Social dominance orientation, prejudice, and discrimination: A new computer-based method for studying discriminatory behaviors

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A number of studies have shown that the scale of social dominance orientation (SDO), used to measure the degree of preference for inequality among social groups, is a predictive measure of social and political attitudes toward stigmatized outgroups. However, the relationship between SDO and discrimination has received little attention. The main goal of this study was to assess the validity of a new computer-based method used to measure discriminatory behaviors in a laboratory setting. An additional goal was to test the mediating role of prejudice in the relation between SDO and discrimination. The results provide a first validation of this new method and demonstrate that the effect of SDO on discrimination is mediated by prejudice.

Anti-North African racism has been on the rise in recent years in France, and this group has become a prime target of prejudice and discrimination (see, e.g., Lambert, Moghaddam, Sorin, & Sorin, 1990; Pettigrew et al., 1998; Pettigrew & Meertens, 1995). Social psychologists who have tried to understand why people discriminate against members of stigmatized outgroups have proposed numerous explicit and implicit measures of prejudice, using questionnaires (see, e.g., Brigham, 1993; Dambrun & Guimond, 2001; Katz & Hass, 1988; Pettigrew & Meertens, 1995; Swim, Aikin, Hall, & Hunter, 1995) or computer-based procedure (see, e.g., Brauer, Wasel, & Niedenthal, 2000; Dambrun, Guimond, & Michinov, 2003; Dovidio & Fazio, 1992; Fazio, Jackson, Dunton, & Williams, 1995; Greenwald, McGhee, & Schwartz, 1998; Wittenbrink, Judd, & Park, 1997). Studies in which discrimination against members of outgroups has been examined are less numerous, and most of them are based on observational research in the "real world" (see, e.g., Bovenkerk, Robert, & Gilles, 1991; Goldberg, Mourinho, & Kulke, 1996; Henry & Ginsberg, 1985; Kalin, 1981). None of these research efforts was made within the context of a systematic investigation, within a laboratory setting, of individual acts of discrimination through which people try to maintain a group-based hierarchical structure in society, although this behavior is recognized as very important in social dominance theory (Sidanius, 1993; Sidanius & Pratto, 1993, 1999; Sidanius, Pratto, & Bobo, 1996).

According to this theory, all human societies are inherently oppressive and structured along group-based hierarchies (Sidanius, 1993). Most forms of oppression, including ethnocentrism, sexism, racism, nationalism, classism, and so on, help people to establish and maintain a group-based hierarchical structure in society. Social dominance theory postulates that people who are more social-dominance oriented will tend to favor hierarchy-enhancing ideologies and policies, whereas those who are less social-dominance oriented will tend to favor hierarchy-attenuating ideologies and policies. In order to test these propositions, Pratto, Sidanius, Stallworth, and Malle (1994) developed a scale of social dominance orientation (SDO), which is assumed to reflect an individual difference construct. Among numerous individual difference variables, SDO may be considered one of the most important predictors of prejudice (see, e.g., Sidanius & Pratto, 1993, 1999; Whitley, 1999). SDO refers to a very general individual difference orientation expressing the value that people place upon non-egalitarian and hierarchically structured relationships among social groups. It expresses general support for the domination of certain socially constructed groups over other socially constructed groups, regardless of the manner in which these groups are defined (Sidanius & Pratto, 1999, p. 61).

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In other words, SDO reflects approval of hierarchical and dominance relationships between social groups, regardless of whether or not one's ingroup is in a dominant position (see Sidanius, Levin, Federico, & Pratto, 2001). Thus, SDO determines the level of prejudice toward outgroups and, consequently, discrimination against members of these groups.

According to Sidanius and Pratto (1999), the desire to maintain the superior position of their ingroups motivates people high in SDO to denigrate members of outgroups and particularly members of minorities such as ethnic groups, feminists, lesbians, gays, and so on. Empirical research has widely demonstrated that in the United States SDO is related to various social attitudes, such as support of military intervention, opposition to interracial marriage, anti-Black affect, opposition to affirmative action policies, and so on (see, e.g., Pratto et al., 1994; Sidanius & Pratto, 1993; Sidanius et al., 1996). The same results were observed in different, sometimes more egalitarian countries, such as Sweden (Sidanius, Devereux, & Pratto, 1992; Sidanius & Pratto, 1993).

