several investigators have noted this possibility, and its potential importance deserves emphasis.

Hopf (1992, 1993) draws explicit connections between authoritarianism and avoidant attachment. She found that lower-status German adolescents who were high on avoidant attachment articulated the most extreme authoritarian views. And though TAP stressed displacement of hostility from a stern father, Hopf (1992, 1993) notes that 7 of the 20 men classified as authoritarian by Frenkel-Brunswik had experienced the death of their mothers as young children, compared to none of the nonauthoritarians (Fisher's exact test, $p < 0.005$). In contrast to TAP, Ackerman & Jahoda (1950) emphasized parental rejection and found rejection by one or both parents to be common among their sample of anti-Semites. Van IJzendoorn (1997) gave a sample of American university students the Adult Attachment Scale (AAS) and the RWA. He found that students who scored high on avoidant attachment scored highest on authoritarianism, whereas those who scored high on the secure and anxious attachment dimensions scored lowest.

General descriptions of avoidants often read as if they were direct quotations from TAP. Hence, Main et al. (1985) found that avoidant adults idealized their parents but could not provide clear, episodic memories to support their unrealistically glowing assessments—precisely what TAP found for those scoring high on authoritarianism.

Worldwide research results support the linkage between avoidant attachment and authoritarianism. In India, Hassen (1987), in a study of 400 Muslim teenagers, found that parental rejection correlated positively with both authoritarianism and prejudice. In Italy, Roccato & Ricolfi (2005)

noted that members of an extreme right-wing political party scored high on measures of authoritarianism, social dominance orientation, and avoidant attachment and low on secure attachment. In Germany, Oesterreich (2005) used three items that tap avoidant attachment in his authoritarianism scale: "I don't like to meet new people," "I try to avoid contact with people who are different," and "I feel uncomfortable with people I do not know."

Not all studies support the avoidant–authoritarian link. Several papers, all using convenience samples of American undergraduate subjects, have actually shown small negative correlations between various avoidance measures and right-wing authoritarianism (Gormley & Lopez 2010, Thornhill & Fincher 2007, Weber & Federico 2007).

Avoidant attachment orientation is one of three orientations delineated by Ainsworth and colleagues (1978): secure, anxious, and avoidant (Mikulincer & Shaver 2007). These attachment "styles" are best thought of as continuous and interrelated dimensions rather than as exclusive "types" (Fraley & Waller 1998). In broad strokes, secure individuals neither avoid nor are especially anxious about close relationships. Anxious individuals typically seek close relationships with others but are highly anxious about them. Avoidants simply attempt to avoid close relationships. Prototype items for each style are (*a*) secure: "It is easy for me to become emotionally close to others"; (*b*) anxious: "I worry a lot about my relationships"; and (*c*) avoidant: "I find it difficult to trust others completely."

Later, Bartholomew (1990; Bartholomew & Horowitz 1991) separated the avoidant style into two distinct groupings: dismissive-avoidants and fearful-avoidants. Both styles harbor negative views of others, but they differ in their views of the self. Dismissive-avoidants tend to value independence and feel self-sufficient. A prototypical item is, "I prefer not to depend on others or have others depend on me." By contrast, fearful-avoidants report less self-esteem and self-acceptance. They are more likely to have suffered a serious loss of or rejection by a primary caregiver in early life. A prototypical item is, "I sometimes worry that I will be hurt if I allow myself to become too dependent on others." This division within the avoidant style may well help to explain some of the differences found in its relationship with authoritarianism.

In a further exploration of the avoidant–authoritarianism link, Jost Stellmacher, German and American colleagues, and I (manuscript in preparation) have conducted three quite different studies. The first is a secondary analysis of a national probability survey of German citizens. We found a strong relationship among the 2,400 respondents between authoritarianism and a four-item measure of avoidant attachment with controls for age, education, and sex. The second study of American university students replicated this finding with a more extensive measure of avoidant attachment, but it uncovered no relationship between authoritarianism and anxious attachment. A third study examined 219 German respondents with a still more extensive questionnaire using the online platform Unipark (**http://www.unipark.de**). The respondents in this unrepresentative sample varied widely in age but were generally highly educated. This study again found a significant correlation between avoidance and authoritarianism. Authoritarians are disproportionally found among both types of avoidants.

However, the most interesting findings of our studies are the moderators and mediators that shape the relationship. Thus, the first study found that the link between the two variables is strongly moderated by contact with outgroups. Those with more such contact revealed a significantly smaller relationship between avoidant attachment and authoritarianism. The third study found that openness to experience—often shown to be an underlying component of authoritarianism (e.g., Ekehammar et al. 2004)—acts as a significant mediator of the avoidant–authoritarian link. More detailed work on this promising link between authoritarianism and attachment theory is clearly indicated.

