Political Science Research and Methods

http://journals.cambridge.org/RAM

Additional services for ***Political Science Research and Methods:***

Email alerts: Click here
Subscriptions: Click here
Commercial reprints: Click here
Terms of use : Click here

What Does it Take to Reduce Racial Prejudice in Individual-Level Candidate Evaluations? A Formal Theoretic Perspective

Arthur Lupia, Logan S. Casey, Kristyn L. Karl, Spencer Piston, Timothy J. Ryan and Christopher Skovron

Political Science Research and Methods / Volume 3 / Issue 01 / January 2015, pp 1 - 20
DOI: 10.1017/psrm.2014.12, Published online: 24 July 2014

Link to this article: http://journals.cambridge.org/abstract_S2049847014000120

How to cite this article:
Arthur Lupia, Logan S. Casey, Kristyn L. Karl, Spencer Piston, Timothy J. Ryan and Christopher Skovron (2015). What Does it Take to Reduce Racial Prejudice in Individual-Level Candidate Evaluations? A Formal Theoretic Perspective. Political Science Research and Methods, 3, pp 1-20 doi:10.1017/psrm.2014.12

Request Permissions : Click here

CAMBRIDGE JOURNALS

Downloaded from http://journals.cambridge.org/RAM, IP address: 141.211.32.5 on 15 Dec 2014

Political Science Research and Methods Vol 3, No. 1, 1–20 January 2015
© The European Political Science Association, 2014 doi:10.1017/psrm.2014.12

What Does it Take to Reduce Racial Prejudice in Individual-Level Candidate Evaluations? A Formal Theoretic Perspective*

ARTHUR LUPIA, LOGAN S. CASEY, KRISTYN L. KARL, SPENCER PISTON, TIMOTHY J. RYAN AND CHRISTOPHER SKOVRON

Anti-black prejudice affects how some citizens evaluate black candidates. What does it take to reduce the role of prejudice in these evaluations? Using logical implications of relevant psychological phenomena, this article shows that repeated exposure to counter-stereotypical information is insufficient to reduce evaluative prejudice. Instead, citizens must associate this prejudice with adverse effects *for themselves in contexts that induce them to rethink their existing racial beliefs. These findings explain important disagreements in empirical prejudice research, as only some empirical research designs supply the conditions for prejudice reduction predicted here. This study also clarifies why similarly situated citizens react so differently to counter-stereotypical information. In sum, we find that prejudice change is possible, but in a far narrower set of circumstances than many scholars claim.*

Many people viewed the election of Barack Obama as president in 2008 as a sea change in how citizens evaluate political candidates. Thernstrom (2008), for example, claimed that an Obama presidency "will allow black parents to tell their children, it really is true: the color of your skin will not matter." Such effects would be important, as anti-black prejudice has long affected how some Americans evaluate political candidates (Hutchings and Valentino 2004; Kinder 1998). When can new information, of the kind supplied by greater exposure to black officeholders, make people less prejudiced in their subsequent evaluations of black candidates?

According to the contact hypothesis (Allport 1954), increased interactions between members of racial groups can reduce prejudice. While Allport identified additional conditions for contact to reduce prejudice (equal status among groups, shared goals, genuine acquaintance and support from authorities), these requirements are few in number. Many scholars have examined Allport's hypothesis. Using meta-analyses, Pettigrew and Tropp (2006) conclude that Allport's conditions are not necessary for contact to reduce prejudice. Indeed, 94 percent of the studies they examine "show an inverse relationship between contact and prejudice" (Pettigrew and Tropp 2006, 757), leading them to claim that "contact typically reduces intergroup prejudice" (2006, 751).

* Arthur Lupia is the Hal R. Varian Collegiate Professor in the Department of Political Science, University of Michigan, 5700 Haven Hall, Ann Arbor, MI 48109-1045 (lupia@umich.edu). Logan S. Casey (lscasey@umich.edu), Kristyn L. Karl (krislm@umich.edu) and Christopher Skovron (cskovron@umich.edu) are graduate students in the Department of Political Science, University of Michigan. Spencer Piston is Assistant Professor, Department of Political Science, Syracuse University, 100 Eggers Hall, Syracuse, NY 13244-1020 (spiston@maxwell.syr.edu). Timothy J. Ryan is Assistant Professor, Department of Political Science, University of North Carolina, 361 Hamilton Hall, Chapel Hill, NC 27599-3265 (tjryan@umich.edu).

Other studies adopt a similar theme. Hajnal (2001, 604), for example, argues that "The greater the number of African Americans elected to positions of power, the more whites will learn about the effects of their leadership, the less they will fear it, and the more likely they will be to vote for black candidates in the future." He finds that as white voters learn about black mayors, their subsequent evaluations are less prejudiced. He argues that a black incumbent "essentially changes the way that many white Americans think about the black community and therefore subtly alters the nature of racial politics and race relations in this country" (Hajnal 2007, 3).

Some studies, however, show continuing prejudice. Hutchings (2009) finds that even in the wake of Barack Obama's election, the level of white prejudice against blacks and its effects on policy attitudes remain as high as they were twenty years ago (also see Tesler and Sears 2010). So disagreement persists about how anti-black prejudice affects candidate evaluations (Paluck and Green 2009).

Most studies on how new information affects evaluative prejudice focus on the role of a single psychological or contextual factor. Few studies examine how interactions among such factors affect race-related information processing. As Pettigrew and Tropp (2006) argue, "more elaborate models are needed to integrate and account for these varied intergroup effects…multilevel models that consider both positive and negative factors in the contact situation, along with individual, structural, and normative antecedents of the contact, will greatly enhance researchers' understanding of the nature of intergroup contact effects" (768). In political science, such models are especially valuable, since analysts are often less interested in context-free findings about psychological processes and more interested in how such processes interact with important aspects of political contexts to influence behaviors and outcomes.

In this article, offer such a model. The model builds from points of consensus in research on how people process racial information. It produces distinct conditions for new information to reduce the role of racial prejudice in subsequent candidate evaluations.

These conditions (that is, distinct combinations of perceptions, feelings, incentives and politically relevant contextual factors) reveal numerous situations in which repeated exposure to counter-stereotypical information is insufficient to reduce evaluative prejudice. We find that prejudice reduction requires more than contact with, or exposure to, counter-stereotypical information. It requires individuals to recognize the personal consequences of their own prejudice, an external incentive to reconsider their beliefs *and* a social context that makes such reconsideration likely to be worthwhile. The joint logical implication of these conditions is to narrow the set of circumstances in which prejudice change is logically reconcilable with basic facts about political contexts and how people process racial information. In other words, we find that even when many currently claimed conditions for prejudice change are met, there are many people for whom evaluative prejudice will not decline.

The article continues as follows. First, we describe how a model can complement extant empirical studies. Then we develop a new model and use it to clarify how new information affects evaluative prejudice. Finally, we discuss the broader implications for racial prejudice in future candidate evaluations.

BACKGROUND

In this section, we offer a brief overview of research on prejudice change. We first describe contradictory conclusions in the empirical literature. Some people argue that prejudice

change is easy, while others argue that it is not. We then discuss how a formal model can complement and extend the meaning of existing empirical work by clarifying when various findings best apply to specific situations.

Allport, a common point of reference in prejudice research, defines prejudice as "an antipathy based upon a faulty and inflexible generalization. It may be felt or expressed. It may be directed toward a group as a whole, or toward an individual because he is a member of that group" (1954, 9). Some subsequent definitions offer different criteria. Some do not require false beliefs (Eagly and Diekman 2005), while others allow positive prejudice (Schuman and Harding 1964; Dienstbier 1970; Sniderman and Stiglitz 2008). While we focus our narrative on anti-black prejudice due to its historical importance, our findings also apply to positive-true, negative-true, positive-false and negative-false prejudices. In other words, our treatment will allow prejudice to stem from true or false beliefs (and we will clearly differentiate such cases as we proceed).

When can we expect new information to change the role of prejudice in subsequent evaluations? Allport's (1954) *contact hypothesis* provides a focal answer. Many people interpret his hypothesis as "contact decreases prejudice." But Allport argued that contact is not enough, and that it reduces prejudice only in the presence of equal status among groups, common goals, acquaintance potential and the support of authority.