Paradoxically, research thus far has neglected the relation between SDO and discrimination per se. Although a number of studies have been made to examine discriminatory behaviors in the form of ingroup favoritism in the tradition of social identity theory (Tajfel & Turner, 1986), little interest has been shown in the study of individual acts of discrimination that reinforce the hierarchical structure between ingroup and outgroup, the former occupying a higher position in this structure than the latter (see, e.g., Sidanius, Pratto, & Mitchell, 1994).

The principal goal of our research was to test a new computer-based method for studying discrimination in a laboratory setting. This method, entirely computerized, measures a central element of social dominance theory—namely, individual acts of discrimination that maintain group-based hierarchies. Such a method allows one to study discrimination in both a direct and an indirect or more subtle way, in that participants are asked to assign targets of different ethnicities to positions in a prearranged hierarchical structure (which represent positions within an organization). The position assigned to each target in this structure and the order of assignment are recorded. Despite the exploratory nature of the methodology used, we should observe that, if our measures are valid, higher SDO participants will try to maintain group-based hierarchies by discriminating against targets of a different ethnicity (e.g., North Africans). Thus, we expect that high-SDO participants should be less likely than low-SDO participants to assign North African targets to the top of the hierarchical structure. Moreover, high-SDO participants should place North African targets later in the hierarchical structure than low-SDO participants would. We postulate that this measure, which involves the order in which the targets are selected for placement, is more indirect or subtle than hierarchical position itself because participants are not aware that a computer program is recording the order in which they assign each target (and themselves) in the structure. In line with this methodological innovation, some studies (e.g., Drigotas, 1993; Michinov & Monteil, 2002) have suggested that the order in which a decision is made was an efficient and subtle way to assess preferences toward individuals. Indeed, because individuals prefer similarity over dissimilarity (see, e.g., Festinger, 1954), targets that were similar to the participants were generally selected before targets that were different. In the present research, the participants were instructed to place themselves and each target in the hierarchical structure, and nothing was said about the order in which each target or the self should be placed. However, because one can expect that participants would first try to fill the top spots in the hierarchy and put the remaining targets in lower positions, we suspect that the longer it takes for a target to be put in the structure, the more likely that target is to be put at the bottom of the structure. Moreover, if placement of North African targets later (and lower in the hierarchy) than other targets reflects discrimination, then this should also relate to the participant's level of prejudice against North Africans (i.e., a negative attitude toward targets in that outgroup). Those displaying higher levels of prejudice against North African targets should place them lower in the hierarchy, and should do so after they have placed ingroup targets. Finally, because SDO determines the level of prejudice toward outgroups and, consequently, discrimination against members of these groups, we hypothesized that prejudice against North Africans would mediate the relation between SDO and discrimination measured in terms of both the position and the order of assignment of North African targets.

METHOD

Participants

Ninety Caucasian French students (81 of them female) in their first year of psychology at Blaise Pascal University in Clermont-Ferrand, France, agreed to participate in a study about "leadership in organizations." Their ages ranged from 18 to 23 years ($M = 19.4$, $SD = 1.29$). For the sake of homogeneity, the males were excluded from the statistical analysis.

Materials

The method was developed using Macintosh application software (HyperCard 2.3). Of course, it is possible to transpose the program to a more current platform, such as Revolution® (Runtime Revolution Ltd; http://www.runrev.com). Revolution® is a multiplatform software development tool that enables developers to easily create powerful applications for Mac OS X, classic Mac OS, Windows, Linux, and Unix systems. Such a platform can import HyperCard stacks directly from their native file formats. All objects and object properties (including scripts), bitmaps, icons, cursors, and sounds are converted. Only PICT images and colors are not saved.

