TPM

DIMENSIONALITY IN PETTIGREW AND MEERTENS' BLATANT SUBTLE PREJUDICE SCALE

SILVIA GATTINO
ANNA MIGLIETTA
SILVIA TESTA
UNIVERSITY OF TORINO

In this study, we analyzed dimensionality for Pettigrew and Meertens' Blatant and Subtle Prejudice Scale (1995). More specifically, we sought to verify two hypotheses: first, that the scale is one-dimensional, and second, that the difference in the items featured in the two subscales (blatant and subtle) is exclusively due to their different locations on the scale of the latent variable. Expressing the latter hypothesis in the language of the Item Response Theory measurement approach we expected items from the blatant subscale to be more difficult (they require a greater level of prejudice to be positively answered by persons) than those of the subtle subscale. To this end, we used two databases (N_1 = 323; N_2 = 268), which we analyzed through confirmatory factor analysis and the partial credit model. Results confirmed our hypotheses, and highlighted the usefulness of the Item Response Theory models in analyzing prejudice scales.

Key words: Confirmatory factor analysis; IRT models; Subtle and Blatant Prejudice Scale; Unidimensionality.

Correspondence concerning this article should be addressed to Anna Miglietta, Dipartimento di Psicologia, Università degli Studi di Torino, Via Verdi 10, 10124 TORINO (TO), Italy. E-mail: miglietta@psych.unito.it

INTRODUCTION

Since the end of World War II, and especially after 1970, the expression of prejudice in Western societies has been evolving thanks to the spreading of tolerant and equalitarian ideologies. Respect for human rights, which is one of the defining traits of contemporary Western democracies, penalizes explicit expressions of prejudice that were commonplace in the past, often in association with overt discrimination. However, although open rejection of diversity is now somewhat constrained, it doesn't necessarily follow that prejudice has disappeared from the individual's cognitive and affective world. Such tendency, which mostly refers to ethnic prejudice, has also been called "modern racism" and has been confirmed by research studies conducted in various European countries, the United States, South Africa, Australia, and New Zealand (e.g., Barker, 1982; Durrheim & Dixon, 2004; Essed, 1991; Pettigrew & Meertens, 1995; Reeves, 1983; Sears, 1988; Taguieff, 1990; van Dijk, 1984; Wetherell & Potter, 1992).

From a conceptual point of view, many researchers (see, among others, Gaertner & Dovidio, 1986; Kinder & Sears, 1981; McConahay, 1986; Meertens & Pettigrew, 1997) agree that it is useful to distinguish between traditional forms of prejudice and more subtle, hidden forms. Indeed, "modern racism, unlike the old uninhibited racism, is expressed in covert ways, which avoid a direct appeal to racial values. Acts of discrimination and the voicing of prejudice will be justified in terms of any value but a racial one" (Billig, 1989, p. 218).

This conceptual distinction is reflected empirically in the various instruments developed in order to define the nature of this new construct, for instance Kinder and Sears' Symbolic Racism Scale (1981), Kleinpenning and Hagendoorn's Aversive Racism Scale (1993), the scale developed by McConahay, Hardee, and Batts (1981), the McConahay Scale (1986), and finally the Blatant and Subtle Prejudice Scale (BSPS) developed by Pettigrew and Meertens (1995). This last instrument in particular, unlike the others mentioned above, is based on a European environment and stems from data collected through the European Community Euro-Barometer Survey N° 30 of 1988, involving 3806 participants from France, the Netherlands, the United Kingdom, and former West Germany. Conceptually speaking, Blatant Prejudice (BP), defined as "hot, close and direct" (Pettigrew & Meertens, 1995, p. 58), is made up of two components: "perceived threat from, and rejection of, the outgroup" and "opposition to intimate contact with the outgroup"; whereas Subtle Prejudice (SP) is defined as "cool, distant and indirect" and consists of three components: defence of traditional values, exaggeration of cultural differences, and denial of positive emotions (Pettigrew & Meertens, 1995, pp. 58-59). The scale is made up of 20 items grouped into two subscales of 10 items each, and theoretically permits a division of subjects into three different categories: bigots, equalitarians, and subtles. Bigots score high on both scales; equalitarians, on the contrary, get low scores on both scales, while subtles are those who do not discriminate the outgroup openly (low score for blatant prejudice), but are ready to discriminate if there is a socially acceptable way of doing so (high score for subtle prejudice).[1] The fact that this scale was developed in Europe ensured its widespread use in this type of context (Gawronski, Geschke, & Banse, 2003; Hofmann, Gshwendner, & Schmitt, 2005; van Dick et al., 2004; Vrij, Akehurst, & Smith, 2003; Wagner & Zick, 1995). In Italy the scale was translated and validated by Arcuri and Boca (1996), maintaining the original response category format; following Pettigrew and Meertens validation procedures, the authors found the same factorial structure. The target group of prejudice in the Italian version of the scale was that of *Moroccans*. The choice of this specific ethnic group depended on a prior pilot study by the authors in which it emerged that Moroccans were the first ethnic group that participants mentioned when thinking about immigrants. Moreover, as Arcuri and Boca (1996) stated, in Italian the label Moroccan is used to refer to all the populations in the Maghreb area. This version of the scale was used in many research studies, even if the target group of prejudice was changed depending on different research needs (see Castelli, Arcuri, & Zogmaister, 2003; Ferrara, Solimeno Cipriano, & Villani, 2002; Manganelli Rattazzi & Volpato, 2001, 2003; Morino Abbele, Martini, & Pizzini, 2000; Volpato & Manganelli Rattazzi, 2000, among others).