## The Role of Threat in Authoritarianism

Threat is often intertwined with authoritarianism. An analysis of a 2004 probability sample of 1,153 German citizens (Pettigrew & Tropp 2011, pp. 155–156, 196–200) uncovered ties between authoritarianism and two types of threat in predicting anti-Muslim prejudice. Individual threat is measured by four items emphasizing personal feelings: "Foreigners living here threaten *my* personal freedom and rights. . .*my* personal economic situation. . .*my* personal way of life. . .and *my* personal security" – in short, "*they*" are threatening "*me*."

Collective threat involves the ingroup: "Foreigners living here threaten *our* freedom and rights. . .*our* prosperity. . .*our* culture. . .and *our* security" – in short, "*they*" are threatening "*us*." These threat factors mediate much of the association between authoritarianism and anti-Muslim prejudice. Although authoritarianism is strongly and positively related to both types of threat, it is the perception of collective threat that is most highly associated with prejudice. Moreover, the effect of individual threat is almost entirely mediated by collective threat.

That collective, rather than individual, threat drives much of the association between authoritarianism and prejudice is consistent with the emphasis on group identification for authoritarians of both Duckitt (1989) and Stellmacher & Petzel (2005). It is also consistent with the findings of Sales (1973) and others that show how authoritarianism is influenced by societal-level threat factors (Baier et al. 2016; Pettigrew 1959, 2000; Reynolds et al. 2001). Further research in this area should focus on how threat shapes the social context for authoritarians to act out their beliefs.

## How Does Authoritarianism Influence Such Prejudice-Reducing Remedies as Intergroup Contact?

Many assume that authoritarians are highly resistant to efforts to reduce prejudice. But consider intergroup contact. Hodgson and colleagues (2009) and others (Pettigrew & Tropp 2011) have shown that intergroup contact has the potential to reduce prejudice among authoritarians significantly. This may seem surprising, as it counters the view of TAP (Adorno et al. 1950, p. 973). Yet this result fits with many findings that show that intergroup contact potentially can alter numerous factors closely related to authoritarianism: anxiety, group attributions, individual and collective threat, meta-stereotypes, SDO, stereotype threat, trust, forgiveness, empathy, perspective taking, knowledge of the outgroup, ingroup identification, political tolerance, and perceptions of outgroup variability (Pettigrew & Tropp 2011).

In *The Nature of Prejudice*, Allport (1954, p. 279) viewed authoritarianism as a personality barrier to diminishing prejudice via intergroup contact. Because Allport had a narrow research base to rely on at mid-century, this conclusion was based on a single study. Mussen (1950) studied the racial attitudes of white boys at an interracial camp. He found that boys with equalitarian-like traits evinced diminished racial prejudice after their interracial experience, whereas those with authoritarian-like traits had become more prejudiced. But this early finding may not be the exception it appears. Mussen did not use a direct measure of authoritarianism, nor did he have a direct measure of contact. It seems likely that the authoritarian white campers were threatened by the presence of the black campers and simply avoided contact with them.

This is the critical point. Authoritarianism *is* a barrier to positive intergroup contact effects by restricting the willingness to participate in the contact in the first place. Only when authoritarians do have the contact can contact lessen prejudice. Attaining the intergroup contact is the problem.

German survey data illustrate the point (Pettigrew & Tropp 2011, pp. 210–11). Three selection processes are delineated. First, 341 of the 1,377 sample members did not live in a neighborhood with foreigners. But the mere presence of foreigners does not guarantee intergroup

contact—the second selection process. Indeed, 25% of the German respondents who lived in mixed areas reported no contact with their foreign neighbors. Finally, intergroup contact does not ensure that intergroup friendship will develop—and such friendships are a major means for contact to diminish prejudice (Davies et al. 2011, Pettigrew & Tropp 2011). This last contact selection process removes 18% of the German respondents who have neighborhood contact but no foreign friends.

Regression tests for the predictors of these three processes reveal how authoritarianism consistently blocks intergroup contact (Pettigrew & Tropp 2011, pp. 210–12). Although age, gender, and prior prejudice are also involved, only authoritarianism is significantly and negatively related to all three processes. German authoritarians are less likely than nonauthoritarians to be living in an area with foreigners, less likely to have contact with them even when they do live in such an area, and less likely to make friends with those foreigners with whom they have neighborhood contact. Moreover, authoritarians in the survey significantly more often view their contact with outgroups as superficial, involuntary, and with a resident foreigner of unequal status—violations of Allport's (1954) facilitating factors for maximum contact effects.

Thus, authoritarians carefully avoid resident foreigners at multiple levels. Contact effects can be as successful with authoritarians as with others, but authoritarians are far less likely to have such contact.

