

## THE STIGMA OF AFFIRMATIVE ACTION: A STEREOTYPING-BASED THEORY AND META-ANALYTIC TEST OF THE CONSEQUENCES FOR PERFORMANCE

LISA M. LESLIE  
New York University

DAVID M. MAYER  
University of Michigan

DAVID A. KRAVITZ  
George Mason University

**Affirmative action plans (AAPs) are designed to facilitate workplace success for members of the groups they target (e.g., women, ethnic minorities), yet may have the ironic effect of stigmatizing AAP targets and, in turn, decreasing their performance outcomes. Prior work has focused on the stigma of incompetence as the primary mechanism that links AAPs to performance; however, the broader social psychological literature suggests that additional mechanisms may also play a role. We use stereotyping theories to develop a more comprehensive model of the pathways through which AAPs limit targets' performance outcomes. Drawing from the stereotype content model, we propose that the negative effect of AAPs on others' evaluations of targets' performance is driven by perceptions of incompetence and low warmth. Drawing from stereotype threat theory, we propose that the negative effect of AAPs on targets' self-evaluated and objective performance is driven by perceptions of low self-competence, negative state affect, and perceived stereotyping by others. Meta-analytic path analyses support our hypotheses. Our theory and findings demonstrate that multiple mechanisms explain the negative consequences of AAPs for targets' performance outcomes, highlight differences in reactions to AAP targets by others versus the self, and provide insight into preventing the unintended negative effects of AAPs.**

Despite improvements in recent decades, women and ethnic minorities continue to face employment discrimination and other barriers to advancement (e.g., Bertrand & Mullainathan, 2004; Blau & Kahn, 2007; Leslie, King, Bradley, & Hebl, 2008). To level the playing field, organizations around the globe have implemented affirmative action plans (AAPs), which are policies designed to improve work outcomes for underrepresented groups by providing them with extra help in the employment process

(Jain, Sloane, & Horwitz, 2003; Yang, D'Souza, Bapat, & Colarelli, 2006). AAPs increase the number of women and ethnic minorities in managerial positions (Holzer & Neumark, 2000; Kalev, Dobbin, & Kelly, 2006; Leonard, 1984), and thus help promote organizational diversity and redress societal injustice.<sup>1</sup>

Nevertheless, AAPs are not without drawbacks. They can stimulate backlash among non-beneficiaries who may feel unfairly disadvantaged by these policies (Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006; Lynch, 1992; Shteynberg, Leslie, Knight, & Mayer, 2011). In addition, AAPs can cause the very employees they are intended to ben-

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<sup>1</sup> For the sake of parsimony, we use the term "ethnicity" to refer to the confluence of race (e.g., Asian, Black, Native American, White) and ethnicity (Hispanic, non-Hispanic) (cf. Leslie, Snyder, & Glomb, 2013; Phinney, 1996).

efit to be stigmatized as incompetent by both others and the self (e.g., Heilman, 1994). Existing theory used to explain the stigma of incompetence has been grounded primarily in discounting and related notions of self-doubt. Specifically, the presence of an AAP raises the possibility that members of the groups the AAP targets were hired or promoted due to their demographics, not their qualifications. Scholars have theorized that others therefore discount the possibility that AAP targets are competent (e.g., Garcia, Erskine, Hawn, & Casmay, 1981; Heilman, Block, & Lucas, 1992) and, in a parallel fashion, that AAPs and the associated possibility that demographics played a role in selection cause AAP targets to doubt their self-competence (e.g., Heilman, Simon, & Repper, 1987; Niemann & Dovidio, 2005). Perceived incompetence is likely to result in poor performance outcomes (e.g., Heilman & Alcott, 2001). To the extent that AAPs and the associated stigma of incompetence limit targets' performance, AAPs may have the opposite of their intended impact.

Understanding the mechanisms that drive the unintended consequences of AAPs is essential for ensuring that AAPs facilitate, rather than constrain, targets' work outcomes. Existing theory grounded in discounting and self-doubt has focused on the stigma of incompetence, yet the broader social psychological literature suggests that additional mechanisms contribute to the effects of AAPs on performance. For example, AAPs increase the ability of target groups to compete for jobs and other workplace resources. Several theories of stereotyping and intergroup relations suggest that a target group's competitiveness threatens others and leads to perceptions of the competing group as cold and unlikable (e.g., Bobo, 2000; Fiske, Cuddy, Glick, & Xu, 2002), which negatively affects others' evaluations of the competing group's performance (Cardy & Dobbins, 1986; Nisbett & Wilson, 1977). Thus, the stigmatization of AAP targets by others may be more complex than prior theory suggests, such that others perceive AAP targets as lacking both competence and warmth, each of which may contribute to the negative effect of AAPs on others' evaluations of targets' performance.

Similarly, in the case of targets' own reactions to AAPs, mechanisms other than the stigma of incompetence may link AAPs to performance. Prior work substantiates that AAPs negatively affect targets' perceived self-competence (e.g., Heilman et al., 1987), and are thus likely to threaten targets' desire to view the self favorably. A number of theories in

the broader literature on stereotyping and stigma suggest that threats to a positive self-image trigger negative emotions, such as stress and anxiety (e.g., Major & O'Brien, 2005; Steele, Spencer, & Aronson, 2002), which limit performance (Kaplan, Bradley, Luchman, & Haynes, 2009; Schmader, Johns, & Forbes, 2008). Thus, AAP targets are likely to experience negative state affect, in addition to low self-competence, both of which may affect their performance negatively.

In summary, prior theory on why AAP targets are stigmatized by others and by the self is grounded primarily in discounting and self-doubt, respectively, and focuses on the stigma of incompetence; however, the broader social psychological literature suggests that additional other-driven (e.g., perceived warmth) and self-driven (e.g., state affect) mechanisms contribute to understanding why AAPs negatively affect targets' performance outcomes. An alternative theoretical framework may therefore be needed to gain a fuller understanding of the stigma of AAPs and the associated consequences for performance. To this end, we draw from stereotyping theories and build a more comprehensive model in which the stigma of incompetence is only one of several mechanisms through which AAPs negatively affect targets' performance outcomes.

In using the stereotyping literature to advance theory regarding the unintended negative effects of AAPs, we rely on two specific theories: the stereotype content model (SCM) and stereotype threat theory (STT). In the literature on stereotyping and social cognition more broadly, self–other discrepancies—or differences in individuals' perceptions of others in a given situation versus their perceptions of the self when placed in the same situation—are well documented (Jones & Nisbett, 1972; Malle & Knobe, 1997; Miller & Ross, 1975; Pronin, Lin, & Ross, 2002). It is therefore not surprising that scholars have developed distinct theories that detail how others react to negatively stereotyped individuals versus how individuals react to negative stereotypes about the self. Specifically, the SCM and STT provide comprehensive accounts of how individuals are stereotyped by others and by the self, respectively, and also detail how negative stereotypes affect a number of outcomes, including performance (Cuddy, Glick, & Beninger, 2011; Fiske et al., 2002; Schmader et al., 2008; Steele et al., 2002). Consistent with the two fundamental stereotype content dimensions identified in the SCM, we theorize that others perceive AAP targets

as lacking competence and warmth, both of which negatively affect others' evaluations of targets' performance. Consistent with key mechanisms identified in STT, we theorize that AAP targets experience low self-competence, negative state affect, and perceived stereotyping by others, each of which negatively affects their self-evaluated and objective performance.

We use path-analytic meta-analyses to test our hypotheses. Prior work has focused primarily on the effects of AAPs on competence and performance. Researchers, however, have also explored the effects of AAPs on other outcomes, including warmth, state affect, and perceived stereotyping (e.g., Brutus & Ryan, 1998; Heilman et al., 1992; Taylor, 1994). We are therefore able to test our theory with meta-analysis. Although our analyses are based on existing studies, we depart from prior work by testing a model in which competence, warmth, affect, and perceived stereotyping each contribute to the effect of AAPs on performance.

Our stereotyping-based theory and meta-analytic test advance knowledge by demonstrating that stereotyping theories provide a more comprehensive account of the unintended negative effects of AAPs. Consistent with prior theory, we propose that AAPs impede targets' performance because targets are perceived as incompetent by both others and the self. At the same time, we build new theory by proposing that additional mechanisms contribute to the effect of AAPs on performance and that there are some differences in others' reactions to AAP targets (e.g., perceived low warmth) versus the self's own reactions to being an AAP target (e.g., negative state affect). A fuller understanding of the pathways through which AAPs impede performance is essential for preventing AAPs from having the opposite of their intended impact. Thus, from a practical standpoint, our research suggests novel strategies for ensuring that AAPs do not have the ironic effect of limiting the workplace outcomes of their intended beneficiaries.

## THEORY DEVELOPMENT

AAPs are policies designed to improve the employment outcomes of members of underrepresented social groups by providing them with extra help in the employment process (cf. Kovach, Kravitz, & Hughes, 2004). AAPs originated with Executive Order 11246, implemented by President Johnson in 1965. Notably, AAPs differ from equal employment opportunity (EEO) policies, which

originated with the Civil Rights Act of 1964. Specifically, EEO policies mandate non-discrimination, but AAPs go further by allowing positive actions aimed at helping target groups (Kovach et al., 2004). Moreover, EEO policies are identity-blind policies that focus on equal treatment regardless of group membership, whereas AAPs are identity-conscious policies that target specific groups (James, Brief, Dietz, & Cohen, 2001; Konrad & Linnehan, 1995).

The positive actions provided by AAPs take different forms that vary in strength (Harrison et al., 2006; Kovach et al., 2004). For example, opportunity enhancement (OE) AAPs—the weakest AAP type—provide extra resources to AAP targets, but do not give demographics any weight in employment decisions (e.g., targeted recruitment). Weak preferential treatment (WPT) AAPs give targets preference in employment decisions if and only if their qualifications are equivalent to those of non-targets. Finally, strong preferential treatment (STP) AAPs give demographics a positive weight in employment decisions, in addition to qualifications. For example, an AAP target may be hired over a more qualified non-target, assuming the target meets the minimum qualifications for the job. Despite this variability, all AAP types share the common goal of providing extra help to members of underrepresented groups to enable them to achieve more favorable outcomes.