Subsequent research challenges Allport's claim. Most notably, Pettigrew and Tropp (2006) identify hundreds of studies in which contact reduces prejudice without satisfying Allport's conditions. Pettigrew and Tropp conclude that "contact typically reduces intergroup prejudice" (2006, 751).

Kurzban, Tooby and Cosmides reach a similar conclusion (2001, 15391). In their experiment, subjects answer questions about two teams. Each team has black and white members. The authors expect that "[t]he strength of race encoding will be diminished by creating a social context in which (i) race is no longer a valid cue…and (ii) there are alternate cues that do reliably indicate coalitional affiliation" (15388). They find that "subjects bring the tendency to categorize by race with them into the experiment, but then begin to lose it as the circuitry detects that it no longer predicts relevant coalitions within this context" (15390). They conclude "What is most striking about these results is just how easy it was to diminish the importance of race by manipulating coalition" (15391).

Gaertner and Dovidio (1986) conclude differently, finding that prejudice does not disappear as much as it changes form, a phenomenon they call aversive racism. As Fiske (1998, 360) describes, when people's "behavior can be explained away by other factors (i.e., when they have a non-racial excuse), or when situational norms are weak, ambiguous, or confusing…then aversive racists are more likely to discriminate overtly because they can express their racist attitudes without damage to their nonracist self-concept."

Research on motivated reasoning yields similar findings. Sinclair and Kunda (1999), for example, exposed experimental subjects to an "authority figure" who evaluated their work. The experimenters randomly assigned subjects to receive positive and negative feedback from a black or white authority figure.[1] When a black authority figure offered praise, subjects described him positively. When a black authority figure offered criticism, subjects used negative racial stereotypes to denigrate the authority. Specifically, "a Black professor who delivers praise may be categorized and viewed as a professor, whereas a Black professor

[1] The authority figure is presented as nearby but in a different location. He communicates with subjects via video. A common video is used across subjects within an experimental group, which allows the identical presentation of the stimulus within experimental groups.

who delivers criticism may be categorized and viewed as a Black person'' (Sinclair and Kunda 1999, 885). In this context, increased contact does not reduce evaluative prejudice.

Political science also finds persistent prejudice (see, for example, Kuklinski and Hurley 1994; Sniderman and Piazza 2002; Kawakami et al. 2009). Hochschild (2001, 324), for example, shows that many whites continued to hold a wide range of mistaken attitudes about blacks. She also showed that these attitudes correlate with opposition to policies that benefit blacks. So despite ostensibly having access to the same historical information about blacks, many whites sustain false beliefs about blacks in their broader political worldviews.

These literatures provide valuable insights, but they do not converge on the conditions under which we can expect new information to reduce evaluative prejudice. So, when and how does prejudice change? As mentioned above, one answer comes from Pettigrew and Tropp (2006). They claim that ''94% of the samples [in a meta-analysis] show an inverse relationship between contact and prejudice'' (757).

To understand why prejudice persists in political contexts, we need to ask ''*94% of what?*'' Meta-analyses compile hundreds of individual findings, many of which come from experiments that vary a single value of a single factor. Most designs are not built to capture dynamic relationships among psychological and contextual variables. Similarly, when thinking about Sinclair and Kunda's experiment, it is worth noting that the authority figure's race, and his praise or criticism, constitute nearly all of the information that the experimenters give subjects. Many political environments send more diffuse and uncertain messages. Moreover, the experiment's design makes the black authority figure impinge directly on subjects' self-esteem. In politics, by contrast, people often ignore people with whom they disagree. So the question remains: when can we expect new information to change the role of prejudice in subsequent evaluations?

In what follows, we use a model to answer this question. Among other things, the model implies that the context created by Kurzban, Tooby and Cosmides ''erases'' race because it gives subjects opportunities to experience, and incentives to act, upon the harm that their anti-black attitudes can cause. Sinclair and Kunda's context, by contrast, offers no such opportunities or incentives. Hence, it is not so much that the truth of one scholar's claim falsifies another's claim. Rather, it is that these empirical contexts differ significantly in the feedback, and the motivations for change, that they supply to prejudiced people. While both studies generate increased intergroup contact, one study provides sufficient conditions for prejudice reduction, while the other does not.

PREJUDICE IN A POLITICAL CONTEXT

We now develop a model of how new information about a black candidate affects the role of prejudice in subsequent evaluations. We seek a simple design that captures relevant political and psychological dynamics. We represent most of these dynamics with continuous variables. We use this continuity to complement and extend previous empirical findings. It does so by greatly expanding the set of cases in which we can characterize whether claims new information's effect on evaluative prejudice are logically consistent (or inconsistent) with basic political and psychological phenomena. The desired result is clarity about what combinations of person-attributes and context facilitate or inhibit the persistence of prejudice in evaluations.[2]

[2] This is a decision-theoretic model, in which we focus on how an individual processes different kinds of information in different kinds of contexts. The online appendix features a game-theoretic version of the model. In it, information recipients consider information providers' motives, and vice versa, when

The model focuses on a Citizen's actions and beliefs. The Citizen's task is to make $N + 1$ candidate evaluations. The first evaluation occurs in the "present." The next N periods occur in the "future." The Citizen benefits by favorably evaluating candidates who better serve his goals.

Contacts inform the Citizen about candidates. Collectively, contacts represent various sources (for example, neighbors, co-workers, websites, newspapers, cable news channels, interest groups, political parties or direct contact with candidates themselves) from which citizens obtain information about the correspondence between a candidate's race and other politically relevant attributes or skills. Their information's accuracy may be inconsistent.

Figure 1 depicts events that precede (Figure 1a) and follow (Figure 1b) each candidate evaluation. Each period begins by setting the values of two factors: (1) the relationship between a candidate's race and politically relevant abilities and (2) the accuracy of available information about this relationship. We now describe the model in greater detail.

How a Candidate's Race and Skill Relate to the Citizen's Political Goals

In each period, the Citizen evaluates two candidates with respect to a goal. Each evaluation represents a vote, an answer to a poll question, a response to a neighbor's question or internal considerations of candidate-related feelings. An evaluation is basically any chance to offer an opinion on a candidate relative to an alternative.

Goals in this model represent a citizen's motives for evaluating a candidate in a particular way. Goals can represent material aspirations (for example, getting a certain policy passed), representational aspirations (for example, wanting legislators to reflect a particular group's desires), non-material aspirations (for example, helping society or himself live in accordance with a particular moral or ethical standard) or combinations of the above.

The Citizen receives higher utility by favoring candidates who best achieve his goal in the current period. We represent this situation by saying that in each period, one candidate is more *skilled* than the other. Skill represents a candidate's relative ability to achieve the Citizen's goal in that period. Hence, the $N + 1$ evaluations can represent the Citizen's need to evaluate candidates on $N + 1$ topics (to judge a candidate with respect to $N + 1$ goals), the Citizen's need to evaluate at different times, or combinations of these needs.

In addition to skill levels, candidates have racial identities. In each period, one candidate is black and the other is white. We denote the Citizen's evaluation in period i, $i \in \{1, \ldots, N + 1\}$ as $V_i \in \{0, 1\}$. $V_i = 1$ denotes the Citizen favoring the black candidate, and $V_i = 0$ denotes the Citizen favoring the white candidate.

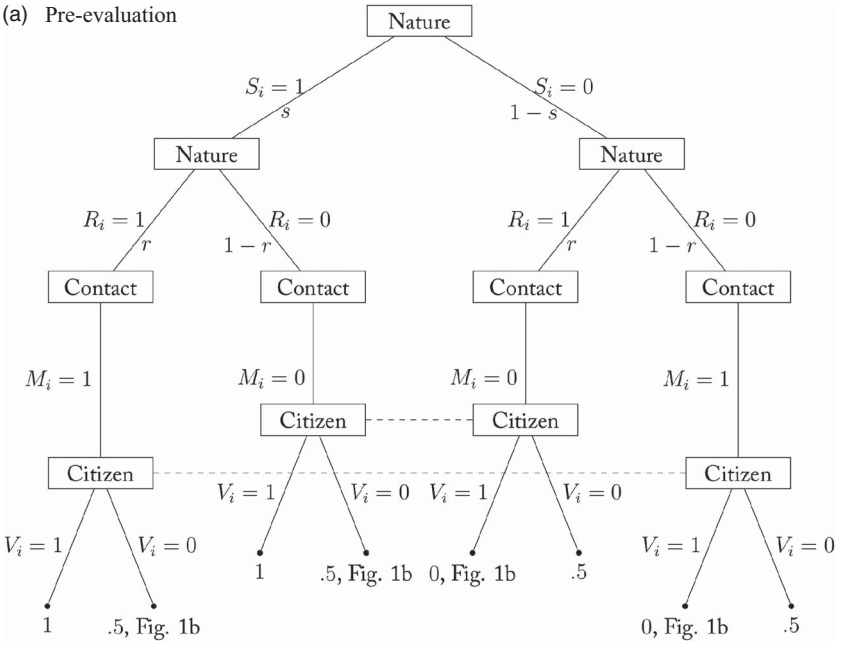
To reflect the fact that a candidate's abilities vary across citizens' goals, we say that the black candidate is more skilled than the white candidate in some periods, while in other periods the opposite is true. Let $S_i \in \{0, 1\}$ denote the black candidate's *relative skill level* in period i. $S_i = 1$ means that the black candidate is more skilled than the white candidate, and $S_i = 0$ means the opposite.