## RELATIVE DEPRIVATION

To study a second theory involving prejudice, I am indebted to Samuel Stouffer, my Harvard methodology mentor. One of the most influential social psychologists in sociology's history, he introduced the concept of relative deprivation (RD). Together with Paul Lazarsfeld, Stouffer fashioned the probability survey into a refined research instrument for social science. He also directed three of the major social science projects of the mid-twentieth century: Myrdal's (1944) *An American Dilemma* (Stouffer headed the study after Myrdal returned to his native Sweden when it was threatened in World War II); *The American Soldier* series on US Army morale (Stouffer 1962, Stouffer et al. 1949), which Stouffer directed throughout World War II; and the survey study of McCarthyism published during that dark episode in American political history (Stouffer 1955).

Stouffer was an inspiring but unorthodox teacher; he could not have been more different in style from the somewhat shy, formal, and reserved Allport. Instruction from Stouffer was informal and empirical. Intensely engrossed in his work, he taught by example. Students followed him from office to computing room and back, absorbing as best they could his excitement and "feel" for survey analysis. To this day, I have never lost the sense of excitement and curiosity in analyzing survey data instilled by these memorable occasions. If a member of his survey analysis seminar offered an interesting hypothesis, he would leap up and exclaim, "Let's test it!" Then he would lead the class to the machine room and start stuffing the survey data cards into the old IBM 101 counter, sorter, and printer.

### Origins of the Relative Deprivation Concept

Stouffer eschewed sociology's penchant for "grand theory." Consistent with his empirical emphasis, he believed in close-to-the-data reasoning and middle-level concepts. The most famous illustration of Stouffer's talent for middle-range concepts comes from the *American Soldier* studies (Stouffer 1962, Stouffer et al. 1949). Stouffer devised RD as a post hoc explanation for the study's well-known anomalies.

For example, he found that the military police were more satisfied with their slow promotions than the Air Corpsmen were with their rapid promotions. This apparent puzzle assumes the wrong

comparison. Immediate comparisons, Stouffer reasoned, were the salient referents: The military police compared their promotions with other military police—not with Air Corpsmen whom they rarely encountered. Satisfaction is relative to the available comparisons we have. RD became a useful social science concept because social judgments are shaped not only by absolute standards but also by standards set by social comparisons (Pettigrew 1967, 1978, 2015b; Smith et al. 2012; Walker & Smith 2002).

Following Stouffer, RD can be defined as a judgment that one or one's ingroup is disadvantaged compared to a relevant referent; this judgment invokes feelings of angry resentment. In addition to the fundamental feature that the concept operates at the level of individuals, RD involves three psychological processes: (*a*) People first make cognitive comparisons, (*b*) they next make cognitive appraisals that they or their ingroup are disadvantaged, and finally (*c*) these disadvantages are seen as unfair and arouse angry resentment. If any one of these three requirements is missing, RD is not operating (Smith et al. 2012).

Thus defined, RD is a social psychological concept *par excellence*. It postulates a subjective state that shapes emotions, cognitions, and behavior. It connects the individual with the interpersonal and intergroup levels of analysis. It melds easily with other social psychological processes to provide more integrative theory—a prime disciplinary need (Pettigrew 1991b). RD challenges conventional wisdom about the leading importance of absolute deprivation. And it has proven useful throughout the social sciences.

## Development of the Theory

Many social psychological theories burn hot then suddenly cool. But RD and related ideas have simmered slowly on a back burner for two-thirds of a century. Merton (1957) enlarged the idea within a reference group framework. Building on this framework, Davis (1959) provided a mathematical model of RD. This work led me to point out that RD was but one of a large family of concepts and theories that employed relative comparisons in both sociology and psychology (Pettigrew 1967).

Runciman (1966) broadened the RD construct by his invaluable distinction between egoistic (individual) and fraternal (group) RD. People can believe that they are unfairly personally deprived [individual RD (IRD)] or that a social group to which they belong and identify is unfairly deprived [group RD (GRD)]. Feelings of GRD should be associated with group-serving attitudes and behavior such as collective action and outgroup prejudice, whereas IRD should be associated with such individual-serving attitudes and behavior as academic achievement and property crime.

Many psychological publications have since expanded the theory and linked RD with a host of other concepts and theories (Albert 1977, Crosby 1976, Mark & Folger 1984, Olson et al. 1986, Suls & Miller 1977, Walker & Smith 2002). But the study and application of RD has progressed less well in sociology and political science. Gurr (1970) wrote a widely cited book titled *Why Men Rebel* that largely ignores social psychological work and the fact that RD is a phenomenon of individuals—not societies. He employed such gross macro-level measures of RD as economic and political indices of whole societies. Although *Why Men Rebel* uncovered interesting findings, it is not an RD study. As a result, justified criticism of this work in the social movement field mistakenly cast RD as of little value (Pettigrew 2015b).