Paradoxically, AAPs can stigmatize the very employees they are intended to benefit (e.g., Garcia et al., 1981; Heilman, 1994). Current theory focuses on the stigma of incompetence and is grounded primarily in discounting and self-doubt. Specifically, qualifications are the typical causal factor in employment decisions, which leads to perceptions that job incumbents are competent. AAPs raise the possibility that demographics also influence employment decisions. In the case of stigmatization by others, scholars have drawn from the discounting principle, which states that the perceived importance of a given cause is diminished when plausible alternatives exist (Kelley, 1972) and have theorized that the assumption that demographics influence employment decisions causes others to discount the possibility that AAP targets are competent (e.g., Heilman et al., 1992; Resendez, 2002). In the case of stigmatization by the self, scholars have not drawn explicitly from discounting, but have similarly theorized that AAPs and the associated assumption that demographics influence employment decisions cause AAP targets to doubt

their self-competence (e.g., Brutus & Ryan, 1998; Heilman et al., 1987). Others' perceptions that AAP targets are incompetent are likely to lead others to evaluate targets' performance negatively, and AAP targets' self-perceptions of incompetence are likely to lead to low self-evaluated and objective performance. Consistent with theory, evidence indicates that AAPs negatively affect the perceived competence and performance outcomes of AAP targets (e.g., Evans, 2003; Heilman & Blader, 2001; Heilman et al., 1987; Resendez, 2002).

Existing theory provides a compelling account of why AAP targets are stigmatized as incompetent. At the same time, the stereotyping literature suggests that additional mechanisms may contribute to understanding why AAPs impede targets' performance outcomes. We therefore use theories of stereotyping to build a more comprehensive model of the mechanisms that link AAPs to performance. Notably, distinct stereotyping theories have emerged that detail how others react to negatively stereotyped individuals versus how individuals react to negative stereotypes about the self. Thus, we use different theories to advance understanding of the other-driven (SCM) and self-driven (STT) processes that explain the negative effects on AAPs on targets' performance outcomes.

### **Stereotype Content and Others' Reactions to AAP Targets**

The SCM (Fiske et al., 2002) is a useful framework for building theory regarding why and how others react to AAP targets, given that this theory provides a comprehensive account of the dimensions along which individuals are negatively stereotyped by others. Although any number of more specific stereotypes may exist, a core tenet of the SCM is that the two overarching dimensions of stereotype content are competence and warmth. The basis for the two dimensions of stereotype content stems from individuals' basic need to understand whether others have the capacity and intent to do them harm. Individuals are therefore motivated to evaluate others in terms of their competence (i.e., capacity) and their warmth (i.e., intent) (Cuddy, Fiske, & Glick, 2008; Fiske et al., 2002; Fiske, Cuddy, & Glick, 2007). Consistent with theory, research indicates that competence and warmth are the primary dimensions of person perception and explain more than 80% of individuals' global evaluations of others (Asch, 1946; Wojciszke, Bazinska, & Jaworski, 1998). In addition to

identifying competence and warmth as the primary dimensions of stereotype content, the SCM also specifies the conditions under which individuals form competence- and warmth-based stereotypes about others, as well the consequences of these stereotypes (e.g., Cuddy, Fiske, & Glick, 2007; Cuddy et al., 2011; Fiske et al., 2002). We therefore draw from the SCM and build theory regarding why others are likely to perceive AAP targets as lacking both competence and warmth, as well as why both of these stereotypes cause others to evaluate AAP targets' performance negatively.

According to the SCM, status is the key antecedent of competence-based stereotypes and lack of competition is the key antecedent of warmth-based stereotypes (Cuddy et al., 2008; Fiske et al., 2002). More specifically, the status–competence linkage is explained by just-world beliefs; namely, the basic human motivation to believe that individuals get what they deserve (Cuddy et al., 2008). Individuals assume that members of low status groups deserve their low status because they lack competence, whereas members of high status groups have earned their status through competence and hard work. The connection between lack of competition and warmth is explained by the basic human motivation to enhance self-interest (Cuddy et al., 2008). Individuals seek to maximize their own outcomes and therefore view those with whom they must compete for valuable resources as a source of frustration. Moreover, individuals assume that others' competitive behaviors stem from malice and intent to do harm, and groups who are able to compete for resources are therefore perceived as lacking in warmth. Consistent with theory, evidence indicates that a group's status positively affects the perceived competence of group members and that a group's ability to compete for resources negatively affects the perceived warmth of group members (Caprariello, Cuddy, & Fiske, 2009; Fiske et al., 2002).

AAPs simultaneously signal that AAP targets have low status and increase targets' ability to compete for resources. Drawing from the SCM, we therefore propose that others stigmatize AAP targets as lacking in both competence and warmth. AAPs, by definition, provide extra help to target group members to improve their employment outcomes. The notion that certain groups require extra help is likely to create perceptions that the group has poor outcomes and thus occupies a position of low status (e.g., Maio & Esses, 1998; Steele, 1990). Given that AAPs signal that targets have low status,

and status is the key antecedent of competence, others are likely to perceive members of a given group as less competent when the group is targeted by an AAP than when it is not. AAPs are similarly likely to affect perceived warmth. The goal of the extra help provided by AAPs is to enable target groups to compete for workplace resources (e.g., jobs, promotions). Given that AAPs increase targets' competitiveness, and lack of competition is the key antecedent of warmth, others are likely to perceive members of a given group as less warm when the group is targeted by an AAP than when it is not (e.g., Aquino, Stewart, & Reed, 2005).

Importantly, stereotypes are context dependent (Crocker, Major, & Steele, 1998) and the presence of an AAP in a given setting is therefore likely to affect the perceived competence and warmth of any group it targets in that setting, regardless of whether the group is chronically negatively stereotyped in the broader society. For example, ethnic minorities are generally stereotyped as lower in competence than Whites, yet both groups are seen as incompetent if portrayed as poor and as competent if portrayed as professionals (e.g., Fiske et al., 2002). Thus, AAPs are likely to affect the perceived competence and warmth of any group they target.

The tendency to view AAP targets as lacking in both competence and warmth is consequential, given that stereotypes of incompetence and low warmth negatively affect how others view and treat stereotype targets. Research on the consequences of competence and warmth stereotypes has focused largely on emotions (e.g., contempt) and behaviors (e.g., harassment) (Cuddy et al., 2007). More recently, however, SCM scholars have suggested that competence and warmth judgments also affect workplace evaluations (Cuddy et al., 2011). Specifically, others' evaluations of a target's performance are vulnerable to subjective influences, such that individuals perceive others in stereotype-consistent ways; for example, by seeking out and attending to stereotype-confirming, but not stereotype-disconfirming, information (e.g., Dunning & Sherman, 1997; Feldman, 1981). If others perceive a target as competent, and thus have high performance expectations for that target, they are more attentive to that target's successes than failures, resulting in favorable impressions of performance, whereas the reverse is true if others perceive a target as incompetent. Thus, the perceived competence of a target is likely to be positively related to evaluations of that target's performance.

Perceived warmth is also likely to shape performance evaluations. Due to preferences for consistency, evaluators are subject to a halo effect. Specifically, if a target is positively stereotyped on a given dimension, evaluators' subsequent judgments—even on unrelated dimensions—tend to be consistent with that positive impression (Feldman, 1981; Nisbett & Wilson, 1977). For example, evidence documents that positive perceptions of a target's warmth lead to positive judgments of that target's physical attractiveness (Nisbett & Wilson, 1977). As a result, when others evaluate the performance of a target they perceive as warm, they seek out and attend to information that confirms their positive impression, whereas the reverse is true for a target they perceive as cold. Thus, others' perceptions of a target's warmth, similar to perceptions of competence, are likely to be positively related to others' evaluations of the target's performance.

The above arguments suggest that perceptions of incompetence and low warmth are both mechanisms through which AAPs negatively affect others' evaluations of AAP targets' performance (see Figure 1A). Notably, the predicted effect of AAPs on perceived competence is consistent with prior work grounded in discounting, which has focused on the stigma of incompetence. Our SCM-based theory advances prior work, however, by suggesting that a stigma of low warmth is a second mechanism that links AAPs to evaluations of targets' performance and thus provides a more comprehensive account of the stigmatizing effects of AAPs.

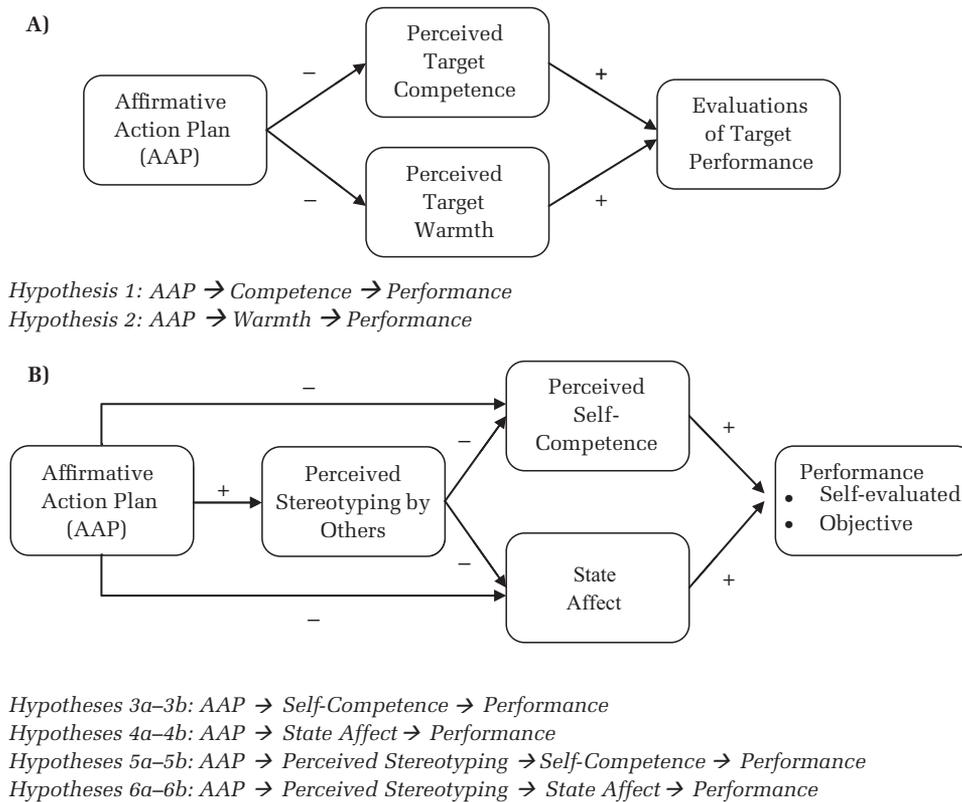
*Hypothesis 1. The presence of an AAP has an indirect negative effect on others' evaluations of AAP targets' performance through perceived competence.*

*Hypothesis 2. The presence of an AAP has an indirect negative effect on others' evaluations of AAP targets' performance through perceived warmth.*

### **Stereotype Threat and Self-Reactions among AAP Targets**

The SCM provides a useful framework for building theory regarding how others react to AAP targets, but is less relevant to the self's own reactions to being an AAP target. For example, we draw from the SCM and propose that, because AAPs increase targets' ability to compete for resources and threaten non-targets' work outcomes, others perceive AAP targets as low in warmth. Yet this logic

**FIGURE 1**  
**Hypothesized Mediated Models**  
**A) Others' Reactions to AAP Targets; B) Self-Reactions among AAP Targets**



does not apply to targets' self-reactions because AAPs increase, rather than decrease, targets' likelihood of receiving resources, and are thus unlikely to lead to self-perceptions of low warmth. It is therefore not surprising that distinct theories have emerged that explain reactions to negative stereotypes about the self. In particular, STT (Steele et al., 2002) provides a detailed account of how individuals react to being negatively stereotyped, as well as the consequences for their performance. We therefore draw from STT to build theory regarding the self-driven process that link AAPs to performance.