In spite of its widespread use, this scale has been an object of debate within the scientific community. On the one hand, for example, Gordijn, Koomen, and Stapel (2001) asserted its effectiveness and felt it was preferable to the more popular scale developed by McConahay (1986; McConahay et al., 1981); while, on the other hand, Ganter (2001), as well as Coenders, Scheepers, Sniderman, and Verberk (2001) seriously questioned the scale effective capacity to discriminate between subtle and blatant prejudice. In particular, according to Coenders and colleagues, the confirmatory factor analysis conducted by Pettigrew and Meertens (1995) had certain limitations, "the most important of which is that the distinction between items measuring subtle prejudice and those measuring blatant prejudice was imposed as a matter of definition, not actually tested empirically" (Coenders et al., 2001, p. 295). In other words, Coenders et al. underlined as one of the scale problematic aspects the fact that Pettigrew and Meertens tested the unidimensional character of the two subscales separately, whereas only a joint analysis, leading to

the unambiguous identification of the two constructs, would actually confirm the hypothesis of a two-dimensional structure. In their study, Coenders et al. also identified two dimensions in the BSPS. However, these were different factors compared to those indicated by Pettigrew and Meertens: the first dimension referred to a broad factor (labeled general prejudice), where most items of the subscales fell, whereas the second concerned a factor comprising "merely items referring to the perception of cultural differences" (Coenders et al., 2001, p. 295).[2]

Other objections were brought up by Ganter (2001): in a study conducted in Germany, the scholar came up with the same dimensions as those identified by Coenders et al. (2001, p. 126; general prejudice and *cultural differences*) and stressed the limitations of the BSPS when trying to distinguish between the two forms of prejudice. The author identified two types of problems. The first one derived from the strong relationships found among SP items and external criteria, such as national pride and political conservatism, and regarded the capacity for the SP items to effectively identify subtle prejudice (see Ganter, 2001, p.128). The second concerned the possibility that the indicators used in this scale, particularly items relating to cultural differences, might be adequate for the American context but not for a European one. According to the author, the contents of these items were indeed better suited to identifying the attitudes of white Americans with regard to their non-white compatriots rather than the attitudes of German nationals towards immigrants in Germany.

The literature also features studies in which the BSPS has been used as a means of measuring overall prejudice, because the two subscales showed rather high correlations (rs > .50) (see for example Castelli et al., 2003; Hofmann et al., 2005). Moreover, Neuman and Seibt (2001) combined in their study the two subscales regarding the relations between implicit and explicit measures of prejudice. They based their decision on two empirical pieces of evidence: on the one hand a single factor emerged from exploratory factor analysis, and on the other the two explicit measures of prejudice did not show significantly different correlations with the implicit prejudice measure.

These empirical findings led us to conduct the present study, in order to assess the dimensionality of the BSPS through a specific analysis. More specifically, we hypothesized that the scale was actually one-dimensional, meaning that it investigated a single dimension of prejudice. Furthermore, we believed that the differences between items identifying blatant prejudice and those identifying subtle prejudice were actually due to their location on the latent scale of prejudice. According to this hypothesis, all of the scale items measured the same general prejudice construct and the level of prejudice had to be higher for individuals to express agreement with items from the BP subscale compared to items from the SP subscale. In other words, to use the Item Response Theory (IRT; Rasch, 1980) terminology, we assumed the items found in the BP subscale to be more "difficult" than those in the SP subscale.

METHOD

About Unidimensionality

In general terms, the unidimensionality of an instrument may be characterized by the fact that there is only one latent trait underlying the data (Hattie, 1985). This is one of the basic, crucial aspects of measurement theory, but, "there is not an accepted and effective index of the

unidimensionality of a set of items" (Hattie, 1985, p. 139). One of the psychometric procedures more typically used to assess the unidimensionality, and, more generally, the dimensionality, of a scale, is confirmatory factor analysis (CFA; Hoyle, 2000). Because there is a theoretical model which can specify the links between a set of items and one or more underlying constructs, CFA enables us to statistically assess whether or not the variance and covariance matrix brought forth by the theoretical model differs significantly from the empirical one. A similar technique may be applied in order to compare prior alternative models (model comparison). It is often the case that hypothesized models get refined through the elimination of some parameters and the introduction of new ones (MacCallum, 1995), so as to bring them to better fit the data (model generation). In this latter approach, an initial solution is provided that gives rise to indications on how to modify the model, and the model is then re-specified before being tested on the same data a second time. The redefined model necessarily fits the data better than the original one, but, as it is at least partly generated by the sample data, there is a risk that it may not be generalized to other data. Contrary to other research strategies, the model generation method is not strictly confirmatory, and so models obtained through this method cannot be deemed valid unless they can be replicated on other independent databases (MacCallum, 1995).

Further information regarding scale dimensionality may be drawn from the application of unidimensional IRT models for binary- and polytomously-scored items. Indeed, in such models unidimensionality is assumed a priori, and any non-negligible violation of it produces inadequate fit measures. The IRT analysis may serve as a second verification of the instrument dimensionality, albeit a weaker one (in this case, contrary to what happens with CFA, unidimensionality is not tested, but rather assumed; Miceli, Sotgiu, & Settanni, 2008).

Databases

For both databases, the data were gathered during the school year 2005/2006. The first database consisted of the responses given by 323 Italian students in their final (senior) year of high school in Turin (general high school 22.6%, technical high school 43.7%, vocational high school 33.7%), 46.4% of whom were male and 53.6% female, aged from 18 to 23 years (64.3% aged from 18 to 19 years). From the original 344 participants, 21 were excluded because of missing data. Participants were administered the Italian version of the BSPS (Arcuri & Boca, 1996), with items scored on a 7-point scale.