## The Ecological Fallacy

A classic ecological fallacy occurs when micro-level phenomena, such as RD, are erroneously assumed from macro phenomena (Pettigrew 1996, 2006; Robinson 1950). It is a fallacy because

macro units are usually too broad to determine individual data, and individuals have unique properties that cannot be inferred from macro data. Indeed, the central thrust of RD theory is that individual responses are often different from those that are expected of the macro category. Given contrasting comparisons, the rich can be dissatisfied and the poor content—just the opposite from what their macro income characteristics would indicate. The ecological fallacy has seriously stymied the development of RD theory in its application to social movement theory (Pettigrew 2015b).

In short, RD makes the claim that absolute levels of deprivation of individuals only partly determine feelings of dissatisfaction and injustice. Imagined counterfactuals, past experiences, and comparisons with similar others also strongly influence such feelings. RD describes these subjective evaluations by individuals, and it offers an elegant way to explain numerous paradoxes (Tyler & Smith 1998). Thus, RD explains why there is often little relationship between objective standards of living and satisfaction with one's income (Strumpel 1976): The objectively disadvantaged are often satisfied with receiving low levels of societal resources, whereas the objectively advantaged are often dissatisfied with high levels of societal resources (Martin 1986, Pettigrew 1964). RD models suggest that the objectively disadvantaged often compare themselves to others in the same situation or worse, whereas the objectively advantaged often compare themselves to those who enjoy even more advantages.

## Two Relative Deprivation Problems

Two problems account for the discrepancies in results found in RD research. First, in *The American Soldier*, Stouffer did not measure RD directly; rather, as noted previously, he inferred it as a post hoc explanation for surprising results. This failure to initiate a prototype measure has led to literally hundreds of diverse and often conflicting measures that have bedeviled RD research.

Worse, many of the measures purporting to tap RD do not meet the concept's basic features. One prevalent example involves the Cantril-Kilpatrick Self-Anchoring Scale (Cantril 1965). This measure has respondents place themselves on a 10-step ladder, with the top rung labeled as the best possible life and the bottom rung as the worst possible life. This scale measures discrepancies between people's attainments and aspirations. But it does not measure discrepancies between their expectations as to what they want and deserve and their current situation, and how they feel about these discrepancies (Smith et al. 2012). Thus, this measure emphasizes RD's cognitive component at the expense of its affective component.

Second, Stouffer offered a concept, not a testable theory. This problem, too, has impeded development of RD. Only recently have full-fledged theories emerged that allow direct testing and falsification. In the 1980s, Heather Smith (then a doctoral student at the University of California, Santa Cruz and now a professor at Sonoma State University) and I decided that what was needed was a meta-analysis of the far-flung research literature that employed the concept (Smith et al. 2012). It took 25 years of an off-and-on effort to complete the Herculean task.

## Meta-Analytic Tests of Relative Deprivation

Our first task was to clear the underbrush that had sprung up due to the absence of a precise theoretical and measurement model. We used inclusion criteria that ensured that RD was being tested, and a huge 76% drop-off occurred. Although we initially secured 860 studies that purported to study RD, only 210 met our modest criteria and entered the meta-analysis. Failing to exclude these marginal studies has been a major problem in the past for qualitative RD reviews that did not employ strict inclusion rules. As a consequence, their criticism of RD typically involved studies that did not actually assess RD.

Our second task was to ascertain the mean effect sizes for the entire RD literature as of January 2010. The 210 separate studies we located included 293 independent samples, 421 nonindependent tests, and 186,073 respondents. Three different checks indicated that our tests were not altered by a publication bias that favored positive results (for details, see Smith et al. 2012). The mean effect sizes that emerged were highly statistically significant but small: +0.106 for studies, +0.144 for samples, and +0.134 for tests.

Why such small RD effects? We examined three hypotheses for an explanation. First, our affect hypothesis predicts that stronger RD effects will emerge when people are angry over their perceived disadvantage. One can detect a personal or group disadvantage but believe that it is justified, as system justification research has repeatedly shown (Jost et al. 2004). Indeed, experiments show that system-justifying beliefs act as a moderator for both IRD and GRD. Subjects with these beliefs show smaller RD effects (Osborne & Sibley 2013). Hence, feelings of anger and resentment are basic to the RD formulation.

Our second proposition involves the fit hypothesis. We predicted that RD effects will be larger when the levels of analysis between RD and the dependent variable are the same (Walker & Pettigrew 1984). Put differently, we contend that RD effects are reduced when IRD is used to predict group-level phenomena and GRD is used to predict individual-level phenomena.

Our third test is methodological. The research quality hypothesis holds that the more rigorous studies will yield larger effects. If the major effects of RD were found among the poorest conducted studies—as with the effects of psychotherapy for adult depression (Cuijpers et al. 2010)—one would question RD's predictive power. But we predicted the opposite—that the most rigorous RD studies would reveal the largest effects. We defined quality in terms of the reliability of both the RD and dependent variables.