Stereotype threat—defined as the risk of confirming that a negative stereotype about one's group applies to the self—is a psychological state with the potential to inhibit performance (Steele, 1997; Steele & Aronson, 1995; Steele et al., 2002). According to STT, negative cognitions (e.g., low self-competence) and negative state affect (e.g., anxiety, fear, etc.) are two key mechanisms that play a role in explaining why negative stereotypes limit performance (Cadinu, Maass, Rosabianca, & Kiesner,

2005; Schmader et al., 2008). Notably, stereotype threat is not a unitary phenomenon, but takes different forms depending on the source of the threat (Shapiro & Neuberg, 2007). Specifically, self-as-source stereotype threat is driven by one's own concern that a group stereotype may be true of the self, whereas other-as-source stereotype threat is driven by a concern that others may believe a group stereotype is true of the self. Self-as-source stereotype threat therefore suggests a direct effect of negative stereotypes on self-competence and state affect, whereas other-as-source stereotype threat suggests an indirect effect through perceived stereotyping by others. Drawing from STT, we build theory regarding the negative effects of AAPs and propose that self-competence, state affect, and perceived stereotyping serve as mechanisms through which AAPs negatively affect targets' performance.

According to self-as-source STT, negative stereotypes breed negative cognitions, including self-doubt (e.g., Cadinu et al., 2005), and negative affect, including anxiety and fear (e.g., Keller & Dau-

heimer, 2003; Osborne, 2001). If a group stereotype of incompetence exists, group members question whether the stereotype applies to them personally and thus doubt their own competence. Negative stereotypes also increase negative affect; stereotypes are a source of anxiety because they are incompatible with a self-interested desire to view the self favorably and lead to a fear of performing poorly and confirming that a stereotype is true of the self (Schmader et al., 2008; Spencer, Steele, & Quinn, 1999; Steele et al., 2002). For example, consistent with theory, the presence of negative stereotypes about women's math ability causes women to report low self-competence and negative state affect, and negative stereotypes about ethnic minorities' academic ability have corresponding effects on ethnic minority individuals (Cadinu et al., 2005; Keller & Dauenheimer, 2003; Osborne, 2001; Spencer et al., 1999; Steele & Aronson, 1995).

Stereotype threat research has focused on stereotypes about women's math ability and ethnic minorities' academic ability that are activated, for example, by indicating that group-based performance differences exist on a given test (e.g., Cadinu et al., 2005; Keller & Dauenheimer, 2003; Spencer et al., 1999). AAPs also are likely to activate a negative stereotype and thus affect targets' self-competence and state affect. Specifically, AAPs provide target groups with extra help in the employment process, signaling that they cannot achieve favorable outcomes on their own and creating the stereotype that AAP targets lack competence. To the extent that AAPs create a negative stereotype, STT suggests that individuals experience lower self-competence and higher negative state affect when their group is the target of an AAP than when it is not.

Notably, like the SCM, STT suggests that stereotype threat is a context-dependent phenomenon that can affect any group in certain settings, even if the group is not chronically negatively stereotyped in the broader society (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999; Steele et al., 2002). For example, Whites are generally stereotyped as high in competence, yet fall victim to stereotype threat in contexts where their performance is compared to that of a higher ability group, such as Asians (Aronson et al., 1999). Thus, STT suggests that the presence of an AAP in a given setting creates a negative stereotype about any group it targets in that setting and, in turn, has detrimental consequences for the perceived self-competence and state affect of AAP targets.

The negative cognitions (i.e., low perceived self-competence) and state affect (e.g., anxiety, fear) triggered by negative stereotypes inhibit self-evaluated and objective performance. STT holds that individuals engage in self-regulatory processes, such that they seek to suppress unwanted negative cognitions and negative affect in an attempt to prevent them from impeding performance (Schmader et al., 2008). Yet attempts at suppression require effort and diminish individuals' cognitive capacity and ability to concentrate (e.g., Gross, 2002; Muraven & Baumeister, 2000). Cognitive resources are critical to performance, and such attempts at suppression therefore have the paradoxical effect of inhibiting performance (Schmader et al., 2008; Schmader & Johns, 2003). Consistent with theory, evidence indicates that negative stereotypes impair the performance of members of the groups they target and that this effect is driven by both low self-competence and negative state affect (e.g., Cadinu et al., 2005; Keller & Dauenheimer, 2003; Osborne, 2001). It follows that the low self-competence and negative state affect triggered by AAPs are likely to inhibit AAP targets' self-evaluated and objective performance.

The above arguments, derived from self-as-source STT, suggest that AAPs negatively affect the self-evaluated and objective performance of AAP targets through two pathways. Specifically, the negative effect of the presence of an AAP on targets' performance outcomes is explained by both low self-competence and negative state affect (see Figure 1B).

*Hypothesis 3. The presence of an AAP has an indirect negative effect on AAP targets' (a) self-evaluated and (b) objective performance through perceived self-competence.*

*Hypothesis 4. The presence of an AAP has an indirect negative effect on AAP targets' (a) self-evaluated and (b) objective performance through state affect.*

In addition to the two hypotheses derived from self-as-source STT, other-as-source STT suggests that AAPs affect performance through two other pathways. Negative group stereotypes have not only a direct effect on self-competence and state affect, but also indirect effects through perceived stereotyping by others. When a negative group stereotype exists, members of that group are aware that others may believe the stereotype is true of them personally (e.g., Steele & Aronson, 1995; Steele et al., 2002). To the extent that AAPs provide target groups with extra

help, and thus create a stereotype of incompetence, individuals are more likely to perceive that others believe a stereotype of incompetence applies to them personally when their group is targeted by an AAP than when it is not.

Perceived stereotyping by others, in turn, is likely to negatively affect self-competence and state affect. In addition to the direct effect of negative stereotypes on self-competence, targets' perceptions that others believe a stereotype of incompetence applies to them personally reinforces the possibility that the stereotype is true and causes targets to further doubt their self-competence (Gunderson, Ramirez, Levine, & Beilock, 2012; Jacobs, 1991; Parsons, Adler, & Kaczala, 1982). Perceived stereotyping by others also increases negative affect by creating anxiety and fear of performing poorly and confirming that the stereotype is true of the self, not only in one's own mind, but also in the eyes of others (Steele & Aronson, 1995; Steele et al., 2002). As previously noted, low self-competence and negative state affect inhibit performance. Thus, drawing from other-as-source STT, we propose that AAPs increase perceived stereotyping by others, which inhibits self-competence, state affect, and, ultimately, targets' self-evaluated and objective performance (see Figure 1B).

*Hypothesis 5. The presence of an AAP has an indirect negative effect on the (a) self-evaluated and (b) objective performance of AAP targets through perceived stereotyping by others and perceived self-competence.*

*Hypothesis 6. The presence of an AAP has an indirect negative effect on the (a) self-evaluated and (b) objective performance of AAP targets through perceived stereotyping by others and state affect.*

In summary, we draw from STT and theorize that AAPs negatively affect targets' self-evaluated and objective performance through four pathways (i.e., Hypotheses 3–6). Notably, consistent with prior theory grounded in self-doubt, we propose that low perceived self-competence explains why AAPs negatively affect targets' performance outcomes, at least in part. At the same time, our hypotheses differ from past work by providing a more comprehensive account of the self-driven mechanisms that explain the negative effects of AAPs on targets' performance. In particular, we propose that AAPs lead to negative state affect and perceived stereotyping by others, in addition to low perceived self-

competence, and that the pathways through which AAPs have indirect negative effects on targets' performance include self-competence, negative affect, perceived stereotyping and self-competence, and perceived stereotyping and negative affect.

## METHOD

We used a meta-analytic approach to test our hypotheses. To identify relevant studies, we searched databases—including ABI-Inform, Business Source Premier, ERIC, and PsycINFO—as well as the programs for the annual meetings of the Academy of Management and Society for Industrial and Organizational Psychology using Boolean combinations of relevant search terms (“affirmative action,” “preferential selection,” and “employment discrimination” with “stigma”, “competence,” “evaluation,” “judgment,” “perception,” “qualification,” “warmth,” “affect,” “attitude,” “performance,” and “career”). No start date was specified and our search included papers available through the end of 2011. We also manually searched 19 high-quality management journals, identified by Gomez-Mejía and Balkin (1992), and six high-quality social psychology journals that often publish affirmative action research (from 1980 through 2011).<sup>2</sup> Finally, we requested unpublished work by posting on discussion groups and contacting affirmative action scholars.

Studies were included in the meta-analysis if they investigated the effects of AAPs on one of the dependent variables of interest and reported the statistics necessary to calculate effect sizes (e.g., *t*-statistics, correlations, etc.). We conducted an initial inspection of each paper identified through the search procedures, which resulted in 85 potentially relevant manuscripts. The 85 manuscripts were coded in greater detail by one of the authors or a research assistant. The first author then independently coded all studies initially coded by someone else (40% of studies). Agreement in the coding was almost perfect ( $\kappa = .87$ ; Landis & Koch, 1977) and all coding discrepancies were resolved through discussion. The coding revealed that 35 manuscripts met our inclusion criteria. These

<sup>2</sup> The social psychology journals were *Basic and Applied Social Psychology*, the *Journal of Applied Social Psychology*, the *Journal of Experimental Social Psychology*, the *Journal of Personality*, the *Journal of Personality and Social Psychology*, and the *Personality and Social Psychology Bulletin*.

manuscripts included data from 6,432 individuals, across 45 independent samples. Tables 1 and 2 summarize the studies included in the sample.

### Independent and Dependent Variables

The independent variable was the extent to which an AAP was present in the study setting. The studies in the sample assessed the presence of an AAP in one of two ways. Researchers either conducted a field study and asked participants to report the extent to which an AAP was present in their organization or conducted a laboratory study and manipulated the extent to which an AAP was present—for example, by providing participants with a rationale for why they were chosen for a task. Most laboratory studies manipulated the presence versus absence of an AAP, but some manipulated the presence of a stronger versus weaker AAP.