Procedure

The participants were told that they were going to take part in a study about "leadership in organizations." On their arrival at the laboratory, the participants were seated in an experimental room in front of a microcomputer. A female experimenter told them that

they would complete a task intended to be used in recruitment situations and to be presented as a measure of leadership ability. All instructions were given on the computer screen in the absence of the experimenter. This task was divided into two basic parts. In the first part, the participants had to complete a leadership inventory designed to assess their leadership skills. More specifically, a series of 60 filler items was presented on the computer screen, one after the other, and the participants had to indicate an answer on the computer using a five-point Likert scale. For the present study, the only purpose of this task was to give some substance to the cover story, and it will not be discussed further. In the second part, the participants were to make decisions about how to best organize an office staff composed of several employees, and it is from this task that we derived measures of discrimination.

More specifically, for the second part the participants were asked to assume that they were part of an office staff composed of 6 employees and themselves. The figures (i.e., drawings of white and dark-skinned people) of these 6 employees, each identified by a first name, were presented on the screen. There were 3 women (2 of them Europeans with light skin and 1 of them North African with dark skin) and 3 men (2 of them Europeans with light skin and 1 of them North African with dark skin). The first names served to reinforce the ethnicity of each of these coworkers. Beneath these six figures, there was an empty white box, which represented the participant. Each participant was invited to type his or her initials inside this box.

The task of the participants was to make decisions about how to best organize this office. They were then presented with a hierarchical structure consisting of four levels (see the Appendix for a translation of the screen display). Thus, the participants were to assign 6 employees and themselves in a hierarchical structure that contained eight positions, one position in the structure remaining empty. To reinforce the idea that the positions in this structure reflect different levels of responsibility, above the position at the top of the pyramid was the label "Group Leader." This assignment task offered two measures of discrimination: the position in the hierarchical structure assigned to the North African targets and the order in which they were assigned. The former—that is, the extent to which the participants assigned North Africans to the bottom of the hierarchy on the basis of their group membership—can be considered a direct measure of discrimination. The latter is a more indirect measure of discrimination because the participants were not aware that a computer program was recording these data.

In the last part of the study, the participants were asked to fill out a paper-and-pencil questionnaire that included measures of intergroup attitudes (prejudice, ethnocentrism, and ingroup favoritism relative to North African outgroups) and a French translation of the SDO scale (Pratto et al., 1994).

Finally, the experimenter debriefed the participants, explaining the fictitious character of the tasks and the real purpose of the study. They were requested not to discuss the experiment with other students before its completion.

Measures

Social dominance orientation. SDO was measured with Pratto et al.'s (1994) Social Dominance Orientation scale. This scale consists of items such as "Some groups of people are simply inferior to other groups" and "It's probably a good thing that certain groups are at the top and others are at the bottom." This scale has been found to have high degrees of reliability and construct validity (Pratto et al., 1994). In the present study, the scale consisted of 10 items combined to form a composite SDO score (Cronbach's alpha = .84). Scores ranged from 1 (low SDO) to 7 (high SDO).

Prejudice. Three Likert-type measures of prejudice were used in this study, all based on seven-point rating scales. The main measure was a 15-item scale of generalized prejudice adapted to the intergroup context in France. Two complementary and classical mea-

sures were also used in the present study: an ethnocentrism scale and a measure of ingroup favoritism.

Generalized prejudice. This measure was based on a 15-item, seven-point rating scale developed on the basis of previous research (Dambrun & Guimond, 2001). This scale included eight statements reflecting a positive attitude toward outgroups (e.g., "I consider our society to be unfair to North Africans") and seven negative statements reflecting negative attitudes (e.g., "Those immigrants who do not have immigration documents should be sent back to their country"). The content of the items is similar to that of other measures of prejudice, such as Lepore and Brown's (1997) prejudice scale, although it is adapted to the intergroup context in France, where the prime targets of prejudice and discrimination are North Africans (see Lambert et al., 1990; Pettigrew et al., 1998). In the present study, the scale had an internal consistency coefficient of .85. Higher scores on this scale indicate greater levels of prejudice.