Skills are independently determined in each period. $s \in [0, 1]$ is the (exogenous) probability that the black candidate is more skilled $(S_i = 1)$ in any given period, while $1 - s$ is the probability that the black candidate is less skilled. High s-values represent

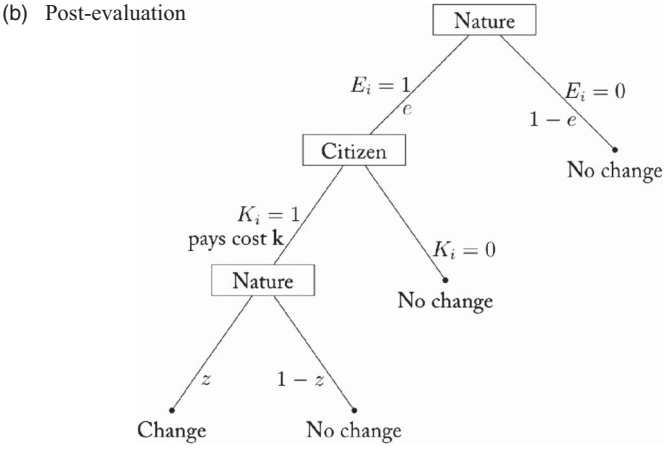
---

(F'note continued)

interpreting information. We developed the simpler model after realizing that it could produce the same focal insights as the original version.



Note: the Citizen sees a message but may be uncertain of the circumstances that produced it (as shown by the dotted line). He need not know the candidates' true skill levels (S_i) or the message's reliability (R_i). The game continues to Fig. 1b at terminal nodes with that label.



Note: if a triggering event occurs ($E_i = 1$), the Citizen can attempt introspection, which costs k and succeeds with probability z.

Fig. 1. Sequence of events in a single period

circumstances in which the black candidate is more skilled on average than the white candidate with respect to the citizen's goals. Low s-values represent the opposite circumstance. We assume that the Citizen need not know a candidate's true skill level, S_i, in any given period but may learn about it by means described below. The main analytic

focus of our model is to examine how the Citizen's beliefs about the relationship between race and skill (described above) interact with new information about this relationship from various contacts (described below) to affect the Citizen's evaluations over $N + 1$ periods.

In each of these periods, if the Citizen favors the white candidate, he earns a utility of 0.5. The Citizen's utility from favoring a black candidate equals S_i. In other words, when the black (white) candidate is more skilled, favoring him yields the citizen greater utility than favoring the white (black) candidate. We assume that citizens do not always receive immediate feedback about whether or not they are favoring the candidate who is truly better for them. Below, we explain how a Citizen obtains such feedback.

Note that we have fixed the utility of selecting the white candidate not to indicate greater variance in the skill of a black candidate, but to reflect *relatively greater variance in the Citizen's beliefs* about the skill of a black candidate. Existing work suggests that in at least some cases, white voters are less certain about black candidates (see, for example, Hajnal 2001). It is also worth noting that this utility specification implies *risk neutrality*. This assumption is conservative relative to our main claim that conclusion prejudice persists in a broad set of circumstances (that is, the white candidate is perpetually favored). If we assume that citizens are risk averse, prejudice would be even more persistent than we show.

With this framing in hand, we can be more precise about what follows. While we solve the model for all possible values of all given parameters, we focus the narrative on cases in which contacts can reveal that the Citizen underestimates a black candidate or candidates because he uses race as a proxy for skill. In such cases, our question becomes "Under what conditions will the Citizen learn to base subsequent evaluations on skill rather than race?" Our answer depends on the beliefs described above and the learning opportunities described below.

How Accurate is New Information?

Citizens obtain information about candidates from many sources including friends, family, media and direct encounters. We represent these opportunities by saying that before each evaluation, the Citizen receives new information. $M_i = 1$ is the message, "The black candidate is higher skilled." $M_i = 0$ is the opposite message. Each message is accurate ($R_i = 1$) or not ($R_i = 0$). An accurate message conveys true information ($M_i = 1$ when $S_i = 1$ and $M_i = 0$ when $S_i = 0$), while an inaccurate message does not ($M_i \neq S_i$).

The Citizen observes each message's content but not its accuracy. $r \in [0, 1]$ is the probability that a message ($R_i = 1$) is true, while $1 - r$ is the probability that it is untrue. Accuracy, R_i, is independently determined in each period. High r-values represent circumstances in which the Citizen knows that his information is likely to be accurate from period to period. Low r-values represent opposite circumstances. Values of r near 0.5 represent citizens whose information is neither reliably true nor reliably false, on average.

With new information M_i in hand, the Citizen uses Bayes' rule to update his beliefs about the black candidate's period i skill level. For example, when $M_i = 1$, and the Citizen has the initial racial belief s, he subsequently infers that the probability that the black candidate is higher-skilled in period i is $[rs]/[rs + (1 - r)(1 - s)]$ and when $M_i = 0$, the Citizen infers that this probability is $[(1 - r)s]/[(1 - r) + r(1 - s)]$. In short, the Citizen bases his evaluations on his beliefs about the candidates' relative skill levels

described in the previous section and on information that he receives from sources of possibly varying reliability.[3]

Feedback and a Chance to Rethink the Race-Skill Relationship

The model's final component represents opportunities for the Citizen to further update his beliefs about race and skill. This component of the model draws from research on information processing. Integrating these insights into the model described above allows us to identify conditions that facilitate or inhibit prejudice persistence.

One existing insight is that prejudice reduction requires "inhibition of the automatically activated stereotype and activation of the newer personal belief structure. In other words, prejudice is the result of an automatic process but can be controlled under certain conditions" (Devine 1989, 5). Accordingly, the post-evaluative process in our model (see Figure 1b) begins with an environmental trigger. Here, the trigger is evidence that the citizen favored the wrong candidate. Absent any such trigger, no post-evaluation processing occurs.

Specifically, after the Citizen makes an evaluation, Nature (that is, factors and actors outside of the model) provides feedback, $E_i \in \{0, 1\}$. With probability $e \in (0, 1)$, this feedback ($E_i = 1$) reveals the utility that the Citizen earned from his most recent evaluation, V_i. With probability $1 - e$, nothing is revealed ($E_i = 0$). High e-values represent citizens who can observe the consequences of their evaluations. Low e-values represent circumstances in which citizens have no such ability—such as when a voter has difficulty understanding a president's influence on outcomes that matter to him.

A second insight that we leverage is that "triggering conditions are the failure of a prediction and the occurrence of some unusual event" (Holland et al. 1986, 80). Accordingly, when $E = 0$, there is no such triggering stimulus and the Citizen's initial beliefs about race and skill remain intact when the period ends. The same outcome occurs if the Citizen learns that his utility is at least as high as he expected. The period continues only if the Citizen can observe that the candidate he favored was not best for him. In other words, the required trigger for the Citizen to rethink his beliefs about the relationship between a candidate's race and his ability to achieve the Citizen's goals is exposure to a stimulus that produces a realization such as "I voted for McCain because I thought that blacks can't make the government work for people like me. Now I see from Obama that I was wrong."

Following Holland et al.'s logic, we assume that the Citizen does not anticipate receiving contradictory feedback when rendering his evaluation in a given period. The Citizen's sole focus at that moment is on the expected benefit of favoring a given candidate in that period. So, absent an environmental trigger suggesting a mistake, the Citizen's feelings about his evaluation in period i are based on the inference he drew from his initial belief about race and skill and the updating process triggered by new information M_i.