We conducted separate analyses for others' reactions to AAP targets and AAP targets' own reactions. The variables included in the other-driven model were perceptions of targets' competence, warmth, and performance. For competence, we included both ability-based competence (e.g., competence, ability, efficacy, qualifications) and agency-based competence (e.g., ambition, potency, activity). For warmth, participants rated targets' interpersonal characteristics (e.g., warmth, sincerity, likability). Performance evaluations included perceptions of targets' actual and expected performance either on a specific task or in their career in general.

The variables included in the self-driven model were perceived stereotyping by others, self-competence, state affect, and self-evaluated and objective performance. Perceived stereotyping captured participants' perceptions regarding the extent to which they expected to be evaluated as incompetent by others. Perceived self-competence included both ability-based and agency-based competence. State affect captured participants' ratings of their general affect at a given point in time (e.g., nervous–calm, tense–relaxed), coded so that high ratings indicate positive affect and low ratings indicate negative affect.<sup>3</sup> Performance evaluations included partici-

pants' perceptions of their actual performance and expectations for future performance. Objective performance included objective measures of participants' task performance.

### Meta-Analytic Procedures

We used Hunter and Schmidt's (2004) random effects methodology to calculate meta-analytic effect sizes. The analyses were conducted in SAS, using the programs provided by Arthur, Bennett, and Huffcutt (2001). We first transformed the effect size reported in each study into a correlation and corrected the correlations for unreliability. If the reliability of a variable was not reported in a given study, we used the average reliability reported in other studies for the same variable. We assumed perfect reliability for manipulations of the presence of an AAP, which is a conservative approach. When a sample contributed more than one effect size for a given dependent variable, we transformed the correlations to *z*-scores, averaged the *z*-scores, and used the back-transformed average correlation in the analyses to maintain independence across effect sizes (Hunter & Schmidt, 2004). Following prior work, we calculated a meta-analytic effect size for a given dependent variable if at least three studies were available (e.g., Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005; Dalton, Certo, & Roengpitya, 2003).

We report the uncorrected sample-weighted mean effect sizes (*r*), the variance of the uncorrected effect sizes (var. *r*), the corrected sample-weighted mean effect sizes ( $\rho$ ), and the variance of the corrected effect sizes (var.  $\rho$ ). We also report 95% confidence intervals (CI<sub>95</sub>) and conclude that an effect is significant if the CI<sub>95</sub> excludes 0. We report the *Q*-statistic and the credibility interval around  $\rho$ ; significant *Q*-values and/or credibility intervals that are large or include 0 indicate that there is substantial variability across studies and suggest that moderators may be present. Finally, to address the file drawer problem (i.e., the possibility that non-significant studies are unlikely to be published and, therefore, unlikely to be included in meta-analyses), we calculated the fail-safe *k* statistic (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012; Orwin, 1983; Rosenthal, 1979). Fail-safe *k* (*k*<sub>FS</sub>) indicates the number of additional studies, each producing an effect size of 0, that would be needed to nullify a significant effect.

To identify potential outliers, we calculated the sample-adjusted meta-analytic deviancy (SAMD)

<sup>3</sup> There is a debate regarding whether positive and negative state affect are distinct constructs or bipolar ends of a single dimension (e.g., Brief & Weiss, 2002). Consistent with the approach taken in the studies in our sample, we treat state affect as a unidimensional construct.

TABLE 1  
Studies of Others' Reactions to AAP Targets

Study	AAP Target Group(s)	AAP Type(s) <sup>a</sup>	Research Setting	Perceived Competence <sup>b</sup>	Perceived Warmth <sup>b</sup>	Performance Evaluations <sup>b</sup>
Aquino et al. (2005), Study 1	Ethnic minorities	SPT	Laboratory	—	—	NS
Aquino et al. (2005), Study 2	Ethnic minorities	SPT	Laboratory	NS	NS	NS
DeMatteo, Dobbins, Myers, and Facticeau (1996)	Women	SPT	Laboratory	SIG	—	MIX
Evans (2003)	Ethnic minorities	WPT, SPT	Field	MIX	—	MIX
Gilbert and Stead (1999), Study 1	Women	GEN	Laboratory	SIG	—	—
Gilbert and Stead (1999), Study 2	Ethnic minorities	GEN	Laboratory	SIG	—	—
Heilman, Battle, Keller, and Lee (1998), Study 2	Women	WPT, SPT, GEN	Laboratory	SIG	SIG	SIG
Heilman and Blader (2001)	Women	GEN	Laboratory	SIG	—	SIG
Heilman et al. (1998), Study 3	Women	WPT, SPT, GEN	Laboratory	MIX	MIX	—
Heilman et al. (1992), Study 1	Women	GEN	Laboratory	SIG	NS	NS
Heilman et al. (1992), Study 2	Ethnic minorities, Women	GEN	Field	SIG	SIG	SIG
Heilman, Block, and Stathatos (1997), Study 1	Women	GEN	Laboratory	SIG	—	—
Heilman et al. (1997), Study 2	Women	GEN	Laboratory	SIG	—	SIG
Heilman et al. (1996)	Women	SPT	Laboratory	SIG	NS	—
Jacobson and Koch (1977)	Women	SPT	Laboratory	—	—	SIG
Maio and Esses (1998)	Ethnic minorities	GEN	Laboratory	MIX	—	NS
McGlashan, Wright, and McCormick (1995)	Women	SPT	Laboratory	—	—	NS
Resendez (2002), Study 1	Ethnic minorities	GEN	Laboratory	MIX	—	NS
Resendez (2002), Study 2	Ethnic minorities	WPT, SPT	Laboratory	SIG	—	SIG
Seijts and Jackson (2001)	Ethnic minorities	WPT	Laboratory	NS	—	—
Summers (1991)	Women	GEN	Laboratory	NS	—	—
Traver and Alliger (1999)	Women	GEN	Laboratory	NS	—	—
Unzueta, Lowery, and Knowles (2008), Study 2	Ethnic minorities, Women	SPT	Field	SIG	—	—
% significant				60%	33%	46%
% mixed				20%	17%	15%
% non-significant				20%	50%	38%

<sup>a</sup> GEN = generic; WPT = weak preferential treatment; SPT = strong preferential treatment.

<sup>b</sup> SIG = significant effect in the predicted direction; MIX = mixed support (e.g., use of multiple measures, some of which produced significant results); NS = non-significant effect. Dashes indicate that the dependent variable was not measured in the study. Some effects reported in the table could not be included in the meta-analysis because the necessary statistics were not provided.

TABLE 2  
Studies of Self-Reactions among AAP Targets

Study	AAP Target Group(s)	AAP Type(s) <sup>a</sup>	Research Setting	Perceived Stereotyping <sup>b</sup>	Perceived Competence <sup>b</sup>	State Affect <sup>b</sup>	Performance Evaluations <sup>b</sup>	Objective Performance <sup>b</sup>
Brown et al. (2000), Study 1	Women	WPT, SPT	Laboratory	—	—	NS	—	MIX
Brown et al. (2000), Study 2	Ethnic minorities, Whites	SPT	Field	—	SIG	—	—	SIG
Brutus and Ryan (1998)	Women	SPT	Laboratory	—	NS	NS	NS	NS
Chacko (1982)	Women	SPT	Field	—	—	MIX	—	—
Deitch, Brief, Roberson, and Block (2001)	Ethnic minorities	GEN	Field	SIG	—	—	—	—
Hatrup (1998)	Women	SPT	Laboratory	—	—	—	SIG	NS
Heilman and Alcott (2001), Study 1	Women	SPT	Laboratory	SIG	SIG	SIG	—	—
Heilman and Alcott (2001), Study 2	Women	SPT	Laboratory	SIG	SIG	SIG	—	—
Heilman et al. (1998), Study 1	Women	GEN, WPT, SPT	Laboratory	—	MIX	MIX	MIX	—
Heilman et al. (1990)	Women, Men	SPT	Laboratory	—	SIG	SIG	SIG	—
Heilman et al. (1991), Study 1	Women, Men	SPT	Laboratory	—	MIX	SIG	—	—
Heilman et al. (1991), Study 2	Women	SPT	Laboratory	—	SIG	NS	—	—
Heilman et al. (1987)	Women, Men	SPT	Laboratory	—	SIG	NS	SIG	—
Moros (2004)	Women, Men, Ethnic minorities, Whites	SPT	Laboratory	—	—	—	NS	—
Nacoste (1985)	Women	SPT	Laboratory	—	—	SIG	—	—
Niemann and Dovidio (2005)	Ethnic minorities	SPT	Field	—	SIG	—	—	—
Nacoste and Lehman (1987)	Women	SPT	Laboratory	NS	—	—	—	—
Stanush, Arthur, and Doverspike (1998)	Ethnic minorities	GEN	Laboratory	SIG	NS	SIG	—	—
Taylor (1994)	Women, Ethnic minorities	GEN	Field	—	NS	NS	—	—
Turner and Pratkanis (1993)	Women	SPT	Laboratory	—	—	—	MIX	NS
Unzueta, Gutiérrez, and Ghavami (2010), Study 1	Women	GEN, SPT	Field	—	SIG	—	—	—
Van Laar et al. (2008)	Ethnic minorities	GEN	Field	NS	—	—	SIG	SIG
% significant				67%	62%	46%	50%	33%
% mixed				0%	15%	15%	25%	17%
% non-significant				33%	23%	38%	25%	50%

<sup>a</sup> GEN = generic; WPT = weak preferential treatment; SPT = strong preferential treatment.

<sup>b</sup> SIG = significant effect in the predicted direction; MIX = mixed support (e.g., use of multiple measures, some of which produced significant results); NS = non-significant effect. Dashes indicate that the dependent variable was not measured in the study. Some effects reported in the table could not be included in the meta-analysis because the necessary statistics were not provided.

statistic for each study. The SAMD statistic captures the deviation of each effect size from the weighted average of the remaining effect sizes (Hufcutt & Arthur, 1995). Two studies had SAMD values greater than 3 and were thus identified as potential outliers (Arthur et al., 2001). The authors of one of these studies used an idiosyncratic methodology, not used in any other study, by asking White participants to imagine they were Black. Given the artificiality of this task, we excluded this study. We reviewed the other study that was identified as a potential outlier and did not detect any methodological anomalies. We therefore included the study in the analyses; however, excluding it had no impact on our statistical conclusions.