Ethnocentrism. A six-item version of Adorno, Frenkel-Brunswick, Levinson, and Sanford's (1950) ethnocentrism scale, translated into French and validated by Berry, Kalin, and Taylor (1977), was also included. The internal consistency coefficient of this scale is .65. It contains items such as "Those who do not believe that we have the greatest government in the world should leave the country" and "It is only natural and right for people to think their family is better than any other" (see Berry et al., 1977). Higher scores on this seven-point rating scale indicate greater ethnocentrism.

Ingroup favoritism relative to North Africans. Attitudes toward French (ingroup) and North Africans (outgroup) were measured on a seven-point Likert scale (1 = *totally unfavorable* to 7 = *totally favorable*). A measure of ingroup favoritism is obtained by subtracting attitudes toward the ingroup from attitudes toward the North African outgroup (see Guimond & Palmer, 1993). A positive score indicates ingroup favoritism, whereas a negative score indicates outgroup favoritism. Several studies (e.g., Esses, Haddock, & Zanna, 1993) have shown that such global evaluations of groups are an effective way to measure intergroup attitudes.

Discrimination. The order in which each participant assigned the two North African targets to the hierarchical structure was recorded by a computer program. Each target (including the participant) was assigned a score from 1 to 7 depending on the order of assignment. The higher the score, the longer was the time taken to place the North African targets in the structure. Moreover, a more direct measure of discrimination was used: the position assigned to the North African targets in the hierarchical structure. Because the participants were not provided with any information about the targets other than their group membership, any systematic tendency to reject outgroup members from the top of the social structure can be considered as discriminatory.

RESULTS

Preliminary Remarks

Because the position (and order) assigned to the North African targets and the position (and order) assigned to the non-North African targets were not entirely independent, there are statistical objections to examining the relations between these variables. For the same reason, it is statistically invalid to compare discrimination against North Africans with that against other groups. Consequently, only the discriminated or stigmatized targets (i.e., North Africans) were considered in this research. Moreover, statistical analyses carried out using the position assigned to the North African targets generally revealed the same results as those that we have reported using the order of assignment of the North African tar-

gets. Indeed, although the participants were in no way requested to proceed in a particular order, the hierarchical structure of the task somewhat constrained the participants to pick the "group leader" first, the "second in command" next, and so on. In other words, the imperative to fill top roles first probably inflated the correlation between the indirect/subtle measure of discrimination (order) and the position assigned to North Africans in the structure ($r = .59$).

Correlation Analysis

Table 1 shows that SDO scores were correlated with questionnaire measures of generalized prejudice ($r = .31, p < .01$) and ethnocentrism ($r = .31, p < .01$). The correlation with ingroup favoritism relative to North Africans, although positive, was not significant ($r = .14$). More important for our purposes, SDO scores were positively correlated with the order used to assign North African targets in the hierarchical structure ($r = .26, p < .05$). The higher the score on SDO, the more likely it was for North African targets to be assigned later. As we predicted, higher SDO participants try to maintain group-based hierarchies, putting North African targets in the hierarchical structure later. In addition, the indirect measure of discrimination was correlated with questionnaire measures of generalized prejudice, ethnocentrism, and ingroup favoritism relative to North Africans. The higher the levels of prejudice, ethnocentrism, and ingroup favoritism, the later North Africans were assigned in the hierarchical structure ($r = .27$, $r = .21$, and $r = .23$, respectively; all significant at $p < .05$).

Discriminatory Behaviors

An analytic strategy using chi-square adjustment tests was used to compare the observed assignment distributions of the low- and high-SDO participants against the distributions to be expected if assignments were made at random. Assuming a completely random model, the probabilities of placement of the two North African targets in the hierarchical structure were computed and compared with the observed distributions for the low- and high-SDO participants separately. For example, in the hierarchical structure used in the present study, there are 28 possible configurations for the two North African targets (given four levels and eight positions in the structure), with the highest possible average score being 4.0 and the lowest being 1.5. To perform this calculation, each target was assigned a score on the basis of the position assigned