The second database consisted in the responses given by 268 Italian university students from the Department of Economics and the Department of Architecture in Turin, divided as follows: 44.4% male, 55.6% female (mean age = 26.0, *SD* = 3.1). From the original 305 participants, 37 were excluded because of missing data. The items were scored on a 5-point scale. The target group of prejudice in the first database was *Moroccans*, as in the validated Italian version (Arcuri & Boca, 1996); in the second database three target groups were considered: *Moroccans, the Chinese*, and *Immigrants.*

Data Analysis

In the present study, we used confirmatory factor analysis following the model comparison method cited above. We compared the unidimensional model that we hypothesized with Pet-

tigrew and Meertens' (1995) original model. In order to obtain an acceptable fit to data, we re-specified both models (model generation). Our modifications, although essentially plausible, justified the use of a second database. With the first database, we identified the factor model (one- or two-dimensional) that best accounted for the responses to the 20 items, whereas we used the second database in a strictly confirmatory perspective, in order to verify the validity of the refined model. On this second database we used the IRT model to investigate our hypothesis on the varying difficulty of items.

On the variance-covariance matrix of the first database, we applied CFA through the use of LISREL 8.72 (Jöreskog & Sörbom, 1993). Because data violated the multinormality condition (Mardia's multivariate omnibus test of skewness and kurtosis (2) = 360.85, $p < .01$), we used the Maximum Likelihood method (ML) to estimate parameters with a correction of chi-square and standard errors (Satorra & Bentler, 1994). Two alternative models were estimated: the unidimensional model and the model with two correlated factors (the first referring to blatant prejudice items, and the second to subtle prejudice items). We used the following criteria in order to assess the model fit to data: RMSEA < .08; CFI > .90; SRMR < .10 (Browne & Cudeck, 1993; Hu & Bentler, 1995).[3] Both models were re-specified following the indications of the Modification Index (MI), as is typically done in such cases.

The modified model was applied to the second database, using the same criteria. This second database was then subjected to the partial credit model (Masters, 1982), to the aim of analyzing the difficulty level of the items.[4] This analysis was conducted using Winsteps (Linacre, 2003). Infit and Outfit values were used in order to ensure that the model fit to data was acceptable; more precisely, we expected values between .5 and 1.5 for each of the 20 items (Linacre, 2003; Wright & Masters, 1982).

RESULTS

First Database

Table 1 shows the fit values of the two estimated models. As may be observed, both models respect the acceptability threshold for SRMR, but were unsatisfactory for the others indexes, namely CFI and RMSEA.

In both models, the highest Modification Indexes were found for the parameters relative to the covariance between errors in the following pairs of items: BP3, BP4; BP2, SP3; SP4, SP5; and SP7, SP8 (see Appendix A for the contents of items). Such covariance was considered plausible, given the similarity in the formulation or in the content of items. More specifically, items BP3 and BP4, besides their identical initial wording ("I would not mind"), considered situations in which differences (economic or professional) were minimal between immigrants and compatriots; items BP2 and SP3 both explicitly recalled the concept of "trying harder," items SP4, SP5, besides showing identical initial wording ("How often …"), had to do with the expression of positive feelings towards immigrants; finally, the pair SP7 and SP8 dealt with a values dimension. Such characteristics belonged exclusively to these specific pairs of items and not to the re-

maining items. In the four pairs considered, it seemed that items shared not only one or more common factors of prejudice, but also part of their specificity.

TABLE 1
Confirmatory factor analysis of BSPS. Goodness-of-fit indices (Database 1, $N = 323$)

Model	Satorra-Bentler scaled-χ^2	*df*	$p \cong$	RMSEA (90% confidence interval)	CFI	SRMR
Bidimensional model of subtle and blatant prejudice	726.8	169	.00	.10 (.093-.109)	.89	.08
Unidimensional model of prejudice	745.0	170	.00	.10 (.095-.110)	.89	.08

Note. BSPS = Blatant and Subtle Prejudice Scale; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Residuals.

Through the introduction of the four error covariances, we obtained the results reported in Table 2.

TABLE 2
Confirmatory factor analysis of BSPS with estimation of four covariances among errors. Goodness-of-fit indices (Database 1, $N = 323$)

Re-specified model	Satorra-Bentler scaled-χ^2	*df*	$p \cong$	RMSEA (90% confidence interval)	CFI	SRMR
Bidimensional model of subtle and blatant prejudice	461.3	165	.00	.07 (.067-.083)	.94	.07
Unidimensional model of prejudice	462.1	166	.00	.07 (.066-.083)	.94	.07

Note. BSPS = Blatant and Subtle Prejudice Scale; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Residuals.

The two re-specified models fulfilled the cutoff criteria and showed the same values in terms of RMSEA, CFI, and SRMR. The difference in chi-squares was not statistically significant (SB scaled chi-square difference (1) = .36; $p \cong .55$)[5] meaning that the unidimensional model was better than the bidimensional one (that is the correlation between the two factors, .986, is non-statistically different from 1). Tables 3a and 3b show loadings, as well as unique variances and errors covariances (standardized values) estimated by the model.

Loadings for items that Pettigrew and Meertens (1995) related to blatant prejudice were high ($M = .59$) and statistically significant ($ps < .05$); loadings for items considered as indicators of subtle prejudice were on average lower ($M = .42$), but were also statistically significant ($ps <$

.05). Error covariances were all positive, and particularly high in the case of items SP7 and SP8 (.38, standardized value).