We used the corrected effect sizes ( $\rho_s$ ) to conduct meta-analytic path analyses (Shadish, 1996; Viswesvaran & Ones, 1995). Meta-analytic path analysis requires effect sizes for the relationships among the dependent variables. We therefore gathered intercorrelations among the dependent variables from the studies in our sample and used them to calculate corrected meta-analytic effect sizes (see Table 3). Sample sizes varied across studies and we therefore used the harmonic mean across studies as the sample size for the path models (Viswesvaran & Ones, 1995). We concluded that a path model fit the data well if the comparative fit index (CFI) was at least .95, the root mean square error of approximation (RMSEA) was .06 or less, and the standardized root mean square residual (SRMR) was .08 or less (Hu & Bentler, 1999).

To calculate a given hypothesized indirect (i.e., mediated) effect, we multiplied the path coefficients involved in that indirect effect. To test for statistical

significance, we used the delta method to calculate the standard errors of the indirect effects (Muthén & Muthén, 2007). We were unable to use bootstrapped confidence intervals, a more common approach for testing indirect effects, because the dataset included correlations rather than individual observations. In addition to the hypothesized models, we tested plausible alternative models. If an alternative model was nested within the hypothesized model, we used a chi-square difference test to compare the fit of the two models. If an alternative model was not nested within the hypothesized model, we could not assess relative model fit. Instead, we evaluated the alternative model's absolute fit.

## RESULTS

We first calculated the meta-analytic effect size for each dependent variable to determine whether AAPs have generalizable effects. We then used path analyses to test Hypotheses 1–6.

### Meta-Analytic Effect Sizes

For studies of others' reactions to AAP targets, AAPs had a significant effect on each outcome in the expected direction (see Table 4, top half). AAPs were negatively related to others' perceptions of targets' competence ( $\rho = -.27$ ,  $CI_{95} = -.33$  to  $-.17$ ) and this finding held when we separated measures of ability-based ( $\rho = -.30$ ,  $CI_{95} = -.38$  to  $-.19$ ) and agency-based ( $\rho = -.25$ ,  $CI_{95} = -.39$  to  $-.05$ ) competence. We used the program provided by Lipsey and Wilson (2001) to compare the magnitude of the effects for the two competence measures and found that the effects did not differ ( $Q_B = 0.24$ , n.s.).<sup>4</sup> AAPs were also negatively related to others' perceptions of targets' warmth ( $\rho = -.28$ ,  $CI_{95} = -.45$  to  $-.05$ ) and performance ( $\rho = -.23$ ,  $CI_{95} = -.30$  to  $-.10$ ). Moreover, the effect sizes did not differ for perceived ( $\rho = -.16$ ,  $CI_{95} = -.22$  to  $-.06$ ) and expected ( $\rho = -.26$ ,  $CI_{95} = -.37$  to  $-.09$ ) performance ( $Q_B = 0.74$ , n.s.).

For studies of AAP targets' own reactions, AAPs also had significant effects on each dependent variable in the expected direction (see Table 4, bottom

<sup>4</sup> This procedure is analogous to conducting an analysis of variance, in which the effect sizes are the dependent variable and a categorical variable that captures the measure type (ability versus agency) is the independent variable. This analysis produces a  $Q_B$  statistic, which has a chi-square distribution and is analogous to an  $F$ -test.

TABLE 3  
Relationships among the Dependent Variables

Ratings of Others	1	2	3	4
1. Competence	—			
2. Warmth	.71	—		
3. Performance evaluations	.65	.67	—	
Ratings of the Self	1	2	3	4
1. Perceived stereotyping	—			
2. Self-competence	-.36	—		
3. State affect	-.36	.24	—	
4. Performance evaluations	-.25	.49	.40	—
5. Objective performance	-.11	.28	.09	.33

Note. Values are corrected correlation coefficients ( $\rho_s$ ).

TABLE 4  
Meta-Analytic Estimates for the Effects of AAPs

Dependent Variable	$k^b$	$N^c$	$r^d$	Var. $r$	CI <sub>95</sub> <sup>e</sup>	$\rho^f$	Var. $\rho$	CrI <sub>80</sub> <sup>g</sup>	$Q^h$	$k_{FS}^i$
<b>Others' reactions to targets</b>										
Competence <sup>a</sup>	20	2,791	-.25	.04	-.33 to -.17	-.27	.03	-.50 to -.03	111.33**	1,419
Ability-based	19	2,621	-.29	.04	-.38 to -.19	-.30	.04	-.56 to -.05	126.63**	1,713
Agency-based	5	742	-.22	.04	-.39 to -.05	-.25	.04	-.50 to .01	31.38**	73
Warmth	5	686	-.25	.05	-.45 to -.05	-.28	.05	-.57 to .02	38.71**	90
Performance evaluations	13	1,995	-.20	.03	-.30 to -.10	-.23	.03	-.46 to .01	71.43**	434
Perceived	5	626	-.14	.01	-.22 to -.06	-.16	.00	-.23 to -.09	6.37	21
Expected	8	1,369	-.23	.04	-.37 to -.09	-.26	.04	-.53 to .01	62.45**	248
<b>Self-reactions among targets</b>										
Perceived stereotyping	6	1,060	.23	.05	.06 to .41	.26	.05	-.03 to .55	54.83**	197
Self-competence	13	2,009	-.20	.02	-.27 to -.13	-.22	.01	-.38 to -.07	37.53**	433
Ability-based	12	1,690	-.24	.01	-.30 to -.17	-.26	.01	-.36 to -.14	24.73**	425
Agency-based	1	—	—	—	—	—	—	—	—	—
State affect	9	1,204	-.26	.03	-.37 to -.15	-.28	.02	-.48 to -.08	37.39**	295
Performance evaluations	7	1,017	-.29	.01	-.38 to -.21	-.32	.01	-.45 to -.19	17.13**	220
Perceived	6	744	-.31	.02	-.42 to -.20	-.34	.01	-.49 to -.18	16.88**	148
Expected	1	—	—	—	—	—	—	—	—	—
Objective performance	6	1,122	-.17	.01	-.26 to -.08	-.19	.01	-.31 to -.07	14.67*	78

<sup>a</sup> Some studies of others' reactions to AAP targets included multiple competence measures and thus contributed effects to the ability- and agency-based competence estimates. To maintain independence of samples, the effects for all competence measures in a study were averaged to calculate the overall competence effect. For this reason, the sum of studies for the more specific competence measures is greater than the total number of studies for the overall competence measure.

<sup>b</sup>  $k$  is the number of studies.

<sup>c</sup>  $N$  is the number of participants across studies.

<sup>d</sup>  $r$  is the mean sample-weighted effect size.

<sup>e</sup> CI<sub>95</sub> is the 95% confidence interval around  $r$ .

<sup>f</sup>  $\rho$  is the mean corrected effect size.

<sup>g</sup> CrI<sub>80</sub> is the 80% credibility interval around  $\rho$ .

<sup>h</sup>  $Q$  is the chi-square test statistic for homogeneity of effect sizes.

<sup>i</sup>  $k_{FS}$  is the fail-safe  $k$  statistic.

\*  $p < .05$ . \*\*  $p < .01$ .

half). AAPs were positively related to perceived stereotyping ( $\rho = .26$ , CI<sub>95</sub> = .06 to .41) and negatively related to self-competence ( $\rho = -.27$  to  $-.13$ ), state affect ( $\rho = -.28$ , CI<sub>95</sub> =  $-.37$  to  $-.15$ ), performance evaluations ( $\rho = -.32$ , CI<sub>95</sub> =  $-.38$  to  $-.21$ ), and objective performance ( $\rho = -.19$ , CI<sub>95</sub> =  $-.26$  to  $-.08$ ). Due to insufficient sample sizes, we could not compare the effect sizes for ability- and agency-based competence or expected and perceived performance. In all, the results indicate that AAPs have a significant, generalizable effect on each outcome of interest.

### Path Models for Others' Reactions to AAP Targets: Hypotheses 1–2

We tested the fit of the hypothesized model and significance of the hypothesized indirect effects (see Figure 1A). We used the overall effect sizes for competence and performance because the effect

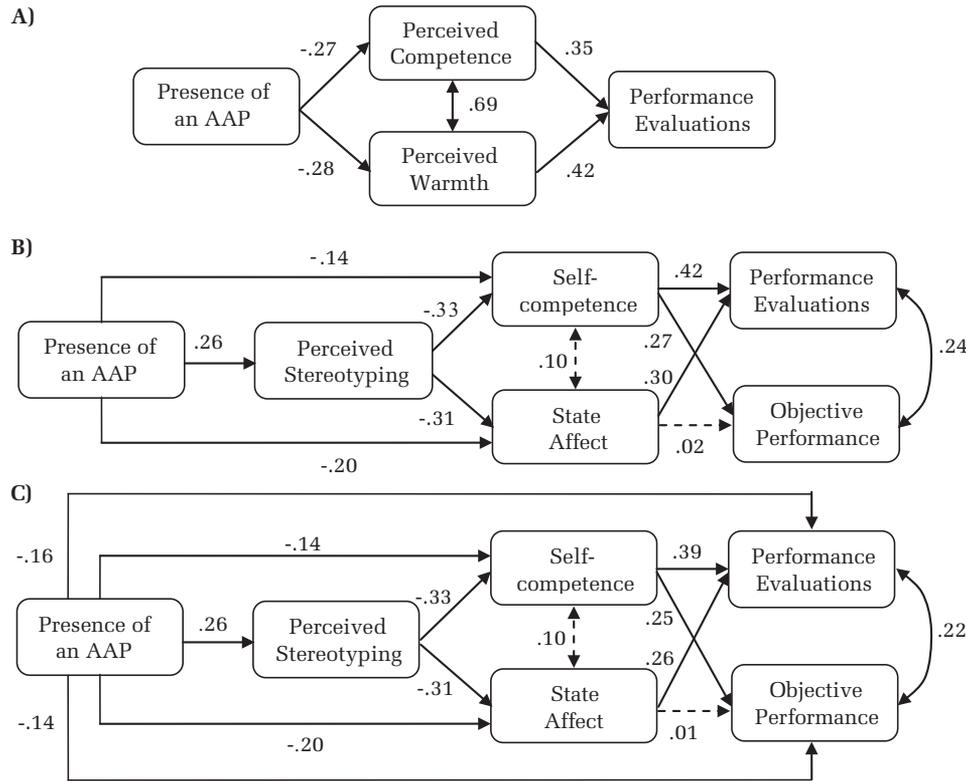
sizes did not differ for the two competence (ability, agency) and two performance (perceived, expected) measures. We allowed competence and warmth to covary in all models because both may be driven by others' general impressions of the target.