in the organizational structure, from 1 (*higher level*) to 4 (*lower level*). The following formula was used to compute the number of possible configurations:

$$8! \, / \, 6! \; 2! = 56/2 = 28.$$

Assuming a completely random model, we would expect only a 4% (1 out of 28) chance of getting a 1.5, a 7% (2 out of 28) chance of getting a 2.0, a 21% (6 out of 28) chance of getting a 2.5, and so on. The probabilities for North African scores vary from 4% (score = 1.5, 1/28) to 29% (score = 3.5, 8/28). Chi-square tests yielded no difference between expected and observed distributions among the low-SDO participants [$\chi^2(4, N = 42) = 2.69$, n.s.]. In contrast, a difference was found among the high-SDO participants [$\chi^2(4, N = 39) = 10.8, p < .03$; see Table 2]. As is shown by residuals between observed and expected counts under random assignments, the high-SDO participants tended to place fewer North African targets at the top of the hierarchy than would be expected by chance and more of these targets at the lower levels. These results suggest that the low-SDO participants displayed random behavior, whereas the high-SDO participants discriminated against the North African targets, placing them at an inferior level in the hierarchical structure as opposed to making a random distribution.

Further statistical analyses were performed separately on the order in which each type of target (North African, European, male, and female) and the self were assigned to the hierarchical structure. The Kolmogorov–Smirnov goodness-of-fit test yielded no significant results for distributions (K–S $Z < 1$), suggesting that these measures did not deviate from normal distributions, except for the self because of a strong tendency to put the self first in the structure (K–S $Z = 1.9, p < .001$). A t-test analysis revealed that the high-SDO participants assigned North African targets later in the hierarchy than did the low-SDO participants [Ms = 4.32 and 3.59, respectively; $t(79) = -2.71, p < .008$]. No significant difference was observed between the high- and the low-SDO participants for the other categories (European, Ms = 4.13 and 4.35, respectively; males, Ms = 4.05 and 4.08, respectively; females, Ms = 4.36 and 4.21, respectively) or for the self (Ms = 2.81 and 3.05, respectively).

Mediation Analysis

Because measures of SDO, generalized prejudice, and order of assignment of North African targets did not deviate from a normal distribution, a mediational model was tested to determine whether the relationship between SDO and the order of assignment of North African targets to the hierarchical structure was mediated by generalized prejudice. Indeed, according to social dominance theory, group-based social hierarchy is driven by basic processes, such as individual and institutional discrimination, and these processes are themselves driven by prejudice (e.g., racism, sexism, nationalism) and influenced by SDO.

A mediational analysis (Baron & Kenny, 1986) revealed that when generalized prejudice and SDO were

Table 1
Correlations Among the Variables

Variable	M	SD	1	2	3	4	5
1. SDO	1.91	0.69	–				
2. Order[a]	3.90	1.25	.26**	–			
3. Generalized prejudice	3.05	0.90	.31**	.26**	–		
4. Ethnocentrism	2.57	0.75	.31**	.21*	.45**	–	
5. Ingroup favoritism	0.59	1.29	.14	.23*	.57**	.44**	–

Note—$N = 81$.   [a]The higher the score, the later the North African targets were assigned to the hierarchical structure.   *$p < .05$.   **$p < .01$.

Table 2
Comparison Between Expected and Observed Distributions in the Assignment of North African Targets
in the Hierarchical Structure Among Low- and High-SDO Participants

| Participants | Score | | Distribution | | Residual | χ^2 Test |
	Average	Expected Probability	Expected	Observed	(E − O)	
Low SDO	(1.5 and 2.0)	3/28	4.50	6	−1.50	$\chi^2 (4, N = 42) = 2.69$, n.s.
	2.5	6/28	9.00	10	−1.00	
	3.0	5/28	7.50	9	−1.50	
	3.5	8/28	12.00	12	.00	
	4.0	6/28	9.00	5	4.00	
High SDO	(1.5 and 2.0)	3/28	4.18	2	2.18	$\chi^2 (4, N = 39) = 10.8, p < .03$
	2.5	6/28	8.36	3	5.36	
	3.0	5/28	6.96	10	−3.04	
	3.5	8/28	11.14	18	−6.86	
	4.0	6/28	8.36	6	2.36	

