Understanding social hierarchies:

The role of ideological configurations for Group-Focused Enmity

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For Lynn and Constanza.

"... la verdad es que no les concedo mucha importancia a mis libros. Estoy mucho más interesado en los libros de los demás."

Roberto Bolaño

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Table of contents

Summary

To study the maintenance and justification of social hierarchies social psychologist have used the concept of ideology. Although defined as an organization of values, beliefs, and attitudes concerning the social order, most approaches to the study of ideology concentrate in one element, usually an ideological attitude such as right-wing authoritarianism or social dominance orientation.

These restrictive approaches have limitations. First, they define ideology at the individual psychological level, giving less importance to a definition of ideology which also includes the social level. They concentrate on explaining, for instance, which motivations underlay the ideological attitudes, or which psychological needs or personality factor explain the development of the ideological attitudes. And second, the different ideological attitude are considered to be competing variables to explain intergroup attitudes or system legitimizing attitudes.

In three articles we propose that intergroup relationships can be studied using ideological configurations, this is an organization of ideological attitudes especially suited to provide a background for intergroup hostilities and system justification. Ideological configurations allow to avoid some of the limitations mentioned before, by giving attention to the specificity of intergroup situations. For different situations, different ideological attitudes can be used with the same legitimizing function. The content of the ideological configuration varies but the legitimizing function remains stable.

In the first article, the concept of ideological configuration is proposed to refer to a complex of ideological attitudes–right-wing authoritarianism (RWA) and social dominance orientation (SDO)–based on a shared core of derogation of outgroups. This idea is tested in two surveys, in Chile and in Germany, by using the shared core of derogation to predict attitudes toward foreigners. Analyses using structural equation modeling (SEM) showed that a second-order factor involving RWA and SDO predicts hostility toward foreigners in Germany and affection toward Peruvian and

Argentinean immigrants in Chile. The model presented here is better at predicting attitudes toward foreigner than the model based in the two separate ideological attitudes.

In the second article we examined the ideological configurations as a function of social classes. Prejudice is more prevalent among members of the working class than among members of the middle or upper class. We took part in the discussion on whether education works to suppress prejudice among upper class members or, on the contrary, to enhance genuinely tolerant attitudes. We proposed that (1) two indicators of social class–income and education–independently predict prejudice toward multiple targets as follow: lower levels of income and education are associated with higher levels of prejudice. (2) The connection between social class and prejudice is explained by the endorsement of system-legitimating ideological attitudes, namely RWA and SDO. We tested these hypotheses in four studies using cross-sectional surveys in Europe (Studies 1 and 2, Ns = 11,330 and 2,640) and longitudinal data from Germany and Chile (Studies 3 and 4, Ns = 343 and 388). Results showed that education and income exert independent negative effects on prejudice. The effect of education is stronger than the effect of income, which is not stable across countries. The relationships between income and prejudice and education and prejudice are mediated by RWA and SDO. We concluded that people of the working class generally endorse an ideological configuration that is well-suited for legitimating the social system.

In the third article we propose an ideological configuration based on the interactive relationship of ingroup identification and SDO. Several studies indicate that ingroup identification does not systematically correlate with prejudice. We tested the moderating role of SDO, a group-based ideological attitude that strongly predicts prejudice, for the identification-prejudice relationship. Studies 1 and 2 are based on national representative surveys from Germany (N_1=2000 and N_2=808), whereas in Study 3 ingroup identification was experimentally manipulated (N_3=122). Results showed that the relationship of religious identification with anti-Semitism (Study 1) is stronger for those high in SDO; gender identification predicts sexism and prejudice toward gay

people only for people high in SDO (Study 2); and the effect of national identification on prejudice toward foreigners (Study 2) and Muslims (Study 3) is also moderated by SDO. We concluded that prejudice follows from an ideological configuration in which identification defines the specific target of prejudice for people holding group-based ideologies.

Introduction

Discrimination is probably the most evident manifestation of a hierarchical organization of societies. Those who belong to groups with low status or powerless are often victimized because of their group memberships. Most people could say that they have been discriminated. Most people could say that they are disadvantaged because of their group memberships.

Since the origin of social sciences, scholars have tried to understand why, although most people admit to have been victim of some kind of group based discrimination, social hierarchies remain stable over decades or even centuries and radical changes are almost never pursued.

The social psychological study of ideology

The concept of ideology was introduced to explain the stability of social structures. Initially, it was defined as a psychological mechanism with the function of hiding the contradictions of the capitalist system (Marx & Engels, 1845/1965). In psychology, a consensual definition is that ideologies are organizations of attitudes, values, and beliefs concerning the social order (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Billig, 1982; Jost, 2006).