The hypothesized other-driven model fit the data well (CFI = 1.00; RMSEA = .00; SRMR = .01;  $\chi^2(1) = 0.40$ , n.s.; see Figure 2A). Moreover, the path coefficients revealed that the presence of an AAP was negatively related to both perceived competence ( $\beta = -.27$ ,  $p < .01$ ) and perceived warmth ( $\beta = -.28$ ,  $p < .01$ ), and that both competence ( $\beta = .35$ ,  $p < .01$ ) and warmth ( $\beta = .42$ ,  $p < .01$ ) were positively related to performance evaluations.

We hypothesized that AAPs have indirect negative effects on performance evaluations through perceived competence (Hypothesis 1) and perceived warmth (Hypothesis 2). In support of Hypotheses 1 and 2, the indirect effects of AAPs on

**FIGURE 2**  
**Path Model Results**

**A) Others' Reactions to AAP Targets: Hypothesized and Final Model; B) Self-Reactions among AAP Targets: Hypothesized Model; C) Self-Reactions among AAP Targets: Final Model**



Note. Standardized path coefficients ( $\beta$ s) are reported. Solid paths are significant at  $p < .05$ ; dashed paths are not significant.  $n = 589$  for Figure 2A;  $n = 301$  for Figures 2B and 2C.

performance through competence ( $\beta = -.10, p < .01$ ) and warmth ( $\beta = -.12, p < .01$ ) were both significant, as was the total indirect effect of AAPs on performance through both competence and warmth ( $\beta = -.21, p < .01$ ).

We compared the hypothesized model to three plausible alternatives. First, scholars have suggested that others view AAPs as unfair and thus negatively evaluate AAP targets on a number of dimensions (e.g., Heilman, McCullough, & Gilbert, 1996). A fairness-based perspective suggests that AAPs have a direct effect on performance, in addition to the direct effects on competence and warmth, but does not suggest indirect effects on performance through competence and warmth. We therefore tested a model that included direct effects from AAPs to competence, warmth, and performance, but no indirect effects, and found it did not fit the data well (CFI = .56; RMSEA = .57; SRMR = .27;  $\chi^2(2) = 388.75, p < .01$ ). Second, unlike the

SCM, the discounting principle suggests that AAPs have a direct effect on competence, but does not suggest a direct effect on warmth. We therefore tested a competence-only model by removing the path from AAPs to warmth from the hypothesized model to test the alternative possibility that any effect of AAPs on warmth is accounted for by the correlation between competence and warmth. The fit of this model was poor (CFI = .94; RMSEA = .20; SRMR = .13;  $\chi^2(2) = 48.49, p < .01$ ) and significantly worse than the fit of the hypothesized model ( $\Delta\chi^2(1) = 48.09, p < .01$ ).

Third, our theory suggests that competence and warmth fully mediate the effect of AAPs on performance evaluations. We investigated the alternative possibility of partial mediation by testing whether AAPs have a direct effect on performance evaluations, after accounting for the indirect effects through competence and warmth. We could not use path analysis to test this model because the model

has 0 degrees of freedom. Instead, we regressed performance evaluations on competence, warmth, and AAPs simultaneously. Competence ( $\beta = .35$ ,  $p < .01$ ) and warmth ( $\beta = .42$ ,  $p < .01$ ) were positively related to performance evaluations, but AAPs were not ( $\beta = -.02$ , n.s.), indicating that the effect of AAPs on performance evaluations is fully mediated by perceived competence and warmth. We therefore adopted the hypothesized model as the final model for others' reactions to AAP targets.

### Path Models for Self-Reactions among AAP Targets: Hypotheses 3–6

We tested the fit of the hypothesized model and significance of the hypothesized indirect effects (see Figure 1B). To mirror the other-driven model, we used the overall effect sizes for competence and performance evaluations; however, using ability-based competence and perceived performance produced the same conclusions. We allowed perceived self-competence and state affect to covary because both variables may reflect general evaluations of the self. We also allowed self-evaluated and objective performance to covary because they are likely related.

The hypothesized model fit the data reasonably well (CFI = .97; RMSEA = .09; SRMR = .04;  $\chi^2(4) = 13.73$ ,  $p < .01$ ; see Figure 2B), although the RMSEA was above the .06 cutoff. The coefficients revealed that AAPs had negative effects on both self-competence ( $\beta = -.14$ ,  $p < .05$ ) and state affect ( $\beta = -.20$ ,  $p < .01$ ), and a positive effect on perceived stereotyping ( $\beta = .26$ ,  $p < .01$ ). Perceived stereotyping was negatively related to both self-competence ( $\beta = -.33$ ,  $p < .01$ ) and state affect ( $\beta = -.31$ ,  $p < .01$ ). Finally, self-competence was positively related to both evaluated ( $\beta = .42$ ,  $p < .01$ ) and objective ( $\beta = .27$ ,  $p < .01$ ) performance, and state affect was positively related to evaluated ( $\beta = .30$ ,  $p < .01$ ), but not objective ( $\beta = .02$ , n.s.), performance.

We hypothesized that AAPs have an indirect negative effect on (a) self-evaluated and (b) objective performance through self-competence (Hypothesis 3) and state affect (Hypothesis 4). In support of Hypotheses 3a and 3b, the indirect effects of AAPs on performance, through perceived self-competence, were significant (self-evaluated:  $\beta = -.06$ ; objective:  $\beta = -.04$ ; both  $ps < .05$ ). The indirect effect of AAPs on performance, through state affect, was significant for self-evaluated ( $\beta = -.06$ ,  $p < .01$ ), but not objective ( $\beta = .00$ , n.s.), performance.

Thus, Hypothesis 4a was supported, but Hypothesis 4b was not.

We also hypothesized that AAPs have indirect effects on (a) self-evaluated and (b) objective performance through perceived stereotyping and self-competence (Hypothesis 5) and through perceived stereotyping and state affect (Hypothesis 6). In support of Hypotheses 5a and 5b, the indirect effects of AAPs on performance, through perceived stereotyping and self-competence, were significant (self-evaluated:  $\beta = -.04$ , objective:  $\beta = -.02$ , both  $ps < .01$ ). The indirect effect of AAPs on performance, through perceived stereotyping and state affect, was significant for self-evaluated ( $\beta = -.02$ ,  $p < .01$ ), but not objective ( $\beta = .00$ , n.s.), performance, which supports Hypothesis 6a, but not Hypothesis 6b. The total indirect effects of AAPs on self-evaluated ( $\beta = -.18$ ,  $p < .01$ ) and objective ( $\beta = -.07$ ,  $p < .01$ ) performance were also significant.

We assessed the fit of three plausible alternative models. First, given that prior work has focused on direct effects rather than mediated relationships, we tested a direct effects model in which the presence of an AAP has a direct effect on perceived stereotyping, self-competence, state affect, and self-evaluated and objective performance, but no indirect effects. This model did not fit the data well (CFI = .47; RMSEA = .25; SRMR = .16;  $\chi^2(8) = 159.14$ ,  $p < .01$ ). Second, theory grounded in self-doubt suggests that the presence of an AAP affects perceived self-competence, but not state affect or perceived stereotyping. We therefore tested a competence-only model in which AAPs do not have a direct effect on perceived stereotyping and state affect, and any effect of AAPs on these variables is instead accounted for by their correlations with self-competence. Specifically, this model included a directional path from AAPs to competence, a correlation between competence and perceived stereotyping, a correlation between competence and state affect, and directional paths from competence, perceived stereotyping, and state affect to self-evaluated and objective performance. This model did not fit the data well (CFI = .60; RMSEA = .24; SRMR = .15;  $\chi^2(5) = 89.70$ ,  $p < .01$ ).

Third, we theorized that self-competence, state affect, and perceived stereotyping mediate the effects of AAPs on performance. We investigated the possibility that the mediation is only partial by testing a model that differed from the hypothesized model in that it included additional paths from AAPs to both performance outcomes (see Fig-

ure 2C). The resulting model fit the data well (CFI = 1.00; RMSEA = .00; SRMR = .01;  $\chi^2(2) = 0.45$ , n.s.) and significantly better than the hypothesized model ( $\Delta\chi^2(2) = 13.28$ ,  $p < .01$ ). The paths from AAPs to self-evaluated ( $\beta = -.16$ ,  $p < .01$ ) and objective ( $\beta = -.14$ ,  $p < .01$ ) performance were significant; however, the direction and significance of all other paths and indirect effects remained unaltered. Given the superior fit of the partial mediation model, we adopted this alternative model as the final model and concluded that perceived stereotyping by others, perceived self-competence, and state affect partially mediate the effects of AAPs on targets' self-evaluated and objective performance.

In the final model, we used 95% confidence intervals to compare the magnitude of the total indirect effects and direct effects of AAPs on performance. The magnitude of the total indirect effects and direct effects did not differ for self-evaluated (total indirect effect:  $\beta = -.16$ ,  $CI_{95} = -.22$  to  $-.10$ ; direct effect:  $\beta = -.16$ ,  $CI_{95} = -.26$  to  $-.06$ ) or objective (total indirect effect:  $\beta = -.05$ ,  $CI_{95} = -.10$  to  $-.01$ ; direct effect:  $\beta = -.14$ ,  $CI_{95} = -.25$  to  $-.02$ ) performance. Thus, the portion of the effect of AAPs on performance that is explained by our theory (i.e., the indirect effects) is roughly equivalent to the portion that is not (i.e., the direct effects).

### Robustness Checks

Our theory suggests that the negative effects of AAPs hold across a number of potential boundary conditions, including the group targeted by the AAP, the AAP type, and the research setting. We used the program provided by Lipsey and Wilson (2001) to conduct post-hoc analyses to determine whether our findings are robust across potential moderators. We focused the moderated analyses on competence because the sample was too small for other outcomes.

Stereotyping theories posit that any group can be negatively stereotyped in certain settings, even if the group is not chronically negatively stereotyped in the society (Aronson et al., 1999; Fiske et al., 2002). Notably, this assumption differs from prior claims that AAPs only have negative consequences if the target is chronically negatively stereotyped (e.g., Brown, Charnsangavej, Keough, Newman, & Renfrow, 2000; Gilbert & Stead, 1999; Heilman et al., 1987; Nacoste, 1985; Resendez, 2002). Most studies in our meta-analysis investigated AAPs that

target chronically negatively stereotyped groups—specifically, women and ethnic minorities—but a few studies of targets' self-reactions investigated AAPs that target groups that are not chronically negatively stereotyped (e.g., Whites, men; Brown et al., 2000; Heilman, Rivero, & Brett, 1991). We compared the effect of AAPs on competence for groups that are ( $\rho = -.24$ ,  $CI_{95} = -.31$  to  $-.12$ ,  $k = 13$ ) and are not ( $\rho = -.16$ ,  $CI_{95} = -.24$  to  $-.05$ ,  $k = 4$ ) chronically negatively stereotyped and found that the magnitude of the two effect sizes did not differ ( $Q_B = 2.70$ , n.s.).