## The Meta-Analytic Results

**Figure 1** provides the overall results by showing the percentages of variance accounted for by subsets of the tests. For bar A, the RD tests that were conducted worst had none of our three desirable characteristics and yielded an $r$ of +0.079. Bar B shows a mean $r$ of +0.134 for all 421 tests. Bar C shows a mean $r$ of +0.165 for those tests that did tap affect but had neither reliable measures nor a fit between the levels of analysis of RD and the outcome variable. Bar D shows a

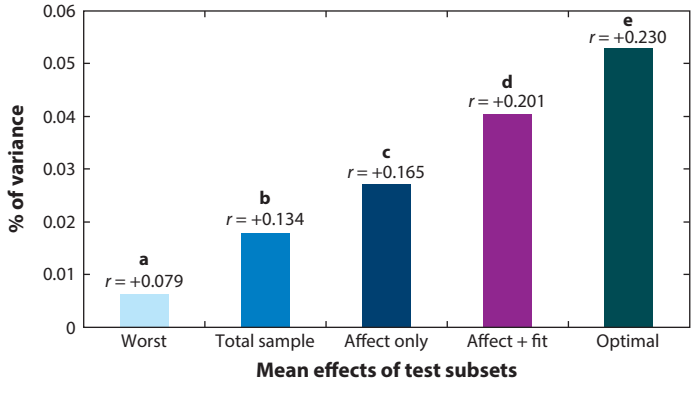


**Figure 1**

Mean effects of test subsets by percentage of variance explained. Adapted with permission from Smith et al. (2012).

mean *r* of +0.201 when the tests boast both fit and an affect measure but lack reliable measures. Finally, bar E records the results of the optimal tests. It reveals a mean *r* of +0.230 when all three of our conditions are met—reliable measures that tap affect and have the same level of analysis between RD and the dependent variable. Furthermore, direct statistical tests of our three hypotheses are all significant at the 0.05 level (Smith et al. 2012). These results solidly support the importance of RD when it is tested appropriately.

### The Range of Dependent Variables

Similar results were also found for four broad types of dependent variables (Pettigrew 2015b): (*a*) Internal states include psychological stress and physical health; (*b*) individual behaviors encompass both normative (e.g., church activities) and nonnormative (e.g., bullying) actions; (*c*) intergroup attitudes consist of prejudice measures and variables tapping stereotypes, nationalism, and ingroup identification; and (*d*) collective behaviors range from self-reported rioting to a readiness to join strikes and endorse violent politics.

Tested rigorously with reliable measures that tap angry resentment against dependent variables of similar scope, these meta-analytic results demonstrate that RD can be a useful theory in a wide variety of domains of central interest to social psychology.

### Universality of the Relative Deprivation Phenomena

Our meta-analysis also addresses a question too seldom raised by social psychology—whether its findings are universal. Positive results were recorded from 30 different nations with widely contrasting respondents, societies, and cultures (Smith et al. 2012).

### Relative Versus Objective Deprivation

One limiting possibility is that RD effects may simply reflect absolute deprivation. Relevant research does not support this possibility. We located 26 studies that allow a direct comparison of relative and absolute deprivation (Smith et al. 2012). All 26 used income as the objective measure of deprivation. In terms of the percentage of variance explained, the mean effects of RD are more than twice that of absolute deprivation. These data supply yet another reason why macro-level measures of objective deprivation cannot be used to gauge the perceived RD of individuals.

## INTERGROUP CONTACT

Just as Thurlow had known, Allport (1954, 1958) was starting to write his classic volume *The Nature of Prejudice* as I arrived at Harvard in 1952. He wrote most of the book at his summer cabin near Lincoln, Maine. While at Harvard, he concentrated on his teaching and extensive administrative duties. But he did work occasionally on the book in Cambridge, and I served as his "go-for" assistant—not for coffee but rather for books from Widener Library.

Allport's book appeared in a hardbound edition in 1954. Issued by a small, local publisher, it had only modest sales. Not until the 1958 paperback edition, issued by a major publisher and reduced 40% in size, did its sales swell and its influence mount.

I committed the volume virtually to memory as soon as it appeared. Two chapters particularly caught my attention. Chapter 17 on conformity bolstered my theory about the white South's anti-black prejudice. Chapter 16 on intergroup contact offered a means of reducing prejudice and coincided with my own experience as a white American who often found himself in African

American settings. I became so interested in intergroup contact that I chose to take my doctoral special examination on the subject. The test was administered and graded by Allport himself, who became my third and major mentor.

## Four Key Factors and Their Problems

Prior to the 1950s, most writers held that intergroup contact exacerbated prejudice and conflict (e.g., Baker 1934). But there was scant relevant research. In his chapter 16, Allport partly followed an earlier analysis by the eminent sociologist Robin Williams (1947). The chapter mentions many pertinent points, yet its broad and discursive nature made it difficult to prepare for the examination. So I boiled the text down to four key factors that enabled intergroup contact to reduce prejudice: (*a*) equal status between the groups within the situation, (*b*) common goals, (*c*) cooperation between groups, and (*d*) authority support for the contact.