TABLE 3a
Parameters estimates for the unidimensional re-specified model (Database 1, *N* = 323)

Item	Standardized loadings	Unique variances
BP1	.39	.85
BP2	.59	.65
BP3	.65	.58
BP4	.61	.63
BP5	.61	.63
BP6	.68	.54
BP7	.62	.62
BP8	.49	.76
BP9	.64	.59
BP10	.65	.58
SP1	.34	.89
SP2	.52	.73
SP3	.27	.93
SP4	.58	.67
SP5	.58	.67
SP6	.65	.58
SP7	.48	.77
SP8	.13	.98
SP9	.32	.90
SP10	.33	.89

Note. BP = Blatant Prejudice; SP = Subtle Prejudice. For the meaning of the 20 items, see Appendix A.

TABLE 3b
Parameters estimates for the unidimensional re-specified model (Database 1, *N* = 323)

Pairs of items	Error covariances (standardized values)
BP3, BP4	.22
BP2, SP3	.30
SP4, SP5	.33
SP7, SP8	.38

Note. BP = Blatant Prejudice; SP = Subtle Prejudice. For the meaning of the 20 items, see Appendix A.

Second Database

The unidimensional model with four covariances between errors was estimated on the second database, resulting in a sufficient fit of the model to data: Satorra-Bentler scaled-Chi

square (166, N = 268) = 362.50, $p \cong .00$; RMSEA = .07 (90% confidence interval: .057-.076); CFI = .95; SRMR = .07. Tables 4a and 4b report the obtained parameters for the estimated model.

TABLE 4a
Parameters estimates for the unidimensional re-specified model (Database 2, N = 268)

Item	Standardized loadings	Unique variances
BP1	.52	.73
BP2	.58	.67
BP3	.66	.56
BP4	.64	.60
BP5	.57	.67
BP6	.63	.60
BP7	.43	.81
BP8	.61	.63
BP9	.69	.52
BP10	.56	.69
SP1	.41	.83
SP2	.63	.60
SP3	.23	.95
SP4	.40	.84
SP5	.45	.80
SP6	.61	.62
SP7	.38	.86
SP8	.17	.97
SP9	.24	.94
SP10	.32	.90

Note. BP = Blatant Prejudice; SP = Subtle Prejudice. For the meaning of the 20 items, see Appendix A.

As with the first database, all loadings were statistically significant ($p < .05$), and those from the original BP scale were higher than those from the original SP scale (Ms = .59 and .38 respectively).

TABLE 4b
Parameters estimates for the unidimensional re-specified model (Database 2, N = 268)

Pairs of items	Error covariances (standardized values)
BP3, BP4	.26
BP2, SP3	.23
SP4, SP5	.35
SP7, SP8	.39

Note. BP = Blatant Prejudice; SP = Subtle Prejudice. For the meaning of the 20 items, see Appendix A.

Standardized error covariances were also in line with the pattern found in the first database (see Table 3b). Results from the application of the partial credit model are reported in Table 5.

TABLE 5
Partial credit model estimates and fit measures (Database 2, $N = 268$)

Item	Measure	Standard error	Infit	Outfit
BP8	.93	.10	.96	.79
BP9	.77	.09	.86	.62
BP6	.71	.09	.87	.57
BP5	.67	.09	.95	.73
BP4	.49	.08	.90	1.04
SP6	*.48*	.08	.93	.85
SP2	*.42*	.08	.85	.81
BP3	.41	.08	.86	.66
SP3	*.23*	.08	1.36	1.44
BP1	.15	.07	1.01	.95
BP2	–.04	.07	.89	.86
BP7	–.23	.06	1.11	1.26
SP4	–.28	.07	1.04	1.04
SP5	–.32	.07	.97	.95
BP10	*–.38*	.07	.90	.89
SP1	–.54	.07	1.04	1.06
SP9	–.63	.07	1.18	1.20
SP10	–.64	.07	1.17	1.15
SP7	–.68	.07	.99	.99
SP8	–1.53	.07	1.26	1.38

Note. Items are ordered from the most difficult to the easiest. For the meaning of the 20 items, see Appendix A. Items which are more difficult or easier than expected from their belonging to SP or BP subscales are shown in italics.

The first column shows the estimated level of difficulty for each item; the second column gives the standard error for the respective estimate, while the last two columns show the fit measures.[6] The model provided a reasonable fit to data because all items had Infit and Outfit values within the acceptability limits. By analyzing the items in terms of their degree of difficulty, we can see that, apart from some exceptions (shown in italics in Table 5), the BP subscale items were more difficult (i.e., a higher level of prejudice is necessary in order to agree with the statement), whereas the SP items tended to be easier.

DISCUSSION AND CONCLUSION

This study examines the dimensionality of the BSPS, that, according to its authors (Pettigrew & Meertens, 1995), is composed of two correlated factors, labeled blatant and subtle prejudice. The scale capacity to distinguish between a subtle and a blatant dimension of prejudice was independently questioned by other authors, who nonetheless had assumed the existence of two

factors, one referring to prejudice and the other to cultural differences (see Coenders et al., 2001; Ganter, 2001). The present study used two unrelated databases. In both cases, results confirmed our hypothesis that the scale refers to a single dimension of prejudice. Therefore, the scale cannot be used to distinguish between the two forms of prejudice. Moreover, the scale cannot be used to distinguish between prejudice and a different factor, namely, cultural differences.

One important implication of our results concerns the typology suggested by Pettigrew and Meertens (1995). This typology can be obtained by crossing the two dummy variables based on respondents' scores relative to the two subscales (BP, SP), which should enable researchers to separate respondents into the bigots', equalitarians', and subtles' categories. Indeed, when a one-dimensional instrument is treated as two-dimensional, the resulting subscales are, in traditional test-theory terms, parallel forms. The typology obtained through dichotomizing and crossing two parallel forms is as follows: two concordant categories (i.e., high scores or low scores in both forms) and two discordant categories (i.e., high scores in one form and low scores in the other). Whereas the first two are meaningful inasmuch as they indicate the intensity of the construct, the other categories do not provide useful information because their discrepancies are exclusively due to accidental error, mainly the imprecise nature of the instrument itself. So, the unidimensionality of the scale makes it impossible to carry out this classification, which, as it happens, is one of the most interesting applications of the scale.