When an environmental trigger reveals lower than expected utility, the Citizen may devote mental energy to preventing future errors (for example, "Perhaps I would be better off thinking about a candidate's abilities rather than just his race"). We denote this situation as $K_i \in \{0, 1\}$. $K_i = 1$ denotes introspection that can help the Citizen better recognize candidates' skills, while $K_i = 0$ denotes no such thinking.

[3] Without a loss of generality, we assume that the Citizen favors the black candidate if both candidates offer equal expected utility. If white candidates win ties, prejudice is not less likely.

$K > 0$ is the effort that such introspection requires. Low k-values represent cases in which introspection occurs automatically or subconsciously. High k-values represent cases in which belief changes require more effort. Another way to think of k is as the cost of introspection. Increasing costs in this context refer to the opportunity costs of seeking new information, the mental or emotional energy needed to reconsider one's beliefs, and the potential loss of support from similarly minded friends or family members.

When introspection occurs ($K_i = 1$), the Citizen learns—with probability $z \in [0, 1]$—how to observe true skill levels in future evaluations (he knows S_i for the next N periods). This representation follows Devine's description of an inhibitory connection that extinguishes the Citizen's initial racial belief and replaces it with a more accurate representation. With probability $1 - z$, introspection fails and leaves the Citizen's initial beliefs intact. High z-values represent people whose circumstances support belief change (for example, a person whose closest friends and co-workers are openly supportive of racial equality). Low z-values reflect Kandel, Schwartz and Jessell's contention that information processing can be characterized by severe psychological constraints—even for very motivated people (1995, 651–66). These constraints can also be contextual, as occurs when a person's friends and co-workers reward prejudicial demonstrations (McDermott 2004).

An implication of these assumptions is that the Citizen's expected utility from introspection is $[z(N[s + 0.5(1 - s)])] + [(1 - z)Nx]$. Since this equation plays an important role in the analysis, we briefly describe its main components.

The component of the equation that begins with z is the value to the Citizen of successful introspection—of basing his next N evaluations on true knowledge of candidate skills rather than possibly faulty racial beliefs. In each period, the *ex ante* expected value of such wisdom is $s + 0.5(1 - s)$. Small values of this component represent cases in which the Citizen experiences little or no benefit from updating his racial beliefs. Large values represent cases in which such learning produces substantial benefits.

If introspection fails (the component of the equation that begins with $1 - z$), then the Citizen expects to evaluate candidates as he did before. For now, we denote as x the expected utility of this outcome in a given period. High x-values represent circumstances in which the Citizen expects few negative consequences from continuing his current racial views. Low x-values represent cases in which he imagines that continuing his prejudice will have severe consequences (for example, unwanted policies, not living in accordance with a desired moral or ethical code, realizing that a mistaken belief about black intelligence may cause him problems in other domains—his grandchildren will see him as a racist, etc.). In the Conclusion, we solve for x's actual value (as it depends on how the Citizen initially evaluates candidates). We then integrate x's true value into this equation to explain when introspection will occur.

This representation of prejudice change is similar to Kurzban, Tooby and Cosmides (2001). In both cases, the cognitive status of race is viewed as potentially flexible and as a product of social objectives. In their study and ours, an individual's abilities to achieve objectives are affected by whom they choose to support. A key difference between our work and theirs is that their conclusion is a useful *existence claim*. They conclude that race can be erased and present one experimental context that produces this outcome. We seek a more dynamic understanding that can be applied to a broader set of evaluative contexts.

Before turning to our findings, a final note about the model is in order. The model allows counter-stereotypical information to cause an individual's brain to commence an introspection sequence. It allows this information to make prejudiced people feel bad

(that is, experience lower utility), and allows such feelings to lead people to consider attempting to reduce their prejudice as a means of reducing future pain. *In many respects, this is an ideal situation for reducing evaluative prejudice*. But some people's lives are so disconnected from politics, or their views about race are so intertwined with other attitudes, that they would not connect any information about candidates or politics to their racial views or feel bad once any connection was made, and so on. Why model introspection as we have?

Our answer is that this design clarifies the applicability and relevance of various contact hypotheses to candidate evaluation. *Our main finding is that prejudice change, even under the model's ideal circumstances, is far from easy*. We identify numerous belief-context combinations in which prejudice reduction is unlikely or impossible. Of course, prejudice reduction would be no more likely in less ideal circumstances. Therefore, the model helps us establish that if various forms of contact are ever to reduce evaluative prejudice, more conditions must be satisfied than many studies currently cover.

CONCLUSIONS AND IMPLICATIONS

We now derive conclusions about prejudice in candidate evaluations—specifically, when will the Citizen continue to evaluate black candidates unfavorably. The proofs offered below document that these conclusions are the unique logical consequence of the assumptions offered above. To identify key findings efficiently, we characterize the Citizen's decisions in two cases. In the first case, the Citizen knows s (the probability that the black candidate better achieves the Citizen's goals) and r (the probability that the messages he receives are accurate). In the second case, which is more complex conceptually, the Citizen has a false prior belief about s. Together, these cases clarify how and why racial prejudice persists in candidate evaluations—even when large amounts of information and counter-stereotypical feedback are available.

Prejudice with Correct Beliefs about Race and Skill

In each period, the Citizen favors the candidate who offers the highest expected utility. But the Citizen may be uncertain about his information's accuracy (R_i) and the black candidate's relative skill level (S_i). So his initial evaluation is based on his beliefs about these factors (r and s) and the content of the period's message, M_i. Proposition 1 is a preliminary result that establishes necessary and sufficient conditions for the Citizen to favor the black candidate initially.

PROPOSITION 1: The Citizen initially favors the black candidate when "$M_i = 1$ & $s \geq 1 - r$" or "$M_i = 0$ & $s \geq r$."

PROOF: When the Citizen receives $M_i = 1$, he believes that this message came to him in one of two ways. With probability rs, the message is a true statement of $S_i = 1$. With probability $(1 - r)(1 - s)$, the message falsely portrays the less-skilled candidate as more skilled. Since the Citizen earns a utility of 1 for favoring a more-skilled black candidate and a utility of 0 for favoring a less-skilled black candidate, the expected utility of $V_i = 1$ given $M_i = 1$, is $rs/[rs + (1 - r)(1 - s)]$. Since the utility of favoring the white candidate ($V_i = 0$) is 0.5, the Citizen favors the black candidate when $rs/[rs + (1 - r)(1 - s)] \geq 0.5$, which is true $\Leftrightarrow$ $s \geq 1 - r$.

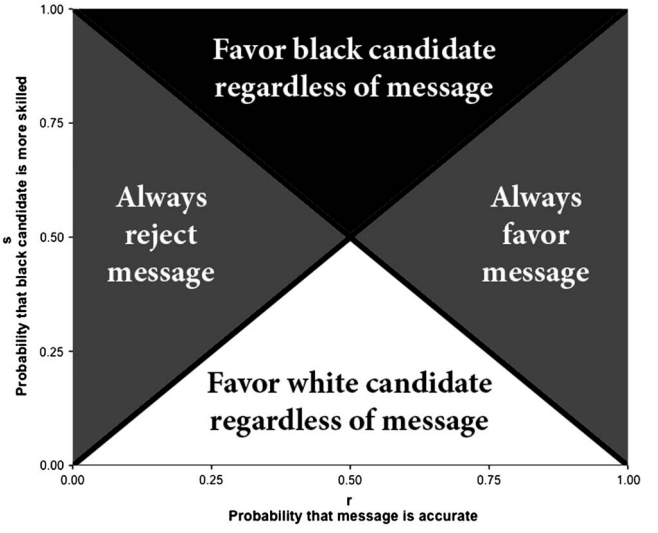


Fig. 2. If the Citizen knows r and s, when will he favor the black candidate?
Note: in the black area, the Citizen initially favors the black candidate. In the white area, the Citizen initially favors the white candidate. In the striped area, the message determines the Citizen's initial evaluation.

By similar logic, when $M_i = 0$, the Citizen favors the black candidate when $[s(1-r)]/[s(1-r)+r(1-s)] \geq 0.5$, which is true $\Leftrightarrow s \geq r$. *QED*.