AAPs may be implemented in different ways that vary in strength and scholars have suggested that some AAP types are more likely to produce stigma than others (e.g., Evans, 2003). In spite of this variability, all AAPs provide extra help to target group members and should therefore stigmatize their targets. We tested if the effect sizes differed for AAPs that provide OE, WPT, SPT, or are generic (i.e., strength is not specified; Harrison et al., 2006). For studies of others' reactions to targets, the stigma of incompetence did not differ for SPT ( $\rho = -.41$ ,  $CI_{95} = -.56$  to  $-.20$ ,  $k = 7$ ), WPT ( $\rho = -.32$ ,  $CI_{95} = -.55$  to  $-.05$ ,  $k = 5$ ), or generic AAPs ( $\rho = -.38$ ,  $CI_{95} = -.49$  to  $-.21$ ,  $k = 10$ ;  $Q_B = 1.20$ , n.s.). For studies of targets' self-reactions, the stigma of incompetence did not differ for SPT ( $\rho = -.32$ ,  $CI_{95} = -.35$  to  $-.21$ ,  $k = 11$ ) and generic AAPs ( $\rho = -.20$ ,  $CI_{95} = -.40$  to  $.02$ ,  $k = 3$ ;  $Q_B = .01$ , n.s.). (There were insufficient studies to calculate effects for studies of OE and studies of targets' self-reactions to WPT.)

Finally, some scholars have suggested that AAPs may not have stigmatizing effects in the field, arguing that AAP targets who are aware they are qualified will not question their competence (Crosby, Iyer, & Sincharoen, 2006; Taylor, 1994). Although aware of absolute qualifications, AAP targets may be unaware of their qualifications relative to the qualifications of others and may thus question their competence. We compared the effect of AAPs across research settings. The stigma of incompetence occurred in the laboratory and the field and the effect sizes did not differ across settings for studies of both others' reactions (laboratory:  $\rho = -.25$ ,  $CI_{95} = -.31$  to  $-.15$ ,  $k = 17$ ; field:  $\rho = -.39$ ,  $CI_{95} = -.64$  to  $-.08$ ,  $k = 3$ ;  $Q_B = 1.45$ , n.s.) and self-reactions (laboratory:  $\rho = -.25$ ,  $CI_{95} = -.32$  to  $-.14$ ,  $k = 9$ ; field:  $\rho = -.19$ ,  $CI_{95} = -.29$  to  $-.06$ ,  $k = 4$ ;  $Q_B = 0.75$ , n.s.).

## DISCUSSION

Organizations around the globe have taken affirmative action to counteract continued discrimination and facilitate employment success for underrepresented groups. AAPs increase the representation of women and ethnic minorities in managerial positions, but also have the potential to produce ironic effects by negatively affecting the very employees they are intended to benefit. Prior theory suggests that perceptions that AAP targets lack competence, both in the eyes of others and in the eyes of targets themselves, explain why AAPs negatively affect targets' performance. Yet the broader social psychological literature suggests that additional mechanisms also play a role. Using theories of stereotyping, we developed a more comprehensive theory of the unintended negative effects of AAPs, which we tested using meta-analytic path analyses.

Drawing from the SCM, we theorized and found that a perceived lack of both competence and warmth explain why others evaluate AAP targets' performance negatively. Drawing from STT, we theorized and found that self-competence, state affect, and perceived stereotyping by others each contribute to explaining why AAP targets experience low performance. The other- and self-driven models derived from stereotyping theories fit the data better than models derived from alternative theoretical frameworks. The present research therefore substantiates that stereotyping theories provide a useful lens for understanding the negative consequences of AAPs. In the other-driven model, competence and warmth fully mediated the effects of AAPs on performance; however, in the self-driven model, self-competence, state affect, and perceived stereotyping partially mediated the effects of AAPs on performance. Thus, although the findings for self-reactions among AAP targets support our hypotheses, additional mechanisms not included in our theory likely exist.

### Implications for Theory

We advance theory by demonstrating that stereotyping theories provide a more comprehensive understanding of the unintended negative effects of AAPs on targets' performance outcomes, as compared to prior theory grounded in discounting and self-doubt, which focuses on the stigma of incompetence. Specifically, we propose that competence is only one of several mechanisms that explain why

AAPs negatively affect targets' performance outcomes. At the same time, our theory does not contradict prior work on the stigma of incompetence. Scholars have previously argued that AAPs and the associated possibility that demographics influence employment decisions lead others to assume that AAP targets lack competence and similarly lead targets to doubt their self-competence. In the other-driven model, we propose that AAPs and the associated assumption that demographics play a role in selection signals that AAP targets lack status, which leads others to assume that AAP targets are incompetent. Thus, although our SCM-based explanation invokes notions of status, the two explanations are convergent, not contradictory. Similarly, in the self-driven model, we propose that AAPs and the associated assumption that demographics play a role in selection creates a stereotype that AAP targets lack competence, which leads targets to doubt their self-competence. Thus, although our STT-based explanation invokes the concept of stereotyping, it also converges with prior theory.

Our primary contribution is using stereotyping theories to build a more comprehensive understanding of the unintended negative effects of AAPs. Although discounting and self-doubt have been the primary theoretical frameworks in this literature, a handful of prior studies have similarly drawn from stereotyping theories. We extend previous work by more fully developing the implications of stereotyping theories for understanding the effects AAPs on targets' performance. For example, Aquino and colleagues (2005) used the SCM to hypothesize that AAPs affect warmth, but used different rationales to justify why AAPs affect other outcomes. Thus, whereas past work suggests that multiple theories are needed to understand all of the dimensions along which others devalue AAP targets, we propose that the SCM provides a single, unifying framework that explains how AAPs affect others' evaluations of targets' competence, warmth, and performance, as well as the interrelationships among these outcomes. Similarly, a few prior studies of self-reactions among targets have drawn from STT (Brown et al., 2000; Van Laar, Levin, & Sinclair, 2008), but have focused on the implications of STT for only a subset of the outcomes and pathways through which AAPs affect performance that are included in our theory. Thus, we build on prior work by using STT to develop a fuller understanding of the mechanisms that contribute to the negative effect of AAPs on targets' performance.

Our theory and findings also suggest that there are differences in the other- and self-driven mechanisms that link AAPs to performance. Specifically, we propose that the other-driven mechanisms include competence and warmth, while the self-driven mechanisms include self-competence, state affect, and perceived stereotyping. Notably, the rationale for why others perceive AAP targets as lacking warmth does not apply to AAP targets' own reactions and the rationale for why AAP targets experience negative affect and perceived stereotyping by others does not apply to others' reactions to AAP targets. It is therefore not surprising that these possibilities have not been investigated empirically and, as a result, our meta-analytic approach did not allow a test of whether the unique mechanisms in our other-driven model apply to the self-driven model and vice versa. The present research therefore offers suggestive, rather than definitive, evidence of differences in the other- and self-driven mechanisms that link AAPs to performance.

We also contribute to theory by proposing and finding that AAPs have negative effects on any group they target, even if the group is not chronically negatively stereotyped in the broader society. This possibility is consistent with stereotyping theories, which indicate that stereotypes are context dependent and that any group can be negatively stereotyped in certain settings. At the same time, our stereotyping-based perspective differs from prior claims that AAPs only have negative consequences for target groups that are chronically negatively stereotyped (e.g., Brown et al., 2000; Gilbert & Stead, 1999; Heilman et al., 1991; Nacoste, 1985; Resendez, 2002). Theoretical and empirical evidence that groups that are not chronically negatively stereotyped are negatively affected by AAPs has implications that extend beyond the AAP literature. For example, our stereotyping-based theory may be relevant to other types of preferential treatment, such as nepotism or legacy admissions to colleges and universities.

In addition, the present work has several implications for the SCM. First, the SCM posits that stereotypes are often ambivalent, in that they involve trade-offs between competence and warmth. As a result, most groups are stereotyped as lacking in either competence or warmth, but not both (Bergsieker, Leslie, Constantine, & Fiske, 2012; Fiske et al., 2007). For example, individuals generally perceive housewives as warm, but not competent, and perceive businesswomen as competent, but not warm (Fiske et al., 2002). Thus, business-

women's gain in competence comes at the cost of low warmth. Although competence-warmth trade-offs are common, our theory suggests that, because AAPs simultaneously indicate that AAP target groups have low status and increase their ability to compete for resources, AAPs stigmatize their targets as low in both competence and warmth. Thus, AAP targets provide a relatively rare example of a group that is negatively stereotyped on both fundamental dimensions of person perception.

Second, although SCM scholars have suggested that competence and warmth stereotypes are relevant for workplace evaluations (Cuddy et al., 2011), SCM research has focused largely on the consequences of competence and warmth outside of organizations. For example, research has assessed whether competence and warmth stereotypes are associated with the tendency to help versus demean stereotype targets (e.g., Cuddy et al., 2007). Moreover, there is some question regarding whether competence, warmth, or both affect performance evaluations. Theoretically, perceptions of low competence are more likely than perceptions of low warmth to result in passive harm, such as rating targets' performance lower than deserved, although some evidence suggests that competence and warmth both predict passive harm (Cuddy et al., 2007). We develop a rationale for why perceptions of warmth, in addition to competence, are likely to affect performance evaluations, and thus help to advance theory regarding the relevance of the SCM—a social psychological theory—for workplace phenomena.

Our theory similarly has implications for STT. Scholars have argued that stereotype threat research is narrow in scope, given that it focuses primarily on the consequences of negative stereotypes for students' performance on academic tests (e.g., Shapiro & Neuberg, 2007) and less is known regarding whether and how stereotype threat operates in the workplace (e.g., Roberson & Kulik, 2007). We provide insight into these issues by theorizing that AAPs, which are common workplace policies, activate negative stereotypes about the social groups they target and therefore trigger stereotype threat. Moreover, we demonstrate that the interrelationships among the negative consequences of AAPs are consistent with predictions derived from STT.

We also make strides toward advancing understanding of the mechanisms that drive stereotype threat. Many mechanisms have been proposed yet ambiguity persists regarding the processes that un-

derlie stereotype threat, in part because prior studies have tended to focus on a single explanatory mechanism (e.g., Schmader et al., 2008). In using STT to build theory regarding the self-driven processes that link AAPs to targets' performance outcomes, we propose that three distinct mechanisms—self-competence, state affect, and perceived stereotyping by others—each play a role. Moreover, we contribute to recent theory that has differentiated self- and other-as-source stereotype threat (Shapiro & Neuberg, 2007) by theorizing and finding that these two types of stereotype threat operate simultaneously and independently and that AAPs negatively affect targets' performance through four self-driven pathways (i.e., Hypotheses 3–6).