Moreover, confirmatory factor analyses brought to light certain affinities between pairs of items, due to their wording or content, which required us to specify the parameters regarding covariance between errors. We believe the introduction of such covariances does not threaten the validity of our conclusion regarding the unidimensionality of the scale. Indeed, affinities found ex post on the first database also emerged in the second database, which confirmed that they were not sample-idiosyncratic. However, it might be argued that covariances between errors may be just as good a way to specify a second dimension. For instance, if the covariances had involved only items relating to cultural differences, the resulting model — regardless of the kind of parameters adopted — would have been two-dimensional. As for our results, covariances between errors do not indicate the existence of a second dimension. On the one hand, even the original two-dimensional model requires the introduction of the same correlations, found in the one-dimensional model, in order to obtain a reasonable fit. On the other hand, the specific pairs of items with correlated errors do not exclusively belong to the BP or the SP subscale, nor do they exclusively involve items referring to a particular content domain such as cultural differences (Coenders et al., 2001). Further evidence of the scale unidimensionality comes from the analysis performed using the partial credit model, suggesting that the distinction between blatant and subtle prejudice has more to do with a difference in terms of item difficulty rather than a difference in constructs.

The results obtained through the partial credit model largely confirm the hypothesis of an order in terms of difficulty among the items; generally speaking, in order to express agreement with the items referring to blatant prejudice in the original scale, a higher level of prejudice is necessary, whereas it is easier (i.e., a lower level of prejudice is sufficient) to agree with items presumably focusing on subtle prejudice. Only one item from the original BP Scale, that is, BP10, violates the expected order, being placed among the SP items. The reason for this probably lies in the item content, which is not so unlike the content of items referring to cultural differences (SP scale).

The reason for classifying items SP2, SP3, and SP6 as belonging to the more difficult group, that is together with the BP scale items, might indicate an Italian cultural trait. Indeed, the possibility that the respondents' cultural features influence the order of items cannot be excluded. For example, the belief that non-European immigrants should avoid places where they are not welcome (SP6) might be particularly anathema for Italians (as opposed to other European citizens), because of past discrimination toward Southern Italians who emigrated to Northern Italy. As these preliminary results suggest, it would be useful to consider item difficulty when analyzing possible variations in the expression of prejudice in different cultural contexts.

In our opinion, after more than 10 years from its formulation, the BSP scale needs to be revised in its item formulation and rationale. Some items have to be differentiated in their content or wording, in order to avoid error covariances; the capacity of the scale to distinguish between subtle and blatant prejudice should be reconsidered, putting the problem in terms of item difficulty.

ACKNOWLEDGMENTS

The authors would like to thank Professor Renato Miceli for his constant and friendly support throughout the writing of this study.

NOTES

1. There is also a fourth category, labeled "Errors" by the authors, which cannot be interpreted from a theoretical standpoint. It is made up of participants who get a high score for blatant prejudice and a low score for subtle prejudice. This category must comprise a small number of participants (< 2%) for the typology to be considered valid.
2. See the article by Coenders et al. (2001) for a detailed description of the procedure chosen by Pettigrew and Meertens (1995), and the limitations of this procedure; see also the response given by Pettigrew and Meertens (2001).
3. The BPS scale is composed of five subdimensions (two for the blatant prejudice and three for the subtle prejudice), which can make the unidimensionality or bidimensionality of the scale harder to assess. For this reason, we did not use the more restrictive criteria proposed by Hu and Bentler (1999; CFI > .95, RMSEA < .06, SRMR < .08), and suggested by one anonymous reviewer.
4. Among the various IRT models for polytomously scored items, we chose the partial credit model, because it preserves the characteristics of Rasch dichotomic model (specific objectivity, separateness between estimated individual parameters, and estimated item parameters), and does not pose constraints of equality between parameters referring to the response categories in the various items.
5. We used the Satorra and Bentler scaled difference χ^2 test (Satorra & Bentler, 2001) as implemented by Crawford and Henry (Sbdiff program cited in Crawford & Henry, 2003).
6. Item difficulty was calculated as the average of parameter values of the item response categories. Each response category parameter is the expression (in logit unit of measurement) of the level of prejudice necessary to choose with an higher probability that particular category instead of the previous one.

REFERENCES

Arcuri, L., & Boca, S. (1996). Pregiudizio e affiliazione politica: destra e sinistra di fronte all'immigrazione del Terzo Mondo [Prejudice and political affiliation: Right and left wings contronted with