Allport approved of my synthesis, and I continued to use it in later publications (e.g., Pettigrew 1971). But there are three limitations to this approach. First, like any list, it does not do full justice to Allport's rich discussion. Second, it is a "positive factors" approach that later research has shown to be too restrictive. Allport, writing during a tense racial era, assumed that intergroup contact typically failed to reduce prejudice. So he sought to make explicit positive factors that were necessary for contact to diminish prejudice.

In turn, this "necessary factors" approach led to a third problem (Pettigrew 1986). During the decades following the publication of Allport's volume, writers repeatedly added further factors that they presumed to be required for intergroup contact to have positive results. As the laundry list of necessary conditions accumulated, the theory was in danger of becoming meaningless. The ever-increasing list of "necessary" conditions rapidly excluded the majority of the world's intergroup situations and rendered the theory trivial. Social psychologists were concentrating on avoiding type I errors (false positives) while ignoring type II errors (false negatives).

The 1960s and 1970s witnessed increasing attention to contact theory as its policy implications became evident. I found it useful as the basis for expert testimony in support of racial school desegregation in legal cases in Springfield, Massachusetts, in Los Angeles, and in Norfolk and Richmond, Virginia (Pettigrew 1979).

## A Needed Meta-Analysis

To test the theory thoroughly, I long wanted to review the research on intergroup contact. But there were too few studies to analyze and inadequate review methods. By the 1990s, however, the contact literature had expanded substantially and meta-analysis—a vast improvement over qualitative reviews—had been developed. So Linda Tropp (then a doctoral student at the University of California, Santa Cruz and now a professor at the University of Massachusetts at Amherst) and I decided the time had arrived to conduct a thorough review of intergroup contact research (Pettigrew & Tropp 2000, 2006, 2008, 2011).

Once again, it took years to gather a near-complete collection of the extensive contact-prejudice research. We uncovered a total of 515 studies with 713 independent samples and 1,351 nonindependent tests that met our inclusion rules. (For a complete listing of these studies, see Pettigrew & Tropp 2011.) The research spans from 1941 through 2000 and contains responses from more than 250,000 participants, with 51% of the samples focused on racial or ethnic target groups.

Several conclusions emerged. First, the average effect for all studies was $r = -0.21$ (Cohen's $d = 0.43$). Like that found for RD, this is a solid, average effect size for meta-analyses in social

psychology (Richard et al. 2003). Larger effect sizes are rare in meta-analyses because they typically include a wide variety of research formats, analyses, contexts, and subjects.

This average effect size cannot be explained away by participant selection, publication bias, sampling biases, or poorly conducted research. Like the RD results, the most rigorous studies tend to provide the largest effects. This phenomenon is repeated in 21st-century research. Recent work is more rigorously executed and yields larger contact effects than earlier work (Pettigrew & Tropp 2008).

We found that the positive effects of intergroup contact are not confined to just those outgroup members who directly participated in the contact. The primary generalization typically extends from the immediate outgroup members who participated in the contact to the entire outgroup. This effect is enhanced when the contact situation makes participants' group identities salient (Brown & Hewstone 2005). The effects of contact also extend to situations different from the original contact situation (Cook 1984).

Furthermore, our review uncovered evidence for the universality of intergroup contact phenomena across varied settings, age cohorts, and 38 countries throughout the world. We also found significant contact effects for groups that differ in race, ethnicity, nationality, sexual orientation, and physical and mental disabilities. Of course, there is variability in these effects. For example, studies repeatedly show that the effects for majority groups tend to be significantly larger than those for minority groups (Tropp & Pettigrew 2005). Yet the positive trend is remarkably consistent. The universality of the intergroup contact phenomenon suggests that there is a basic underlying process. This process may reflect the fact that familiarity generally leads to liking—the mere exposure effect (Zajonc 1968).

An important theoretical finding of the meta-analysis is that the four factors I gleaned from Allport's contact chapter were facilitating, but not necessary, factors for contact's constructive effects (Pettigrew & Tropp 2006, 2011). Studies featuring none of the key factors still tend to yield positive effects of contact on prejudice, though generally smaller than those of other studies.

## Intergroup Contact Effects Spread Broadly

There is even an extended contact effect (Wright et al. 1997). Just having an ingroup friend who has an outgroup friend tends to improve attitudes toward the outgroup. Vicarious contact of various types, such as television viewing, book reading, and imagined contact, can erode prejudice and ease the anxiety that often accompanies interracial contact (Fujioka 1999; Gómez & Huici 2008; Graves 1999; Herek & Capitanio 1997; Schiappa et al. 2005, 2006; Turner et al. 2007, experiments 2 and 3; Vezzali et al. 2012). Part of this process involves the perception of norm changes and part is mediated by a positive change in meta-stereotypes—what you believe the outgroup thinks of your ingroup (Gómez & Huici 2008, Vorauer et al. 1998). These indirect contact effects are especially important for those who live in segregated areas without outgroup friends (Christ et al. 2010).