Figure 2 depicts Proposition 1's implications. When the Citizen believes his information to be sufficiently accurate (r close to 1), his evaluation puts more weight on it. When r is close to 0 (M_i likely false), the Citizen acts against the advice. If the information is neither reliably true nor reliably false (as r approaches 0.5), the Citizen's evaluation depends more strongly on his prior belief (s).

Proposition 2 is a preliminary result that describes when introspection occurs. It states a necessary and sufficient condition for the Citizen to rethink his racial beliefs after receiving counter-stereotypical feedback ($E_i = 1$ and $V_i \neq S_i$).

PROPOSITION 2: The Citizen attempts to learn about skill iff $zN(0.5(1+s)-x) \geq k$.

PROOF: The expected utility of introspection ($K_i = 1$) is $[z(N[s+0.5(1-s)])]+[(1-z)Nx]-k$. The expected utility of $K_i = 0$ is Nx. Hence, the Citizen seeks introspection when $zN(0.5(1+s)-x) \geq k$. *QED*.

In short, prejudice change requires the Citizen to perceive positive net benefits from making an effort to learn more about race and skill. The role of N in this equation is worth noting. When confronted with triggering evidence of a mistaken evaluation, the Citizen may be reminded of his vulnerability to similar mistakes in the future. N represents an important aspect of the Citizen's beliefs about this vulnerability. Higher N-values are equivalent to the Citizen anticipating an increasing number of circumstances in which he can repeat his mistake and potentially benefit from introspection.

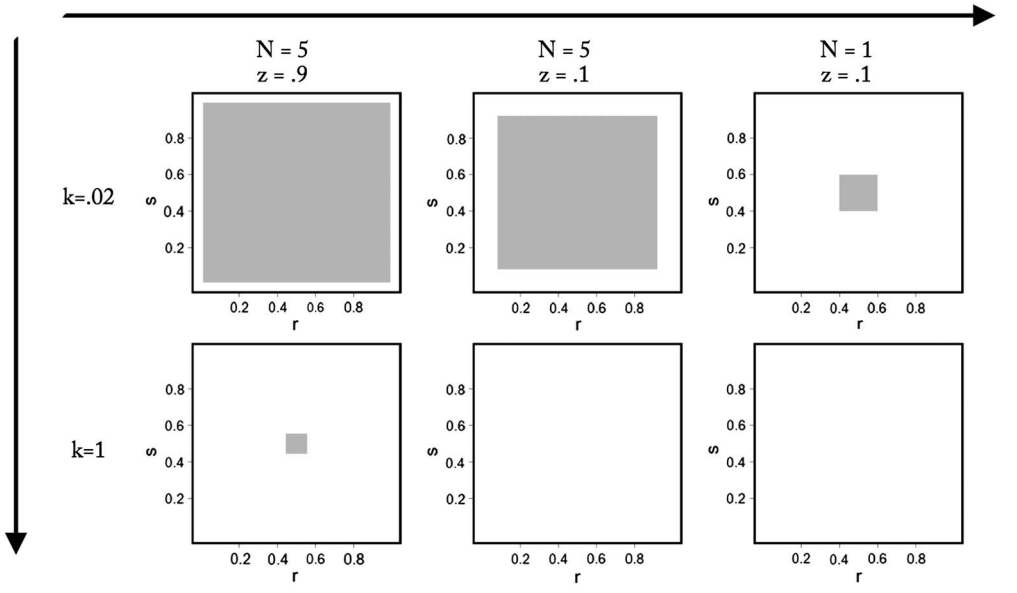


Fig. 3. If the Citizen knows r and s, when will he attempt introspection?
Note: the gray areas represent circumstances in which prejudice change is possible. Increasing cost (k), decreasing the number of periods (N) or decreasing introspection success (z) makes prejudice change less likely.

Proposition 3 builds from Propositions 1 and 2, and is this section's main result. It states, for any situation that the model can describe, necessary conditions for prejudice change (a.k.a., necessary and sufficient conditions for introspection) when the Citizen knows r and has correct beliefs about s. The proof is in the appendix.

PROPOSITION 3: In any given period, prejudice change is possible if and only if $E_i = 1$, $S_i \neq V_i$ and one of the following four combinations of beliefs and contextual factors is satisfied:

- $s \geq max(r, 1-r)$ and $k \leq 0.5(1-s)Nz$
- $s < min(r, 1-r)$ and $k \leq 0.5sNz$
- $r > s \geq 1-r$ and $k \leq 0.5(1-r)Nz$
- $1-r > s \geq r$ and $k \leq 0.5rNz$

Figure 3 depicts Proposition 3's main implication. The gray area in each of the figure's six boxes represents the conditions under which the Citizen will pursue introspection. The white area represents cases in which the Citizen will do no such thing. Moving from left to right in the figure corresponds to z or N decreasing, either of which reduces the expected benefit of introspection. Moving from top to bottom corresponds to higher values of k, which represents increasing introspection costs.

Hence, the likelihood that negative prejudice persists (that is, introspection is not attempted) is decreasing in the probability of success (z) and the number of occasions in which his prejudice might harm him in the future (N). Moreover, if the Citizen believes that his contacts are relatively accurate and that mistakes (for example, $E_i = 1$ when

$S_i = 1$, $V_i = 0$) are unlikely to be repeated (e low or N low or "s high and r not near 0.5"), then he is less likely to see introspection as worth pursuing. To this point, the results tell the story of how prejudice persists when the Citizen has correct prior beliefs s.

Prejudice When the Citizen Underestimates Black Candidates

We now use Propositions 1–3 to tell a different—and, in many respects, more realistic—story about racial prejudice in candidate evaluations. Above, the Citizen based decisions on accurate prior beliefs about race. Yet pernicious racial stereotypes are often inaccurate.

In this section, the Citizen begins with *a false initial belief,* $f < s$, about black candidates' skill levels. In other words, the Citizen initially and systematically underestimates black skill levels. Everything else in the model stays the same as before. Since this analysis reinterprets existing variables, rather than makes new variables, we can use the logic of Propositions 1–3 to characterize prejudice persistence when the Citizen underestimates blacks.

Proposition 3 implies that a false initial belief about black candidates is easiest to sustain when the Citizen regards the new information he receives as minimally reliable ($r = 0.5$) and he is either never triggered to recognize the negative effect that his prejudice has on his utility ($e = 0$) or is never in a situation in which he believes that introspection would be beneficial. We now reinterpret Proposition 3 with f substituted for s and 0.5 substituted for r. We state this result as Proposition 4. The proof follows directly from the logic of Propositions 1–3.

PROPOSITION 4: If $f < 0.5$ and $r = 0.5$, then the Citizen does not initially evaluate black candidates favorably and attempts to learn about skill if and only if $k \leq 0.5fNz$. If $e = 0$ or $k \geq 0.5fNz$, then the Citizen can sustain his prejudice indefinitely.

Here, the only evaluation strategy that the Citizen can rationalize is to always favor the white candidate, regardless of what contacts tell him. In each period, and over the course of N periods, the Citizen's utility of 0.5 per period from favoring whites is always higher than the utility he expects to receive from ever favoring a black candidate in any period.

If the Citizen never receives feedback about his evaluations (for example, $e = 0$), then he can sustain this prejudice indefinitely.[4] Alternatively, if the Citizen does receive feedback, if his anti-black bias is sufficiently severe (f approaching 0) and if introspection requires much effort, the introspection will not be pursued (f nearing zero makes $k \leq 0.5fNz$ less likely.) In this situation, false beliefs about race trump true information about skill in the Citizen's evaluations.

What allows prejudice to persist in this *minimally informative* case? The answer is that *the citizen is repeatedly unable to recognize, or unwilling to act upon, the negative personal impact of his anti-black prejudice*. Since the Citizen incorrectly infers that introspection has little value, new information that could lead him to better understand the black candidate's skill level never challenges his initial belief in black inferiority.

Figure 4 depicts a similar dynamic. The top left image (from Figure 2) shows the Citizen's initial evaluation when the Citizen knows s. The top right image shows when introspection occurs under Figure 3's most favorable conditions for that outcome.

[4] Bullock (2009) offers a complementary explanation of how beliefs can fail to converge with reality after repeated exposure to new information.