Third World immigration]. In P. Legrenzi & V. Girotto (Eds.), *Psicologia e politica* (pp. 241-274). Milano: Cortina.
Barker, M. (1982). *The "new racism": Conservatives and the ideology of the tribe.* Frederick, MD: University Publications of America.
Billig, M. (1989). *Arguing and thinking: A rhetorical approach to social psychology*. Cambridge-Paris: Cambridge University Press, Éditions de la Maison des Sciences de l'Homme.
Bollen, K. A., & Grandjean, B. D. (1981). The dimension(s) of democracy: Further issues in the measurement and effects of political democracy. *American Sociological Review*, *46*, 651-659.
Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
Castelli, L., Arcuri, L., & Zogmaister, C. (2003). Perceiving ingroup members who use stereotypes: Implicit conformity and similarity. *European Journal of Social Psychology, 33,* 163-175.
Coenders, M., Scheepers, P., Sniderman, P. M., & Verberk, G. (2001). Blatant and subtle prejudice: Dimensions, determinants and consequences; some comments on Pettigrew and Meertens. *European Journal of Social Psychology, 31,* 281-297.
Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology, 42*, 111-131.
Durrheim, K., & Dixon, J. (2004). Attitudes in the fiber of everyday life: The discourse of racial evaluation and the lived experience of desegregation. *American Psychologist, 59*, 626-636.
Essed, P. (1991). *Understanding everyday racism: An interdisciplinary theory.* Newbury Park, CA: Sage.
Ferrara, P. C., Solimeno Cipriano, A., & Villani, M. G. (2002). L'effetto del contatto sul pregiudizio. Una ricerca sulle relazioni interetniche [The effect of contact on prejudice. Research on inter-ethnic relationships]. *Ricerche di Psicologia, 25*, 23-37.
Gaertner, S., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination and racism* (pp. 61-89). Orlando, FL: Academic Press.
Ganter, Z. (2001). Zu Subtil? Eine empirische Űberprűfung neuerer Indikatoren zur Analyse interethnischer Beziehungen [Too subtle? An empirical test of new indicators for the analysis of inter-ethnic relations]. *Kolner Zeitschrift für Soziologie und Sozialpsychologie, 53,* 111-135.
Gawronski, B., Geschke, D., & Banse, R. (2003). Implicit bias in impression formation: Associations influence the construal of individuating information. *European Journal of Social Psychology, 33,* 573-589.
Gordijn, E. H., Koomen, W., & Stapel, D. A. (2001). Level of prejudice in relation to knowledge of cultural stereotypes. *Journal of Experimental Social Psychology, 37,* 61-72.
Hattie, J. (1985). Methodology review: Assessing unidimensionality of tests and items. *Applied Psychological Measurement*, *9*, 139-164.
Hofmann, W., Gshwendner, T., & Schmitt, M. (2005). On implicit-explicit consistency: The moderating role of individual differences in awareness and adjustment. *European Journal of Personality, 19,* 25-49.
Hoyle, R. H. (2000). Confirmatory factor analysis. In H. E. A. Tinsley & S. D. Brown, (Eds.), *Handbook of applied multivariate statistics and mathematical modeling* (pp. 465-497). San Diego, CA: Academic Press.
Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling. Concepts, issues, and applications* (pp. 76-99). London: Sage.
Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
Jöreskog, K. C., & Sörbom, D. (1993). *LISREL 8: User's reference guide.* Chicago: Scientific Software.
Kinder, D., & Sears, D. (1981). Prejudice and politics: Symbolic racism versus racial threats to the good life. *Journal of Personality and Social Psychology, 40,* 414-431.
Kleinpenning, G., & Hagendoorn, L. (1993). Forms of racism and the cumulative dimension of ethnic attitudes. *Social Psychology Quarterly, 56,* 21-36.
Linacre, J. M. (2003). *WINSTEPS Rasch measurement computer program*. Chicago: Winsteps.com.
MacCallum, R. C. (1995). Model specification: Procedures, strategies, and related issues. In R. H. Hoyle (Ed), *Structural equation modeling* (pp. 16-36). Thousand Oaks, CA: Sage.
Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika*, *47*, 149-174.
Manganelli Rattazzi, A. M., & Volpato, C. (2001). Forme sottili e manifeste di pregiudizio verso gli immigrati [Subtle and blatant forms of prejudice against immigrants]. *Giornale Italiano di Psicologia, 28*, 351-375.
Manganelli Rattazzi, A. M., & Volpato, C. (2003). Social desirability of subtle and blatant prejudice scales. *Psychological Reports, 92*(1), 241-250.
McConahay, J. B. (1986). Modern racism, ambivalence and the modern racism scale. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination and racism* (pp. 91-127). Orlando, FL: Academic Press.
McConahay, J. B., Hardee, B. B., & Batts, V. (1981). Has racism declined in America? It depends on who is asking and what is asked. *Journal of Conflict Resolutions, 25,* 563-579.

Meertens, R. W., & Pettigrew, T. F. (1997). Is subtle prejudice really prejudice? *Public Opinion Quarterly, 61,* 54-71.

Miceli, R., Sotgiu, I., & Settanni, M. (2008). Disaster preparedness and perception of flood risk: A study in an alpine valley in Italy. *Journal of Environmental Psychology*, *28*, 164-173.

Morino Abbele, F., Martini, M., & Pizzini, S. (2000). Territorialità e distanza sociale: uno studio sul pregiudizio etnico [Territoriality and social distance: An ethnic prejudice investigation]. *Ricerche di Psicologia*, *24*, 107-124.

Neuman, R., & Seibt, B. (2001). The structure of prejudice: Associative strength as a determinant of stereotype endorsement. *European Journal of Social Psychology, 31,* 609-620.

Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology, 25,* 57-75.

Pettigrew, T. F., & Meertens, R. W. (2001). In defence of the subtle prejudice concept: A retort. *European Journal of Social Psychology, 31,* 299-309.

Rasch, G. (1980). *Probabilistic models for some intelligence and attainment tests*. Chicago: University of Chicago Press (first published 1960).

Reeves, F. (1983). *British racial discourse: A study of British political discourse about race and race-related matters*. Cambridge, UK: Cambridge University Press.

Satorra, A., & Bentler, P. M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In A. Von Eye & C. C. Clogg (Eds.), *Latent variable analysis: Applications for developmental research* (pp. 399-419). Thousand Oaks, CA: Sage.

Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika, 66*, 507-514.

Sears, D. (1988). Symbolic racism. In P. A. Katz & D. A. Taylor (Eds.), *Eliminating racism: Profiles in controversy* (pp. 53-84). New York: Plenum.