## Macro-Level Implications of Intergroup Contact

Another significant finding is that extensive intergroup contact in an area can improve the area's intergroup norms. Using multilevel analyses of seven large surveys across three continents, Christ and his coworkers (2014) demonstrated that intergroup norms significantly improved following intergroup contact. This finding is especially noteworthy, for it is rare that changes at the meso level of analysis (contact) have been shown to change norms at the macro level (Pettigrew 1997).

This new normative change finding helps to explain a longstanding conflict in studies of ethnic diversity. A half-century ago, I and others typically found that racial prejudice and discrimination

were greatest in those areas of the racially segregated South that had the highest proportion of black citizens—an apparent threat effect (Blalock 1967, Pettigrew 1957, Pettigrew & Campbell 1960, Pettigrew & Cramer 1959). But these studies all took place in areas with strict segregation. We failed to see that these negative effects of diversity could be offset by the greater intergroup contact that can ensue if there are no structural barriers to the contact. These dual effects of diversity—greater threat and greater contact—have now often been demonstrated (e.g., Pettigrew et al. 2010; Wagner et al. 2003, 2006).

Unfortunately, Putnam (2007), in a much-publicized paper, repeated this mistake (Pettigrew & Tropp 2011, pp. 164–67). Without controlling for either intergroup contact or neighborhood segregation, he found that intergroup diversity increased intergroup distrust. But Uslaner (2012; see also Rothwell 2010, 2012), using the same survey data set but carefully controlling for segregation, found in repeated analyses that it was neighborhood segregation and not diversity per se that related to intergroup distrust. The Putnam paper offers a striking example of the importance of omitted variables in social science analyses.

## Growth in Intergroup Contact Research

The research literature on intergroup contact has exploded—from only 30 publications before 1960 to more than 400 since 2000. Longitudinal studies provide the most compelling support for the theory (Binder et al. 2009, Christ et al. 2010, Eller & Abrams 2004, Levin et al. 2003). Especially impressive is the longitudinal research conducted by Sidanius and colleagues (2008). This study's five data points reveal the evolving pattern of interracial roommate effects over a four-year period.

In 1998, I published a tentative theory of intergroup contact in the *Annual Review of Psychology* (Pettigrew 1998). Next, Brown & Hewstone (2005) provided an intensive review of the many moderating and mediating factors involved in intergroup contact's effects. During the past three decades, these two British investigators have tirelessly contributed significant research and analyses on the theory. Smaller, more focused meta-analyses reveal that two mediators in particular account for contact's reduction in prejudice: optimal contact reduces anxiety about intergroup interaction while it induces empathy and perspective taking (Pettigrew & Tropp 2008). Continued progress in the area is detailed in *Advances in Intergroup Contact* (Hodson & Hewstone 2013).

Contact's potential for diminishing prejudice extends even to outgroups not involved in the contact—the secondary transfer effect (STE; Pettigrew 2009). A growing array of research supports the STE (Lolliot et al. 2013). Tausch and her international colleagues (2010) ruled out three alternative explanations for STEs—prior contact with the secondary outgroup, socially desirable responding, and prior attitudes. In addition, they found strong STEs in cross-sectional studies conducted in Cyprus, Northern Ireland, and Texas and in a longitudinal study conducted in Northern Ireland. Finally, these analyses uncovered strong evidence for attitude generalization.

Another investigation employed a large sample drawn from eight European countries to examine the relationship between intergroup contact with immigrants and attitudes toward primary (immigrants) and secondary (homosexuals and Jews) outgroups (Schmid et al. 2012). Intergroup contact not only directly related with decreasing primary outgroup prejudice but also indirectly with decreasing secondary outgroup prejudice via attitude generalization. These relationships occurred primarily for individuals low in social dominance orientation.

Vezzali & Giovannini (2012) studied 175 Italian high school students. With the effects of prior contact statistically controlled, contact with immigrants improved attitudes toward them. And this attitude change generalized to improved attitudes toward the disabled and homosexuals as well. Intergroup attitudes, intergroup anxiety, and perspective taking all played mediating roles.

In Arizona, STEs have even been found for imagined contact with illegal immigrants (Harwood et al. 2014). These effects were found especially for groups that bore some similarity to the target group—Mexican Americans, legal immigrants, Asian Americans, and homeless people.

Extended, vicarious, and secondary transfer effects make it clear that intergroup contact effects spread broadly—a vital point for social policy.

### What About Negative Contact?

Recent research on contact theory has explored the potential of negative contact to increase prejudice. Using Australian and American samples, Barlow and colleagues (2012) found that the quantity of negative contact related more closely to increased prejudice than the quantity of positive contact related to reduced prejudice. They regarded their results as reflecting greater category salience of negative contact. But other research with German samples fails to replicate this result and finds positive contact effects to be significantly stronger (Christ et al. 2008; Pettigrew & Tropp 2011, chapter 12). This discrepancy in findings may simply reflect contrasting empirical measures.