Social psychologists have developed several explanations about the existence and maintenance of arbitrary social hierarchies. Four research lines have become the most prominent theories that explain group conflict using the concept of ideology. (1) Research on authoritarianism —and more specifically right-wing authoritarianism (RWA)—posits that people develop an orientation to support strong authorities and punishment of deviants (Adorno et al., 1950; Altemeyer, 1981; Duckitt, Bizumic, Krauss, & Heled, 2010; Feldman, 2003). (2) Researchers on the social identity theory propose that people favour the ingroup over outgroups (Tajfel & Turner, 1986). (3) In social dominance theory, authors argue that dominant groups support the maintenance of social hierarchies, while subordinate groups promote equality (Pratto, Sidanius, & Levin, 2006; Sidanius & Pratto, 1999, 2012). (4) According to system justification theory, especially among the

disadvantaged groups, people not only have positive attitudes toward the ingroup, but may even show preference for outgroups in order to justify the social system and the status quo (Jost, Banaji, & Nosek, 2004; Jost & Banaji, 1994; Jost & van der Toorn, 2012).

However, all these theories have some common limitations, from which I would like to stress two. First, the theory development has been concentrated mostly in the individual psychological level, leaving in a secondary place the relationship between ideology and the concrete conditions of group's existence (Haye, Carvacho, & Larraín, 2011). For instance, social dominance theory posits that a generalized individual orientation (social dominance orientation, SDO) underlies the maintenance of arbitrary social hierarchies (Levin, Sidanius, Rabinowitz, & Federico, 1998; Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999, 2012). It is important to mention that overall social dominance theory is genuinely a multilevel theory. However, research in this framework addressing the discussion about ideologies focus mainly the concept of SDO. This point is discussed with more detail in the next section.

Another example of this limitation is the conceptualization of political conservatism as motivated cognition (Jost, Federico, & Napier, 2009; Jost, Glaser, Kruglanski, & Sulloway, 2003a, 2003b; Jost, Nosek, & Gosling, 2008; Jost, 2006). Two central dimensions were identified as the core of the ideologies: acceptance versus rejection of social change, and preference for equality versus hierarchies. These dimensions explain the distinction between liberal and conservatives, left and right wingers. Jost and colleagues found that the ideological differentiation is driven by epistemic (e.g. need for cognition), existential (e.g. threat), and relational (e.g. need for shared reality) motives (Jost et al., 2009, 2003b). No reference to the social level is given to explain ideologies.

Second, the different ideological attitude are considered to be competing variables to explain intergroup attitudes or system legitimizing attitudes. This is particularly interesting for the cases of identification, RWA, and SDO. In the last fifteen years, researchers demonstrated that RWA and

SDO have additive effects on prejudice (Altemeyer, 1998; Cohrs & Asbrock, 2009; Duckitt, Wagner, du Plessis, & Birum, 2002; Mirisola, Sibley, Boca, & Duckitt, 2007; Thomsen, Green, & Sidanius, 2008). Research following this findings uses RWA and SDO as independent predictors, i.e. both make separate contributions to explain intergroup attitudes.

For the case of group identification, some researcher have proposed a competitive approach where the ideological attitudes are confronted in their predictive power to group identification (Reynolds, 2001; Reynolds et al., 2007; Turner & Reynolds, 2003). According to this authors, ideological attitudes are a competitive hypothesis with respect to the postulates of social identity theory, which gives group identification the main role. So far results are inconclusive.

Social dominance theory and the multilevel account of ideology

In the nineties, Sidanius and Pratto (1999) proposed the social dominance theory. According to them, arbitrary social hierarchies, such us those based on race, ethnicity, nationality, social class, religion, and so on, are maintained because of a set of mechanisms that work in three different levels (Sidanius & Pratto, 2012).

At the societal level, the mechanisms are hierarchy-enhancing and hierarchy attenuating institutions and legitimizing ideologies (Sidanius & Pratto, 2012). Institutions allocate resources to different groups as a function of the forces driven the institution. Hierarchy-enhancing institutions allocate more resources to dominant groups whereas hierarchy-attenuating institutions allocate more resources to subordinate groups (see also Haley & Sidanius, 2005). Examples of hierarchy-enhancing institutions are internal security forces or large corporations maximizing profit. Human rights organizations or legal aid groups for the poor or the refugees are examples of hierarchy-attenuating institutions.