Taguieff, P. A. (1990). The new cultural racism in France. *Telos, 83,* 109-122.

van Dick, R., Wagner, U., Pettigrew, T. F., Christ, O., Wolf, C., Petzel, T., et al. (2004). Role of perceived importance in intergroup contact. *Journal of Personality and Social Psychology*, *87*, 211-227.

van Dijk, T. (1984). *Prejudice in discourse: An analysis of ethnic prejudice in cognition and conversation*. Amsterdam: J. Benjamins.

Volpato, C., & Manganelli Rattazzi, A. M. (2000). Pregiudizio e immigrazione. Effetti del contatto sulle relazioni interetniche [Prejudice and immigration. Effects of contact upon interethnic relationships]. *Ricerche di Psicologia, 24,* 57-80.

Vrij, A., Akehurst, L., & Smith, B. (2003). Reducing ethnic prejudice: An evaluation of seven recommended principles for incorporation in public campaigns. *Journal of Community and Applied Social Psychology, 13,* 284-299.

Wagner, U., & Zick, A. (1995). The relation of formal education to ethnic prejudice. Its reliability, validity and explanation. *European Journal of Social Psychology, 25,* 41-56.

Wetherell, M., & Potter, J. (1992). *Mapping the language of racism: Discourse and the legitimation of exploitation*. New York: Columbia University Press.

Wright, B. D., & Masters, G. N. (1982). *Rating scale analysis: Rasch measurement*. Chicago: MESA Press.

APPENDIX A

Items in the Italian version of the scale (Arcuri & Boca, 1996) and in the original English version.

	Italian version	Original English version
BP1	La maggior parte dei politici si preoccupa troppo dei marocchini e non abbastanza dell'italiano medio	More politicians in Italy care too much about Moroccans and not enough about the average Italian person
BP2	Nella maggior parte dei casi, i marocchini che vivono nel nostro paese e che ricevono aiuto dall'assistenza sociale potrebbero farne a meno se solo ci mettessero più impegno	Most Moroccans living here who received support from welfare could get along without it if they tried
BP3	Non avrei nulla in contrario se un marocchino con una posizione economica simile alla mia sposasse un membro della mia famiglia (*)	I would not mind if a Moroccan person who had a similar economic background as mine joined my close family by marriage (*)
BP4	Non avrei nulla in contrario a lavorare alle dipendenze di un marocchino adeguatamente qualificato (*)	I would not mind if a suitably qualified Moroccan person was appointed as my boss (*)
BP5	I marocchini occupano posti di lavoro che spetterebbero agli italiani	Moroccans have jobs that Italians should have
BP6	Supponi che un membro della tua famiglia abbia avuto un bambino con colore della pelle e caratteristiche fisiche molto diverse dalle sue. Se ciò accadesse, quanto ti infastidirebbe il fatto che il bambino possa non assomigliare per niente ai membri della tua famiglia?	Suppose that a child of yours had children with a person of very different colour and physical characteristics than your own. Do you think you would be very bothered, bothered, bothered a little, or not bothered at all, if your grandchildren did not physically resemble the people on your side of the family?
BP7	Sarei disposto/a ad avere rapporti sessuali con un/a marocchino/a (*)	I would be willing to have sexual relationships with a Moroccan(*)
BP8	I marocchini discendono da popolazioni che possiedono abilità meno sviluppate e questo fatto spiega come mai non se la cavino altrettanto bene della maggior parte degli italiani	Moroccans come from less able races and this explains why they are not as well off as most Italian people
BP9	Italiani e marocchini non potranno mai sentirsi a proprio agio gli uni con gli altri anche nel caso in cui diventassero amici	Italian people and Moroccans can never be really comfortable with each other, even if they are close friends
BP10	Pensando alla caratteristica dell'onestà, dovresti dirci quanto, a tuo parere, sono diversi o simili i marocchini che vivono qui rispetto agli italiani come te	How different or similar do you think Moroccans living here are to other Italian people like yourself, in how honest they are?
SP1	Molti gruppi che si sono stabiliti in Italia tempo addietro sono riusciti a vincere pregiudizi nei loro confronti e ad integrarsi nella vita del nostro paese. I marocchini dovrebbero fare la stessa cosa senza godere di speciali favoritismi	Many other groups have come to Italy and overcome prejudice and worked their way up. Moroccans should do the same without special favor
SP2	I marocchini che vivono nel nostro paese trasmettono ai loro figli valori ed abilità che non sono necessari per avere successo in Italia	Moroccans living here teach their children values and skills different from those required to be successful in Italy

(*appendix continues*)

Appendix A (continued)

SP3	Il problema è che le persone non ci mettono l'impegno necessario per riuscire. Se i marocchini si sforzassero di più, potrebbero raggiungere lo stesso livello di benessere degli italiani	It is just a matter of some people not trying hard enough. If Moroccans would only try harder they could be as well off as Italian people
SP4	Quanto spesso ti sei sentito solidale con i marocchini che vivono qui? (*)	Have you ever felt the following ways about Moroccans and their families living here … How often have you felt sympathy for Moroccans living here?(*)
SP5	Quanto spesso hai provato ammirazione per i marocchini che vivono da noi? (*)	Have you ever felt the following ways about Moroccans and their families living here … How often have you felt admiration for Moroccans living here?(*)
SP6	Sarebbe preferibile che i marocchini che vivono nel nostro paese evitassero i posti in cui la loro presenza non è gradita	Moroccans living here should not push themselves where they are not wanted
SP7	Indica qual è a tuo parere il grado di diversità fra marocchini e italiani riguardo ai valori che insegnano ai loro bambini	How different or similar do you think Moroccans living here are to other Italian people like yourself, in the values that they teach their children?
SP8	Indica qual è a tuo parere il grado di diversità fra marocchini e italiani riguardo alle loro credenze e pratiche religiose	How different or similar do you think Moroccans living here are to other Italian people like yourself, in their religious beliefs and practices?
SP9	Indica qual è a tuo parere il grado di diversità fra marocchini e italiani riguardo ai loro valori e abitudini sessuali	How different or similar do you think Moroccans living here are to other Italian people like yourself, in their sexual values or sexual practices?
SP10	Indica qual è a tuo parere il grado di diversità fra marocchini e italiani riguardo al modo in cui parlano l'italiano	How different or similar do you think Moroccans living here are to other Italian people like yourself, in the language that they speak?