But the German data paint a more complex picture. First, there is far more positive than negative contact, save in special situations of open conflict. This fact helps to explain why the contact meta-analysis could locate only 21 studies (4%) reporting negative effects of contact (Pettigrew & Tropp 2006, 2011). Second, although these studies show that positive contact's correlation with reduced prejudice (−0.47) is much larger than that of negative prejudice enhancing prejudice (+0.28), the strongest link (−0.49) is achieved by considering both types simultaneously—positive contact minus negative contact. Indeed, those German respondents who report both positive and negative contact with foreign residents demonstrate almost as much acceptance of immigrants as those reporting only positive contact. Positive contact acts as a buffer against the detrimental effects of negative contact. This conclusion was confirmed in later research conducted in Northern Ireland, Cyprus, and Arizona (Paolini et al. 2014). Although more attention to negative contact is needed, it must be considered together with positive contact.

## PREDICTING PREJUDICE WITH ALL THREE THEORIES

Considered separately, all three of my favorite theories help to explain prejudice. But do they continue to predict prejudice when considered together and with other important predictors? A 2002 national probability survey of German citizens offers an answer by including 16 major predictors of prejudice against resident foreigners (Pettigrew et al. 2007, model 7; Pettigrew & Tropp 2011, pp. 157–58). In addition to measures of our three theories, the regression includes such standard prejudice predictors as SDO, age, gender, education, and political conservatism as well as two economic measures. As expected, the largest predictors are SDO, authoritarianism, and positive contact (a lone negative correlate of prejudice). But following these "big three," GRD ranks together with political inefficacy (a close correlate of RD) as the next most important and highly significant predictors of anti-immigrant prejudice in Germany. Thus, our three theories are among the top five predictors, each adding significantly to the prediction of prejudice even when 13 other predictors are included in the regression.

**Figure 2** provides a structural equation model involving measures of the three theories together with the previously described measure of collective threat in predicting German prejudice against foreign residents. Note that the direct authoritarianism path to prejudice is sharply reduced by the mediation achieved by positive associations with GRD and collective threat and its negative association with positive contact. Observe, too, that the powerful collective threat scale mediates the links of all three key predictors with prejudice.

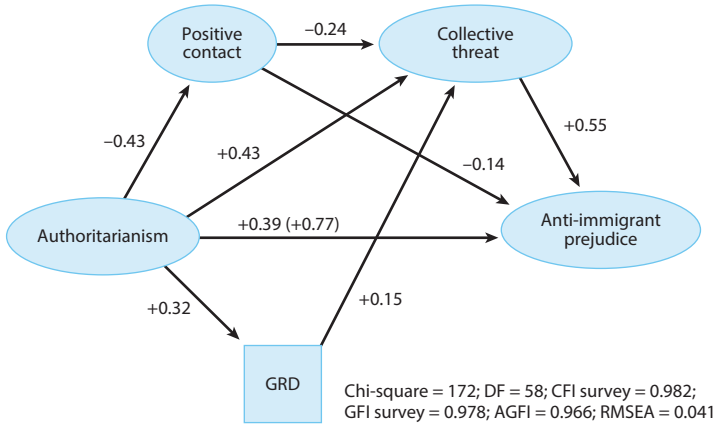


**Figure 2**

Four major predictors of prejudice. Based on data from the 2004 GRE (Group-Focused Enmity) German probability survey (Heitmeyer 2005). Abbreviations: AGFI, adjusted goodness of fit index; DF, degrees of freedom; GRD, group relative deprivation; RMSEA, root mean squared error of approximation.

## One Final Note

The three theories that I have pursued throughout my career all contribute to our understanding of prejudice. While all three help predict prejudice, contact theory offers a means for diminishing prejudice. The worldwide significance of these findings is enhanced by their apparent universalism across widely contrasting subjects, targets, cultures, and nations—30 nations in the RD meta-analysis, and 38 nations in the contact meta-analysis. As always, the progress that has been made in all three domains raises further questions for future research.

The reader will undoubtedly have noticed that I have relied heavily on German data throughout this article. This is the result of Professor Wilhelm Heitmeyer (2002, 2003, 2005) of Bielefeld University generously allowing me to analyze his rigorous phone surveys of the German population. These surveys provided the richest data on intergroup prejudice that I have ever analyzed. In addition, I have had the opportunity of working for many years with Professor Ulrich Wagner and his many talented doctoral students at Philipps University in Marburg, Germany. Together we all analyzed these survey data and became close friends. All retired researchers should be as fortunate as I to have access to such colleagues and data at the close of their careers.

## DISCLOSURE STATEMENT

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