Finally, the present work contributes to theory on the SCM and STT by demonstrating that both theories apply to groups with permeable boundaries, not just groups with impermeable boundaries. Specifically, research on the SCM and STT has often focused on groups based on immutable characteristics, such as gender and race. We demonstrate that the principles of the SCM and STT advance understanding of the experiences of a group that is defined by the situation (i.e., AAP targets), with the result that individuals may belong to the group in some settings but not others (e.g., organizations with and without AAPs).

### Implications for Practice

Our theory and findings also offer practical insights. As shown in Tables 1 and 2, the percentages of prior studies that find a significant effect of AAPs on the outcomes included in our theory range from 33 to 67, which raises questions regarding the robustness of this phenomenon and whether it should be of concern for organizations. Our meta-analyses demonstrate that AAPs have a significant, generalizable effect on each outcome of interest, which indicates that prior null findings stem from statistical artifacts (e.g., sampling error, unreliability), not the absence of true effects. Similarly, some scholars have questioned the robustness of the stigma of AAPs by suggesting that it is an artifact of the laboratory (Crosby et al., 2006; Taylor, 1994) or that it only applies to AAPs that involve strong preferences (e.g., Evans, 2003). In contrast to these claims, we find that the stigma of AAPs occurs in the laboratory and in the field and that the magnitude of the effect does not differ for AAPs that vary in strength. Our findings therefore substantiate that the stigma of AAPs is a real-world

phenomenon with the potential to derail organizational efforts to create and maintain a diverse workforce.

The present research also offers novel insights for preventing AAPs from having negative effects on their targets. We found that perceived incompetence and low warmth both explain why others negatively evaluate AAP targets' performance. Eliminating the negative effects of AAPs therefore requires addressing stigmatization along both dimensions. Publicizing the qualifications of an AAP target—a well-supported and commonly recommended strategy for preventing the stigmatizing consequences of AAPs (e.g., Heilman, Lucas, & Kelloway, 1990; Heilman et al., 2001)—eliminates the stigma of incompetence, but is unlikely to affect perceptions that AAP targets lack warmth. Low warmth stereotypes are driven by perceptions that AAPs increase targets' ability to compete for workplace resources and thus threaten non-targets' outcomes. Our theory and findings suggest that organizations should address perceptions that AAPs are at odds with the interests of non-targets, perhaps by stressing that the increased diversity associated with AAPs has the potential to improve organizational performance and thus benefit everyone in the organization (e.g., Ely & Thomas, 2001).

Similarly, we theorized and found that AAPs have direct effects on the self-competence and state affect of AAP targets (self-as-source stereotype threat), as well as indirect effects through perceived stereotyping by others (other-as-source stereotype threat). It follows that eliminating the self-driven processes that link AAPs to performance requires addressing each of these pathways. For example, AAP targets need to know not only that they are qualified, to prevent low perceived self-competence, but also that others are aware of their qualifications, to prevent perceived stereotyping by others.

Whereas prior work suggests that AAPs only stigmatize groups that are chronically negatively stereotyped, we theorized and found that the stigma of AAPs also applies to groups that are not chronically negatively stereotyped. Thus, our research suggests that, in settings where groups that are not typically negatively stereotyped are underrepresented (e.g., men in nursing), and may thus be targeted by AAPs, organizations must be vigilant to prevent stigma.

The present research reveals that AAPs have negative implications for a range of outcomes, including AAP targets' performance. Thus, in some ways,

our findings present a discouraging picture of the future of AAPs, and one could argue that organizations should not implement these policies. At the same time, it is important to acknowledge that, although important, our focus on performance presents a narrow view of the potential effects of AAPs. For example, the adoption of AAPs facilitates increased representation of women and ethnic minorities in management positions (Holzer & Neumark, 2000; Kalev et al., 2006; Leonard, 1984). In addition, if AAPs increase the number of women and ethnic minorities in high-level positions, these role models may decrease implicit assumptions that women and ethnic minorities lack the ability needed for such positions, thus mitigating discrimination and the need for AAPs in the future. The implementation of AAPs, along with efforts to maximize their effectiveness, is therefore more likely to lead to favorable long-term outcomes than is the elimination of AAPs.

Many organizations implement AAPs as part of broader diversity initiatives (Kelly & Dobbin, 1998), which may include efforts to facilitate a multicultural climate, in which differences are acknowledged and valued, and the implementation of flexible and other family-friendly policies intended to attract groups of employees who tend to have significant personal-life responsibilities (e.g., women, parents). Like AAPs, these efforts are largely effective; multicultural climates facilitate engagement and reduce perceived discrimination (Avery, McKay, Wilson, & Tonidandel, 2007; Leslie & Gelfand, 2008; Plaut, Thomas, & Goren, 2009) and flexible and family-friendly policies improve job attitudes and reduce turnover intentions (Butts, Casper, & Yang, 2013; Gajendran & Harrison, 2007). Yet, just as AAPs have unintended consequences, multiculturalism can lead non-targets to feel excluded (Plaut, Garnett, Buffardi, & Sanchez-Burks, 2011) and use of flexible and family-friendly practices can have negative career consequences (Leslie, Manchester, & Dahm, 2013; Leslie, Manchester, Park, & Mehng, 2012; Manchester, Leslie, & Kramer, 2010, 2013). The parallels between AAPs and other diversity policies suggest that strategies similar to those needed to prevent AAPs from having negative effects may be needed to maximize the effectiveness of other aspects of diversity initiatives.

### Limitations and Future Research

Meta-analysis is a powerful empirical tool, but is also limited by its reliance on existing studies. For

example, we found support for the hypothesized mechanisms that link AAPs to performance, but our ability to make causal claims was somewhat limited. Many studies in our sample were experiments that manipulated the presence on an AAP and demonstrate that AAPs have a causal impact on a number of outcomes, but the causal order among the outcomes is less clear. We tested alternative causal models and generally found that our hypothesized models fit the data better than the alternatives. Nevertheless, we cannot provide definitive evidence for the causal order among the endogenous variables in our models. Similarly, all of the studies in our sample investigated the stigmatization of AAP targets by either others or the self. We were therefore able to test the other- and self-models independently, but not simultaneously.

Another potential limitation is that the number of studies contributing to some meta-analytic effect sizes was relatively small. Even when based on few studies, however, the number of individuals contributing to the effect sizes was large, which lends stronger confidence to our conclusions than to those based on single studies. In addition, our effect sizes may be inflated to the extent that studies with significant results were more likely to be published and are thus overrepresented in our sample (i.e., the file drawer problem). The file drawer problem is likely not a concern, however, given that the fail-safe  $k$ -values for our main effect estimates were generally large ( $M = 414$ ; see Table 4). Moreover, empirical evidence indicates that the file drawer problem has little impact on the validity of meta-analytic estimates (Dalton et al., 2012).

In the other-driven model, perceived competence and warmth fully accounted for the effect of AAPs on performance evaluations. Conversely, in the self-driven model, AAPs had a direct effect on performance after accounting for all of the hypothesized explanatory mechanisms, which indicates that additional factors play a role in linking AAPs to targets' performance in the self-driven model. Stereotype threat research indicates that negative stereotypes affect not only self-reported affect but also biological anxiety responses (Steele et al., 2002). Thus, future research should explore whether physiological anxiety, as well as other mechanisms, help explain the effect of AAPs on self-evaluated and objective performance.

State affect was related to self-evaluated, but not objective, performance. One possible explanation is that the negative state affect associated with AAPs leads targets to believe that they failed to

perform to the best of their ability, but this belief does not translate into reality. Alternatively, the relationship between state affect and performance may be more complex. Consistent with the Yerkes–Dodson law (Yerkes & Dodson, 1908), the effect may be curvilinear such that performance is weaker at low and high levels of negative state affect than it is at moderate levels. Alternatively, the null finding may stem from the presence of boundary conditions. For example, the effect of state affect on objective performance may be small, with the result that it only emerges for tasks that are particularly challenging. Future work on these possibilities will help clarify whether the effects of AAPs on objective performance are driven by state affect, in addition to self-competence and perceived stereotyping by others.

A key contribution of this research is using stereotyping theories to build a more comprehensive understanding of the negative effects of AAPs on targets' performance. Linking stereotyping theories to the AAP literature may also spur future research. For example, evidence demonstrates that the detrimental effects of stereotype threat can be avoided by emphasizing learning goals (Goff, Steele, & Davies, 2008). Future work should therefore explore whether fostering an organizational climate for learning, instead of performance, can prevent the detrimental effects of AAPs on the self-evaluated and objective performance of AAP targets.

Finally, future research should integrate the literature on the negative effects of AAPs with other literatures, such as identity management (e.g., Paetzold, Dipboye, & Elsbach, 2008). Identity is a dynamic construct and individuals may change the groups they identify with to avoid a stigmatized identity (e.g., Hogg & Abrams, 1988). As a result, the presence of an AAP in a given organization and the associated stigmatizing consequences may cause AAP targets to disassociate from their organizational identity, which could have additional negative consequences for workplace outcomes. Investigations that explore this and related questions will help further link the stigma of AAPs to other core topics in the management literature.

## CONCLUSION

AAPs improve employment outcomes for women and ethnic minorities (e.g., Kalev et al., 2006), yet also have unintended consequences in that they can negatively affect the very groups of employees they are intended to benefit. We used stereotyping

theories to advance understanding of these ironic effects of AAPs. Specifically, we extended prior work by proposing and testing a theory that specifies multiple pathways through which AAPs negatively affect the performance outcomes of their intended beneficiaries, and also suggests that there are differences in the other- and self-driven mechanisms that link AAPs to targets' performance outcomes. A more comprehensive understanding of the unintended consequences of AAPs is useful for developing strategies to prevent the negative effects of AAPs on their intended beneficiaries and thus facilitate social justice in the workplace and in society at large.

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**Lisa M. Leslie** (lleslie@stern.nyu.edu) is an associate professor in the Management and Organizations Department at the Stern School of Business, New York University. She received her Ph.D. in organizational psychology from the University of Maryland. Her research focuses on diversity in organizations, cross-cultural organizational behavior, and conflict management.

**David M. Mayer** (dmmayer@umich.edu) is an associate professor in the Management and Organizations Area at the Ross School of Business, University of Michigan. He received his PhD from the University of Maryland. His interests include social and ethical issues in organizations and his research focuses on behavioral ethics, organizational justice, and workplace diversity.

**David A. Kravitz** (dkravitz@gmu.edu) is a professor in the Management Area at the School of Management, George Mason University. He received his PhD in social psychology from the University of Illinois at Urbana-Champaign. His research focuses on affirmative action and diversity in organizations. He is particularly interested in closing the gap between diversity researchers and practitioners.