Note—SDO, social dominance orientation. The 1.5 and 2.0 average score values were gathered because Cochran's (1952) rules were not followed. The expected values were calculated by multiplying the expected probability for each choice by 42 for the low-SDO group and by 39 for the high-SDO group.

simultaneously entered in a regression equation, the direct effect of SDO on the order of assignment of North Africans was reduced to a nonsignificant effect, whereas the effect of generalized prejudice remained significant (see Figure 1). To test whether this pattern of results reflects a significant reduction in the variance accounted for by SDO, a z test was performed (Sobel, 1982). The indirect effect is significant at the .05 level if the z test is larger than 1.96 in absolute value, and it is significant at the .01 level if it is larger than 2.58. In the present study, the indirect effect of SDO on discrimination was significant at .05 ($z = 1.99$). However, because the beta weight drops from .24 to .17, we are in the presence of a small effect and, consequently, a partial mediation. Although the indirect, subtle measure of discrimination is correlated with positions assigned to North Africans, a similar analysis was performed with the direct measure as outcome variable. The results showed the same pattern: The relationship between SDO and the position assigned to North Africans was eliminated once the mediator variable was included in the equation, reducing the beta weight from .22 ($p < .03$) to .09 (n.s.). The indirect effect of SDO on discrimination was significant at .01 ($z = 3.07$). Finally, when generalized prejudice was substi-

tuted for ethnocentrism in the regression equation, the mediational model was not significant.

It is clear from Figure 1 that the effect of SDO on the order of assignment of North African targets was mediated, albeit partially, by generalized prejudice. This analysis suggests that higher social dominance determines higher scores on prejudice, which, in turn, lead to assignment of North Africans later in the hierarchical structure.

DISCUSSION

The main goal of this research was to test a new computer-based method designed to measure discriminatory behaviors that result in the maintenance of group-based hierarchies. According to Sidanius and Pratto's (1993, 1999) social dominance theory, the purpose of social hierarchy maintenance is one of the most important goals for individuals in all societies (whether they be horticultural, agricultural, industrial, or postindustrial) that produce stable economic surplus. Often postulated in theory, social hierarchy maintenance behaviors have been neglected by social psychologists. Indeed, discrimination is studied less than it should be by social scien-
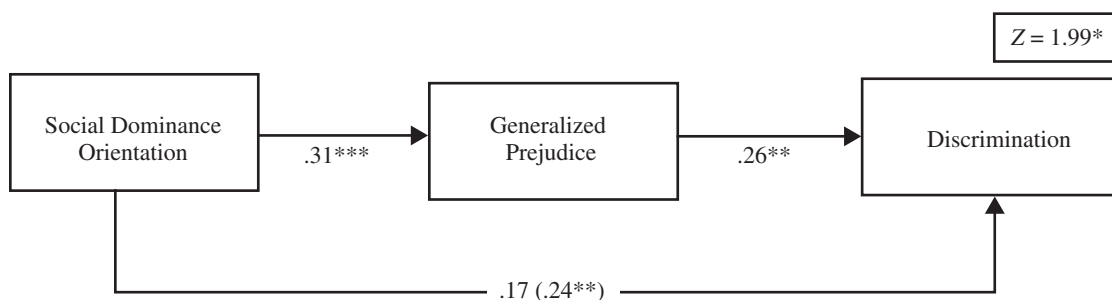

Figure 1. Mediated relationship between social dominance orientation and discrimination (order in which North African targets were assigned to the hierarchical structure) by generalized prejudice. $N = 81$. Path weights are standardized. The path weight in parentheses does not control for the effect of the mediator.   *$p < .05$.   **$p < .01$.   ***$p < .001$.

tists interested in intergroup relations because of the complexity of measuring discriminatory behaviors in a laboratory setting. The new method developed through the present research offers the opportunity to measure discrimination in a laboratory context. The task, entirely computerized, called for the participants to assign three males and three females belonging to different ethnic groups (European and North African) to a hierarchical structure. In the present study, the position and the order used to assign North African targets to the structure were used to measure discrimination directly and indirectly, respectively.