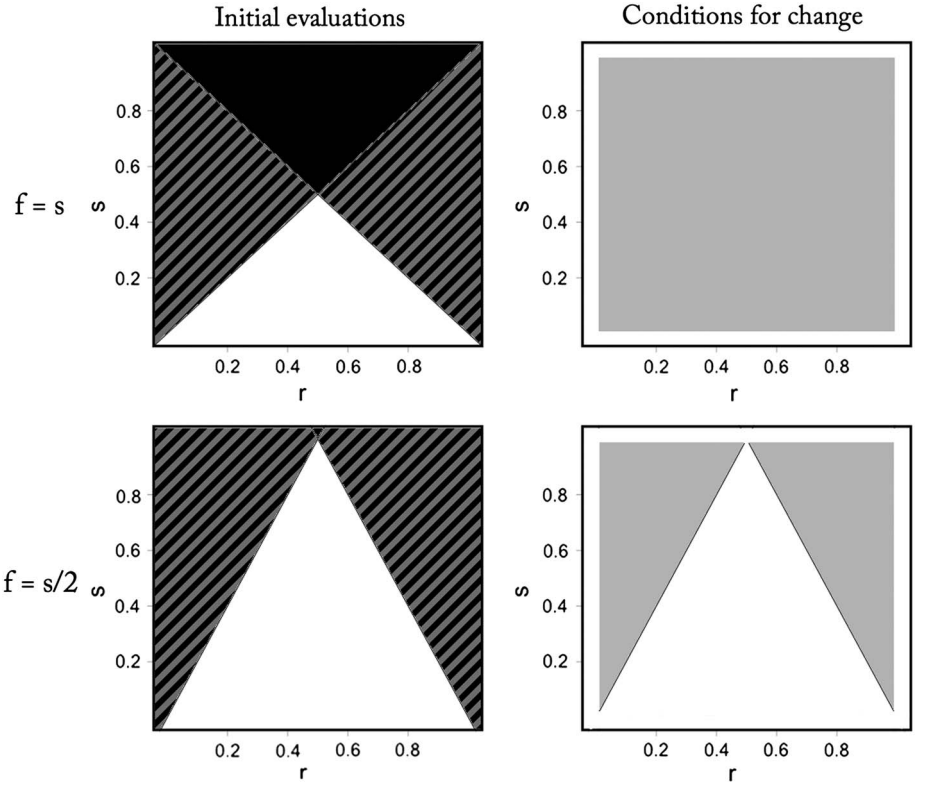


Fig. 4. Underestimating black skills increases prejudice and decreases introspection
Note: the false belief $f < s$ reduces initial support for the black candidate and inhibits prejudice change. The left column shows this effect on the Citizen's initial evaluations. The right column shows this effect on introspection when $k = 0.02$, $N = 5$ and $z = 0.9$.

Moving south in Figure 4 shows how the Citizen's false initial beliefs affect both outcomes. Here, underestimation causes a rapid disappearance of the black area and a rapid expansion of the white area that represents initial evaluations. Underestimating black skill levels by 50 percent causes most of the black area to disappear. Hence black candidates are less likely to be favored.

Underestimation has a similar effect on introspection. For values of k, N and Z that facilitate prejudice change in Figure 3, the figure shows how prior beliefs about race can eliminate almost all introspection. Furthermore, as f goes to zero (that is, the citizen "knows" that blacks are inferior), his rationale for ever favoring blacks or rethinking his prejudice disappears. This situation is consistent with Hochschild's (2001) finding that despite ostensibly having access to the same historical information about blacks, many citizens are able to sustain mistaken (and politically consequential) beliefs about blacks.

In sum, prejudice is reduced only if the Citizen is triggered to realize that his prejudice will lead him to make costly errors in the future. Such a citizen must also believe that changing his ways is worth it. Consider, by contrast, a Citizen who believes that the highly skilled black candidate he just observed is a "one-time thing" (f low when $E_i = 1$ or N low regardless of e). If this Citizen believes that this event will not occur again and he can continue his prejudice without suffering negative consequences, or if the Citizen believes

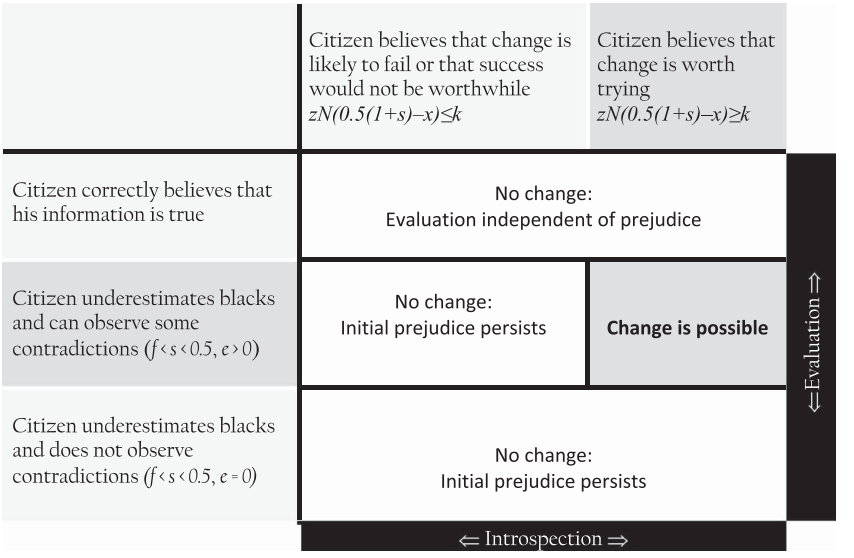


Fig. 5. Focal implications for reducing evaluative prejudice

that he is incapable of change (low z) or that introspection is not worthwhile (low k or f extreme when r is near 0.5), then he can maintain his initial beliefs. The "one-time" observation will be ignored or mentally stored as an "exception" or "subtype," and the Citizen will continue evaluating black candidates as he did before.[5]

Figure 5 summarizes the model's implications for prejudice change. The top row represents the set of conditions in which the Citizen knows the candidates' true abilities and makes color-blind decisions. Continued exposure to new information and counter-stereotypical feedback does not change prejudice's previously non-existent role in subsequent evaluations.

The bottom row represents another set of conditions in which the Citizen has no reason to question his beliefs. Here, triggering information does not emerge or introspection is not pursued due to high costs or beliefs that it is not worthwhile. So, if he begins with prejudice, it will persist—even if a series of contacts offers contradictory evidence.

The middle row represents the conditions under which prejudice change can occur. Here, a Citizen may start with prejudice, but because he receives counter-stereotypical feedback, he can realize that his prejudice will reduce his future utility. The question then becomes whether the Citizen pursues introspection. Only the middle row's right side represents the conditions for introspection to occur. Here, the Citizen's counter-stereotypical observation leads him to realize that introspection can help him increase his future utility. In other words, if $k = 0$ and $z = 1$, then "mere exposure" to a counter-stereotypical stimulus ($E_i = 1$ when $V_i = 0$ and $S_i = 1$) would be sufficient to reduce evaluative prejudice (Zajonc 1968). However, as the situation diverges from this ideal, mere exposure is no longer sufficient to produce this effect.

[5] "Subtyping occurs when perceivers respond to members of a target group… by seeing them as exceptions to the rule and placing them in a separate subcategory" (Richards and Hewstone 2001, 51). A subtyping Citizen maintains his prejudice by categorizing a counter-stereotypical candidate as "not really black."

Now consider Figure 5 as a whole and think about how unlikely it is that some people will find themselves in the small part of the table where new information reduces prejudice. This view suggests that the conditions required for new information to reduce evaluative prejudice will not be easily satisfied for a number of citizens. Hence, our work suggests a different way to understand how new information changes the role of prejudice in candidate evaluations. We find that conditional relationships between the quality of a person's information and their motivation to process such information (which is increasing in the N and the difference between s and f) are essential parts of the process.

For example, if citizens observe that city government provides critical services effectively under a black mayor, this can be equivalent to receiving feedback of the form $E_i = 1$ when $S_i = 1$. Such feedback gives citizens a trigger for basing subsequent evaluations more on skill and less on race. The question remains "When will citizens pursue that opportunity?" The model clarifies these conditions. If the observations represent outcomes that will continue to be of high value to the citizen (for example, a person who is very dependent on critical services; a.k.a. N high), and if the citizen can tie these observations to a more accurate understanding of the relationship between race and skill (low k, high z), then the conditions for reduced evaluative prejudice are present. By contrast, when a citizen's context fails to provide such information ($e = 0$) or if their context does not reward rethinking their evaluations (for example, a person who does not need city services), then prejudiced citizens are likely to continue using race as a proxy for skill in subsequent evaluations.