Legitimizing ideologies are socially available myths, which might be expressed in the form of values, discourses, or beliefs. The legitimizing myths are often used to convince dominants and

subordinates alike of the fairness of social hierarchies (Sidanius & Pratto, 1999). As institutions, legitimizing myths can be either hierarchy-enhancing or hierarchy-attenuating. Hierarchy-enhancing legitimizing myths are for example the belief in the protestant work ethic or in the divine right of kings. Examples of hierarchy-attenuating legitimizing myths are the universal declaration of human rights or affirmative action.

At the intergroup level, Sidanius and Pratto (2012) proposed two mechanisms. First, contextual or situational elements, such as histories of past conflicts or intergroup threat, have an impact on discrimination and stereotyping. Second, the available behavioral repertory depends on the power of the groups. It is easier for members of each group to behave in a way that does not challenge the established social order and reproduce the status quo.

At the individual level they proposed two mechanisms (Sidanius & Pratto, 2012). First, aggregated levels of discrimination, including all kinds of interpersonal behaviors. Second, multiple individual psychological orientations, usually consistently aligned under the general orientation to endorse group-based social hierarchies, namely SDO.

How the different levels interact and, especially, what is the relationship between the individual and the social level of ideologies are question that remains open in social dominance theory.

Ideological configurations

To deal with the limitations mentioned before I propose to bring into the discussion the concept of ideological configurations .

Ideological configurations are specific ways of organizing attitudes, values, and beliefs with the function of maintaining and justifying the social order. The ideological configurations work independent of the content of the specific attitudes, values, and beliefs. Its function is the defining feature of the concept. The attitudes, values, and beliefs that are part of an ideological configuration

might change from context to context, from group to group. The function, on the contrary, remains stable.

The use of ideological configurations allow to combine elements from the different theories in a flexible way. The explanation of a given situation of group conflict is not necessarily explained by a unique construct, but for a complex in which none of the ideological attitudes play a defining role. People use some ideological attitudes in one moment or situation and others in a different moment or situation. The mechanism and the result however remain the same. People legitimize the status quo and justify derogation of others.

The concept of ideological configuration also promotes a change in the way the discussion about the causes of the ideological attitudes has been conducted. Because ideological attitudes are treated as individual differences, narrow psychological explanations can work properly in an empirical assessment. A personality trait such as openness to experience is very close in a conceptual level to conventionalism—one of the defining cores of RWA—therefore, it is easy to expect a strong correlation between both constructs (see Sibley & Duckitt, 2008); or to find a relationship between openness to experience and any measure of political conservatism (Carney, Jost, Gosling, & Potter, 2008). However, the fact that most of the evidence about this relationship is correlational (Cohrs, Kämpfe-Hargrave, & Riemann, 2012), is indicative at least of the lack of clear distinction between the concepts.

Ideological configurations can be linked to group level or social level variables, even if the link between the individual psychological level variables is not clear. If a certain ideological configuration is defined for a group, its ideological function can be assessed with independence of the epistemological status of the constructs used for building the configuration. The elements of the ideological configuration can be attitudes, values, discourses, beliefs, traits, and so on, and the conceptual distinction of the single elements do not change the nature of the ideological configuration as a whole. The use of ideological configurations make such distinction less relevant,

because the different psychological facets of the ideological phenomenon have no impact in the fact that people use conventional and conservative attitudes to justify the status quo. The challenge is to identify the specific configuration used in a specific situation.

Moreover, when social variables—e.g. group status—are included in the discussion, the nature of the relationships involved is very difficult to grasp. It seems that there is an agreement among the four theories discussed here that status is also an antecedent of ideological attitudes (Jost, Pelham, & Sullivan, 2003; Napier & Jost, 2008; Sidanius & Pratto, 1999; Tajfel & Turner, 1986; for critiques see Brandt, 2013; Küpper, Wolf, & Zick, 2010). However, the theories do not agree on whether status predict more or less conservative ideologies! For instance, whereas social dominance theory indicates that higher status leads to higher SDO and support of hierarchy-enhancing legitimizing myths (Sidanius & Pratto, 1999), the theory of system justification and the literature on working-class authoritarianism propose the opposite (Jost, Pelham, & Sullivan, 2003; Napier & Jost, 2008).

Ideological configurations and prejudice

My research focuses on the study of the relationship between ideological configurations and intergroup attitudes such as prejudice. There is a strong correlation between prejudice and discrimination (e.g. Asbrock, Christ, & Wagner, 2007; Schütz & Six, 1996), which has been tested experimentally (Dovidio, Gaertner, Nier, Kawakami, & Hodson, 2004) and with longitudinal data (Wagner, Christ, & Pettigrew, 2008). Therefore, research on prejudice is of central importance to understand the derogatory function of ideological configurations.