The comparison between expected and observed distributions in the assignment of North African targets was performed among low- and high-SDO participants separately. The discriminatory behaviors of the former did not differ from a random distribution, whereas the latter discriminated more than by chance. In other words, low-SDO participants made a random assignment of North African targets to the hierarchical structure, whereas high-SDO participants did not. Using our indirect measure of discrimination, results showed that the high-SDO participants assigned North African targets to the structure later than did the low-SDO participants. This strategy may reflect a subtle form of discrimination against North Africans among higher SDO participants. Such a strategy may be used to maintain group-based hierarchies in society by facilitating discrimination against a stigmatized outgroup. Indeed, individual discrimination is one of the processes involved in the formation and reproduction of group-based hierarchies according to social dominance theory (Sidanius & Pratto, 1993, 1999).

Mediational analysis revealed that the relation between SDO and the order of assignment of North African targets to the organizational structure was mediated by the level of generalized prejudice. Indeed, higher SDO participants demonstrate more prejudice against North Africans targets and put these outgroup members into the hierarchical structure later as a result. Taken together, these results speak in favor of the validity of our new measure of discrimination, in addition to providing a confirmation of some central elements of Sidanius and Pratto's (1999) theoretical model. Moreover, the results bring empirical evidence bearing on the thorny issue of the relationship between prejudice (i.e., attitude toward stigmatized outgroups) and discrimination (i.e., discriminatory behaviors). Indeed, this relation between prejudice and discrimination is often postulated but rarely demonstrated in the literature. Fiske (2000) pointed out that not enough has been done in social psychology to study discrimination and that it is urgent to do more. The method introduced here may be a useful tool in this context. As used in the present research, this computer-based method represents a kind of "minimal discrimination" paradigm that can be improved upon in future research—for example, by providing participants with more information about targets. Indeed, it can be argued that one of the main limitations of our methodology is its lack of eco-

logical validity. First, since participants have no additional information about the targets, race and gender are the only salient sources of information available for them to use in making their decisions. Hence, critics may argue that the role of race and gender may be enhanced and have potentially greater impact on the findings than would otherwise be the case. However, one problem with this argument is that it fails to distinguish between the availability of some pieces of information and their use. Given the same presumably salient information about race, how can one explain, for instance, the fact that the high- and low-SDO participants treated the North African targets differently? An additional criticism may be that using schematic persons instead of real persons reduces the ecological validity of the present method because in real-life organizational settings, people are not likely to assign institutional roles on the basis of drawings. At least two main arguments can be advanced to address these critisms. The first is that such a method may have eliminated external sources of variation that can affect judgment in real life. Indeed, by examining discrimination in a simulated organizational environment, all external sources of variation existing in real-life environments, such as the physical appearance of other persons and the scrutiny of observers, were eliminated. In other words, greater experimental control is obtained by this procedure. Moreover, some findings suggest that real-life measures and projective measures (e.g., placement on a floor plan of seats, figures, or felt dolls) were efficient to assess preferences toward individuals (e.g., Duke & Nowicki, 1972; Michinov & Monteil, 2002). The second argument is that the validity of this new method may be more "ecological" in virtual environments than in real-life settings. Indeed, with the development of virtual worlds and communication over the Internet, recent systems have promoted the concept of an avatar to represent a human user in an electronic space metaphorically simulating a real environment. For these reasons, we have chosen to examine intentional action in a "simulated" organizational environment (i.e., through the placement of schematic persons) rather than to look at effective behavior in real-life environments. Of course, enriching this basic model with more information about the target individuals or with photos of real persons may be fruitful for future studies using the same methodology.