Figure 5's conditions also explain differences in previous experimental claims. For example, in Kurzban, Tooby and Cosmides' (2001) experiments, subjects have access to reliable information about race's irrelevance to their political objectives. The researchers created a circumstance in which counter-stereotypical evidence is easy to observe and incentives to update beliefs are strong. Indeed, many empirical claims of the form "contact reduces prejudice" are based (explicitly or implicitly) on the assumption that counter-stereotypical feedback is easily observed ($e = 1$), that introspection is always pursued ($zN(0.5(1 + s) - x) \geq k$) and that processing of such information is always effective ($z = 1$). One could argue that Sinclair and Kunda's subjects, by contrast, are never confronted with a situation that helps them understand the harm that follows from their racially prejudiced responses. They are given no feedback or motive to reconsider their opinion of the black authority figure. In such cases, the trigger required for belief change does not emerge. The conditions for introspection are not met, and contact does not reduce prejudice.

DISCUSSION

In sum, the following conditions are necessary for prejudice to decrease in subsequent evaluations. First, a person's brain must associate their prejudice with adverse effects ($E_i = 1$ when $S_i \neq V_i$). Second, change requires *sufficient motivation* (satisfaction of Proposition 2's conditions). In other words, it requires the belief that continuing to act on the prejudice will cause additional harm in the future (high N, low x), that an attempt to change a prejudice will improve consequences about which he cares (high z) and that the net benefit of such an attempt is positive (k low relative to specific combinations of s (or f), r, N and z).

Stating matters in this way provides a unique complement to Allport's claim that contact reduces prejudice only in the presence of equal status among groups, common

goals, acquaintance potential and the support of authority. Like Pettigrew, we conclude that Allport's conditions are not necessary to reduce prejudice. But our model allows us to go further. We can now relate Allport's conditions to logically defensible requirements for new information, such as that supplied by intergroup contact, to reduce evaluative prejudice. Specifically, when equal status and common goals correspond to increasing the reliability of a contact's information, they increase r. When acquaintance potential corresponds to more imagined interactions with black candidates, it increases N. When "support of authority" makes counter-stereotypical feedback more likely and empowers introspection to change beliefs, it increases z. To the extent that these analogies are accurate, Propositions 3 and 4 clarify when each of Allport's conditions reduce prejudice. In cases where these associations are not present, Allport's conditions are not necessary for contact to reduce prejudice. So if having an African-American president leads people to realize that a previous belief about black competence is not only mistaken, but also personally costly (that is, a citizen realizes that some of the decisions he makes cause outcomes that are bad for him), and if the same people's circumstances provide incentives to change their views and tangible support for doing so, then the presence of a black incumbent can reduce prejudice in subsequent evaluations. Without this combination of circumstances, prejudice will remain.

With that outcome in mind, a key assumption in the model pertains to the Citizen's beliefs about his information. When the Citizen's information is sufficiently reliable, he can simply follow its content and always favor high-skilled candidates. What allows the Citizen's prejudice to persist in the model is low-quality information (r near 0.5), isolation from counter-stereotypical feedback (e low) or his belief that introspection is not beneficial (Proposition 3's conditions are not satisfied).

We believe that this circumstance helps explain why racial prejudice persists in many evaluative contexts. Consider, for example, that the increasingly partisan televised media environment (for example, the rise of Fox News as a conservative-leaning cable news outlet and the evolution of MSNBC as a liberal-leaning counterpart) and the proliferation of narrowly targeted political websites that allow people to attend only to information that is offered by people who share their beliefs and values (Darmofal 2005; Iyengar and Hahn 2009). People who at one time might have been exposed to counter-stereotypical information about a black candidate by turning on the television and seeing that the only viewing option was the nightly news now have many entertainment options that avoid such depictions altogether (Prior 2007). People have more discretion over what racial information they do (and do not) observe than in the pre-cable era. At the same time, continuing segregation in neighborhoods and workplaces (see, for example, Mutz 2002) can also prevent people from being exposed to other racial views even when they are not in front of a screen. For such people, context can reinforce prejudice. As Swain (2002, 35) describes:

> There is real danger, I believe, when like-minded people get together and discuss only among themselves issues about which they care deeply that cannot be discussed in open forums. Such discussions are certain to lead to one sided and distorted conversations that in the context of race will inevitably enhance racial polarization and political extremism.

In such situations, citizens are less likely to see counter-stereotypical evidence or have reason to believe that introspection about such matters will increase their future utility.

We continue by discussing pro-black prejudice. The model's logic can also clarify the effect of a black incumbent on citizens who hold pro-black stereotypes. Consider, for example, citizens who find a special source of pride in the idea that a person with

substantial African heritage leads the world's most powerful nation (Hunt and Wilson 2009). There are households in which the racial aspect of Barack Obama's presidency is used as a means to encourage young people that great futures are possible. Using the logic derived above, people who begin with a pro-black stereotype may not rigorously process new information about a black candidate that counters their pro-black prejudice. Unless they are confronted with a situation in which it seems worthwhile to stop substituting these racial beliefs for knowledge about skill, we should not expect their evaluative prejudice to change. This type of effect is evident in research demonstrating that racial liberals were more supportive of Obama in his 2008 election bid than they were of previous Democratic candidates for president, and similarly more supportive in terms of presidential approval following his election, even in comparison to like-minded congressional Democrats (Tesler and Sears 2010).

Returning to the topic of negative prejudice, we note that prejudice continues to affect candidate evaluations (Piston 2010). Negatively prejudiced persons may be exposed to positive information about black candidates that can challenge their stereotypes. Our work implies that how citizens react at such moments is not only a function of their prior racial beliefs, but also of how their context affects the costs and benefits of rethinking such beliefs. At the time of his 2008 election, numerous studies documented associations between implicit and explicit forms of racial prejudice and vote intention for Barack Obama (Greenwald et al. 2009; Knowles, Lowery and Schaumberg 2010; Payne et al. 2010). Thereafter, other studies associated racial prejudice with reactions to numerous policies associated with President Obama (Dovidio et al. 2011; Kaiser et al. 2009; Knowles, Lowery and Schaumberg 2010; Tesler and Sears 2010).

So, to achieve the future that Thernstrom described, in which "the color of your skin" does not affect how people evaluate a political candidate, will require much more than one (or even a series of) black presidents. It also requires that people have the means of experiencing the harm that their prejudice causes as well as the ability and motivation to process relevant information in prejudice-reducing ways. As a result, we contend that prejudice change is possible, but in a narrower set of circumstances than many previous studies have indicated.

REFERENCES

Allport, Gordon W. 1954. *The Nature of Prejudice*. Reading, MA: Addison-Wesley.

Bullock, John. 2009. 'Partisan Bias and the Bayesian Ideal in the Study of Public Opinion'. *The Journal of Politics* 71:1109–24.

Darmofal, David. 2005. 'Elite Cues and Citizen Disagreement with Expert Opinion'. *Political Research Quarterly* 58:381–95.

Devine, Patricia G. 1989. 'Stereotypes and Prejudice: Their Automatic and Controlled Components'. *Journal of Personality and Social Psychology* 56:5–18.

Dienstbier, Richard A. 1970. 'Positive and Negative Prejudice: Interactions of Prejudice with Race and Social Desirability'. *Journal of Personality* 38:198–215.

Dovidio, John F., Samuel L. Gaertner, Tamar Saguy, and Eric Hehman. 2011. 'Obama's Potential to Transform the Racial Attitudes of White Americans'. In Gregory S. Parks and Matthew W. Hughey (eds), *The Obamas and a Post-Racial America*. New York: Oxford University Press, 245–62.

Eagly, Alice H., and Amanda B. Diekman. 2005. 'What is the Problem? Prejudice as an Attitude-in-Context'. In John F. Dovidio, Peter Glick, and Laurie A. Rudman (eds), *On The Nature of Prejudice, Fifty Years After Allport*, 19–35. Malden, MA: Blackwell.

Fiske, Susan T. 1998. 'Stereotyping, Prejudice, and Discrimination'. In Daniel T. Gilbert, Susan T. Fiske, and Gardner Lindzey (eds), *The Handbook of Social Psychology*, 4th ed., 357–411. Boston, MA: McGraw-Hill.