Note. (*) reversed item; BP = Blatant Prejudice; SP = Subtle Prejudice.

APPENDIX B

Correlations, means (*M*), and standard deviations (*SD*) for the 20 items.

Database 1

	BP1	BP2	BP3	BP4	BP5	BP6	BP7	BP8	BP9	BP10	SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP10
BP1	1.00																			
BP2	.42	1.00																		
BP3	.22	.31	1.00																	
BP4	.24	.31	.67	1.00																
BP5	.44	.35	.39	.39	1.00															
BP6	.30	.36	.53	.48	.39	1.00														
BP7	.23	.17	.43	.38	.28	.24	1.00													
BP8	.35	.37	.44	.37	.36	.43	.21	1.00												
BP9	.31	.37	.49	.53	.32	.45	.23	.40	1.00											
BP10	.22	.38	.34	.27	.25	.30	.19	.34	.44	1.00										
SP1	.36	.43	.19	.19	.22	.22	.17	.20	.20	.28	1.00									
SP2	.38	.36	.37	.39	.37	.31	.32	.34	.49	.34	.27	1.00								
SP3	.32	.36	.03	.00	.23	.11	.04	.20	.05	.19	.29	.12	1.00							
SP4	.12	.18	.35	.31	.15	.21	.32	.23	.32	.27	.19	.24	.11	1.00						
SP5	.23	.26	.33	.29	.19	.25	.31	.23	.29	.28	.30	.28	.15	.52	1.00					
SP6	.30	.35	.39	.40	.42	.41	.22	.42	.50	.33	.20	.34	.14	.15	.23	1.00				
SP7	.16	.11	.22	.15	.15	.19	.07	.22	.22	.39	.23	.39	.04	.14	.21	.17	1.00			
SP8	.11	.04	.09	.03	.04	.11	.03	.06	.07	.12	.11	.21	.00	.05	.13	.10	.45	1.00		
SP9	.13	.10	.09	.04	.06	.11	.11	.13	.09	.21	.11	.30	.01	.08	.18	.12	.46	.38	1.00	
SP10	.10	.25	.20	.23	.12	.17	.09	.24	.22	.17	.07	.20	.01	.20	.19	.16	.23	.15	.18	1.00
M	2.38	2.75	1.96	1.77	1.78	1.65	2.59	1.70	1.61	3.08	3.25	2.3	2.55	3.01	3.07	1.93	3.34	4.1	3.26	3.34
SD	1.32	1.21	1.29	1.23	1.15	1.13	1.57	1.06	1.12	1.23	1.16	1.21	1.22	1.16	1.16	1.28	1.18	1.08	1.2	1.24

(*appendix continues*)

Appendix B (continued)

Database 2

	BP1	BP2	BP3	BP4	BP5	BP6	BP7	BP8	BP9	BP10	SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP10
BP1	1.00																			
BP2	.33	1.00																		
BP3	.22	.35	1.00																	
BP4	.21	.32	.62	1.00																
BP5	.32	.43	.35	.40	1.00															
BP6	.24	.35	.49	.47	.40	1.00														
BP7	.21	.33	.53	.46	.37	.42	1.00													
BP8	.14	.23	.28	.25	.29	.34	.22	1.00												
BP9	.30	.29	.37	.41	.40	.47	.39	.42	1.00											
BP10	.26	.38	.45	.36	.36	.40	.42	.38	.38	1.00										
SP1	.30	.47	.17	.11	.28	.15	.14	.12	.19	.18	1.00									
SP2	.16	.36	.25	.35	.36	.34	.28	.32	.28	.35	.19	1.00								
SP3	.24	.46	.08	.01	.28	.13	.12	.07	.08	.27	.38	.19	1.00							
SP4	.17	.30	.48	.47	.32	.36	.47	.23	.41	.34	.14	.21	.02	1.00						
SP5	.20	.39	.43	.36	.34	.36	.45	.19	.35	.34	.24	.23	.10	.66	1.00					
SP6	.20	.41	.36	.30	.44	.49	.35	.40	.47	.43	.18	.39	.27	.31	.32	1.00				
SP7	.20	.30	.32	.28	.18	.33	.21	.21	.33	.34	.26	.29	.11	.28	.31	.23	1.00			
SP8	.07	.12	.03	-.05	-.02	.02	.05	-.02	.00	.13	.18	.11	.07	.13	.16	.12	.44	1.00		
SP9	.11	.20	.22	.07	.08	.18	.21	.14	.13	.31	.09	.25	.16	.15	.20	.21	.41	.35	1.00	
SP10	.02	.18	.18	.12	.16	.17	.16	.19	.17	.30	.03	.19	.06	.32	.31	.29	.20	.27	.13	1.00
M	3.94	4.49	3.85	2.91	3.17	2.67	4.45	2.38	2.36	3.71	4.92	3.10	3.88	4.54	5.37	3.09	4.68	6.09	4.64	4.84
SD	2.02	1.86	2.33	2.12	2.09	2.04	2.27	1.60	1.91	2.09	1.88	1.80	1.82	1.59	1.47	2.05	1.69	1.32	1.82	1.82

Note. For the meaning of the 20 items, see Appendix A.