The main limitation of the present study is that our subject population is limited to females. This aspect is crucial because social dominance theory posits a relation between sex/gender and SDO: Males are more dominance-oriented than females (Sidanius, 1993). Consequently, a test of the *invariance hypothesis* is not possible in this study because of insufficient numbers of males. This hypothesis suggests that gender differences in SDO are not affected by situational or contextual variables, but rather that, all else being equal, males tend to be more favorably disposed toward group-based hierarchy and have higher SDO scores than females (Sidanius & Pratto, 1999).

However, these findings are hotly debated today (see, e.g., Schmitt, Branscombe, & Kappen, 2003; Wilson & Liu, 2003) and future studies should compare discriminatory behaviors among women and men in studies using a computer-based method such as the one presented here. This is one important challenge for further research into the invariance hypothesis using this computer-based method in a laboratory setting.
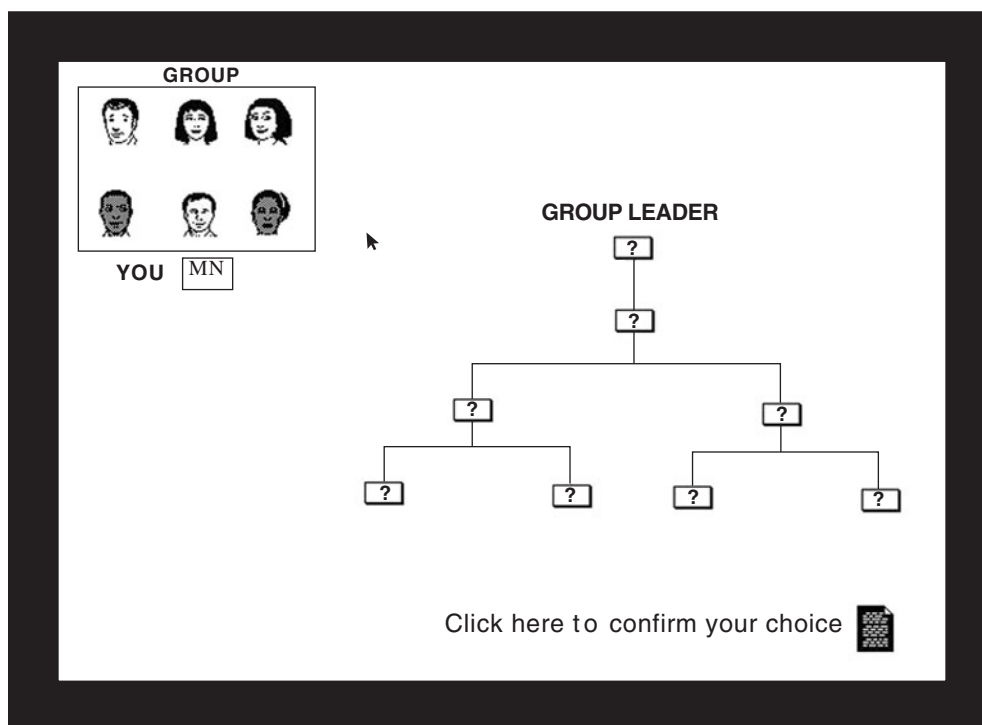
To conclude, the present study confirmed important predictions derived from social dominance theory and suggests that the new computer-based method that we have introduced to measure discriminatory behaviors may be used fruitfully in controlled studies of discrimination. For example, contrary to Sidanius et al.'s (2001) propositions, we have recently shown that SDO mediates the relationship between ingroup position and prejudice (Guimond, Dambrun, Michinov, & Duarte, 2003). More precisely, we have found that participants in a dominant social position display higher levels of prejudice than do others and that this relationship is mediated by the participants' levels of SDO. Although none of the measures used in the present study was implicit, in future studies researchers should examine more accurately the relationship between this new, indirect, and subtle measure of discrimination and different implicit techniques used in the literature, such as the Implicit Association Test (Greenwald et al., 1998). This comparison should be of interest in determining whether or not our measure reflects a conscious individual act of discrimination. The introduction of a new method in social psychology to measure discrimination requires important validation efforts, and the present study is only a first step in the development of a "minimal discrimination" paradigm.

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APPENDIX
Organizational Structure and Targets (Capture Screen)