Gaertner, Samuel L., and John F. Dovidio. 1986. 'The Aversive Form of Racism'. In John F. Dovidio and Samuel L. Gaertner (eds), *Prejudice, Discrimination, and Racism*, 61–89. San Diego, CA: Academic Press.

Greenwald, Anthony G., Colin Tucker Smith, N. Sriram, Yoav Bar Anan, and Brian A. Nosek. 2009. 'Implicit Race Attitudes Predicted Vote in the 2008 US Presidential Election'. *Analyses of Social Issues and Public Policy* 9(1):241–53.

Hajnal, Zoltan L. 2001. 'White Residents, Black Incumbents, and a Declining Racial Divide'. *American Political Science Review* 95(3):603–17.

——. 2007. *Changing Attitudes toward Black Political Leadership*. New York: Cambridge University Press.

Hochschild, Jennifer. 2001. 'Where You Should Stand Depends on What You See: Connections Among Values, Perceptions of Fact, and Political Prescriptions'. In James H. Kuklinski (ed.), *Citizens and Politics: Perspectives from Political Psychology*. New York: Cambridge University Press.

Holland, John H., Keith J. Holyoak, Richard E. Nisbett, and Paul R. Thagard. 1986. *Induction: Processes of Inference, Learning, and Discovery*. Cambridge, MA: MIT Press.

Hunt, Matthew O., and David C. Wilson. 2009. 'Race/Ethnicity, Perceived Discrimination, and Beliefs about the Meaning of an Obama Presidency'. *Du Bois Review* 6:1–19.

Hutchings, Vincent L. 2009. 'Change or More of the Same: Evaluating Racial Policy Preferences in the Obama Era'. *Public Opinion Quarterly* 73:917–42.

Hutchings, Vincent L., and Nicholas A. Valentino. 2004. 'The Centrality of Race in American Politics'. *Annual Review of Political Science* 7:383–408.

Iyengar, Shanto, and Kyu H. Hahn. 2009. 'Red Media, Blue Media: Evidence of Ideological Selectivity in Media Use'. *Journal of Communication* 59:19–39.

Kaiser, Cheryl R., Benjamin J. Drury, Kerry E. Spalding, Sapna Cheryan, and Laurie T. O'Brien. 2009. 'The Ironic Consequences of Obama's Election: Decreased Support for Social Justice'. *Journal of Experimental Social Psychology* 45:556–9.

Kandel, Eric R., James H. Schwartz, and Thomas M. Jessell. 1995. *Essentials of Neural Science and Behavior*. Norwalk, CT: Appleton and Lange.

Kawakami, Kerry, Elizabeth Dunn, Francine Karmali, and John F. Dovidio. 2009. 'Mispredicting Affective and Behavioral Responses to Racism'. *Science* 323:276–8.

Kinder, Donald R. 1998. 'Opinion and Action in the Realm of Politics'. In Daniel Gilbert, Susan Fiske, and Gardner Linzey (eds), *Handbook of Social Psychology*, 778–867. New York: McGraw-Hill.

Knowles, Eric D., Brian S. Lowery, and Rebecca L. Schaumberg. 2010. 'Racial Prejudice Predicts Opposition to Obama and his Health Care Reform Plan'. *Journal of Experimental Social Psychology* 46(2):420–3.

Kuklinski, James H., and Norman L. Hurley. 1994. 'On Hearing and Interpreting Political Messages: A Cautionary Tale of Citizen Cue-Taking'. *Journal of Politics* 56:729–51.

Kurzban, Robert, John Tooby, and Leda Cosmides. 2001. 'Can Race Be Erased? Coalitional Computation and Social Categorization'. *Proceedings of the National Academy of Science* 98:15387–92.

McDermott, Rose. 2004. 'The Feeling of Rationality: The Meaning of Neuroscientific Advances for Political Science'. *Perspectives on Politics* 2:691–706.

Mutz, Diana C. 2002. 'Cross-Cutting Social Networks: Testing Democratic Theory in Practice'. *American Political Science Review* 96:111–26.

Paluck, Elizabeth Levy, and Donald P. Green. 2009. 'Prejudice Reduction: What Works? A Review and Assessment of Research and Practice'. *Annual Review of Psychology* 60:339–67.

Payne, B. Keith, Jon A. Krosnick, Josh Pasek, Yphtach Lelkes, Omair Akhtar, and Trevor Tompson. 2010. 'Implicit and Explicit Prejudice in the 2008 American Presidential Election'. *Journal of Experimental Social Psychology* 46(2):367–74.

Pettigrew, Thomas F., and Linda R. Tropp. 2006. 'A Meta-Analytic Test of Intergroup Contact Theory'. *Journal of Personality and Social Psychology* 90:751–83.
Piston, Spencer. 2010. 'How Explicit Racial Prejudice Hurt Obama in the 2008 Election'. *Political Behavior* 32:431–51.
Prior, Markus. 2007. *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections*. New York: Cambridge University Press.
Richards, Zoëe, and Miles Hewstone. 2001. 'Subtyping and Subgrouping: Processes for the Prevention and Promotion of Stereotype Change'. *Personality and Social Psychology Review* 5:52–73.
Schuman, Howard, and John Harding. 1964. 'Prejudice and the Norm of Rationality'. *Sociometry* 17:353–71.
Sinclair, Lisa, and Ziva Kunda. 1999. 'Reactions to a Black Professional: Motivated Inhibition and Activation of Conlficting Stereotypes'. *Journal of Personality and Social Psychology* 77:885–904.
Sniderman, Paul M., and Thomas Piazza. 2002. *Black Pride and Black Prejudice*. Princeton, NJ: Princeton University Press.
Sniderman, Paul M., and Edward H. Stiglitz. 2008. 'Race and the Moral Character of the Modern American Experience'. *The Forum* 6:1–15.
Swain, Carol M. 2002. *The New White Nationalism in America: Its Challenge to Integration*. New York: Cambridge University Press.
Tesler, Michael, and David O. Sears. 2010. *Obama's Race: The 2008 Election and the Dream of a Post-Racial America*. Chicago, IL: University of Chicago Press.
Thernstrom, Abigail. 2008. 'Great Black Hope: The Reality of President-Elect Obama. An NRO Symposium'. *National Review Online*, 6 November. Available at http://www.thernstrom.com/pdf/11-6-08%20NRO%20Symposium.pdf, accessed 19 June 2014.
Zajonc, Robert B. 1968. 'Attitudinal Effects of Mere Exposure'. *Journal of Personality and Social Psychology* 9:1–27.

APPENDIX

Proof of Proposition 3

When $s \geq max(r, 1-r)$, a situation that holds for high s-values, $V_i = 1$ regardless of M_i. So, $x = s$ and $K_i = 1 \Leftrightarrow k \leq 0.5(1-s)Nz$. Here, introspection becomes more valuable, as does its expected success (z), the number of subsequent evaluations (N) and the probability that always favoring the black candidate is a bad idea ($1-s$).

When $s < min(r, 1-r)$, a situation that holds for low s-values, $V_i = 0$ regardless of M_i. So, $x = 0.5$ and $K_i = 1 \Leftrightarrow k \leq 0.5sNz$. Here, introspection's value is increasing in z, N and the average skill of black candidates (s).

When $r > s \geq 1-r$, a situation that holds for high r-values, $V_i = M_i$. Here, $x = ((sr/[sr + (1-s)(1-r)]) * [sr + (1-s)(1-r)]) + 0.5 * [r(1-s) + s(1-r)]$, which simplifies to $0.5(s+r)$. Hence, $K_i = 1 \Leftrightarrow k \leq 0.5(1-r)Nz$ and introspection's value is increasing in z, N and the probability that always following a contact's endorsement is a bad idea ($1-r$).

The remaining circumstance $1-r > s \geq r$ holds for low r-values. Here, $V_i \neq M_i$. So, $x = (0.5 * [sr + (1-s)(1-r)] + [(s(1-r)/[r(1-s) + s(1-r)]) * [r(1-s) + s(1-r)]]$, which simplifies to $0.5(s + 1 - r)$. Hence, $K_i = 1 \Leftrightarrow k \leq 0.5rNz$ and introspection's value is increasing in z, N and the probability that always acting contrary to a contact's endorsement is a bad idea (r). *QED*.