Research on the relation between ideological attitudes and prejudice has a long tradition in social psychology (Adorno et al., 1950; Allport, 1954). In particular, RWA and SDO are considered two of the most important predictors of prejudice (Altemeyer, 1998; Duckitt et al., 2002; Pettigrew, Wagner, & Christ, 2007; Six, Wolfradt, & Zick, 2001; Zick et al., 2008; Zick, Küpper, &

Hövermann, 2011).

Beside RWA and SDO, group identification has also been proposed as predictor of prejudice (Tajfel & Turner, 1986; Tajfel, 1982). Even though experiments and field studies indicate that ingroup identification does not systematically correlate with degrees of negativity toward outgroups (Brown & Zagefka, 2005; Mummendey, Klink, & Brown, 2001; Pehrson, Brown, & Zagefka, 2009), a positive relationship can be found under certain conditions (Becker & Wagner, 2009; Brewer, 1999; Pehrson et al., 2009). Some of these conditions are the perception of outgroups as competitive or threatening, and the belief in moral superiority of the ingroup.

Finally, the idea of prejudice toward different groups constituting a unique syndrome of group–focused enmity (GFE) has been proved, by Zick and colleagues (Zick et al., 2008; Zick, Küpper, & Heitmeyer, 2009). This idea was also presented by Adorno and colleagues (1950) under their notion of authoritarian personality, and by Allport (1954) in his classic book about the nature of prejudice. However, most research has been conducted using prejudice toward single targets. Following Zick and colleagues (2008), the GFE syndrome involves prejudice toward different groups and there is a central factor underlying it: an ideology of inequality. In fact, they found that there are an extremely high correlations between GFE and SDO, and GFE and RWA.

Research on ideological configurations

The research agenda presented in the previous section has been developed in three articles, which test different ideological configurations. The first and the second article proposed ideological configurations based on RWA and SDO that challenge the additive approach to these ideological attitudes. The second article also deal with the problem of the individual psychological bias in research, by exploring the relationship between social class and the ideological configuration. The third article, as the first, confront the additive and competitive account of ideological attitudes by proposing and ideological configuration based on the interactive relationship between SDO and group identification.

Ideological configurations and prediction of attitudes toward immigrants in Chile and Germany

I used the common core between RWA ans SDO, which consists of an ideology of derogation of others, to predict attitudes toward foreigners. The leading hypothesis in this paper was that the common core between RWA and SDO predicts prejudice toward foreigners at least as precisely as both ideological attitudes separate, controlling for the effect of the other. The rationale is that although RWA and SDO are clearly different concepts, underlain by different motivations (Duckitt et al., 2002), both of them are used to justify and legitimize the current social order (Jost & Hunyady, 2005). The specific mechanism is that both ideological attitudes incorporate derogation as a defining element.

RWA encompasses three components: conventionalism, authoritarian submission and authoritarian aggression (Altemeyer, 1981; Funke, 2005). Conventionalism is the tendency to support social norms and conform to the group. Authoritarian submission is the unrestricted approval and obedience to authorities. And authoritarian aggression is the support to punishment of deviants by authorities. Authoritarian aggression is precisely the component of RWA that best

expresses derogation.

SDO is defined as the support to group-based social hierarchies (Pratto et al., 1994; Sibley & Liu, 2010; Sidanius & Pratto, 1999). People high in SDO believe that some groups are superior than others. Groups on the bottom are therefore treated in a derogatory manner.

In the article I tested in two probability samples, from Chile and Germany, whether the ideological configuration based in the common core of RWA and SDO is a better predictor than the addition of the separate effects of RWA and SDO. The latter is the usual way in which these ideological attitudes have been used to predict prejudice, following the research that has proven both concepts to be different and complementary (Altemeyer, 1998; Asbrock, Sibley, & Duckitt, 2010; Duckitt & Sibley, 2009, 2010; Duckitt et al., 2002; Duckitt, 2006; Mirisola et al., 2007; Sibley et al., 2013; Thomsen et al., 2008).

Results of structural equation modeling proved that the ideological configuration based on the common core, is at least as good predictor of attitudes toward foreigners as both attitudes separate. In the case of Chilean sample results were slightly stronger for the ideological configuration than for the separate predictors. In the case of the German sample, the prediction based on the ideological configuration was clearly better than the one based on the separate predictors.

Considering these results, I propose that a new approach to understand the relationship between RWA and SDO should be incorporated in intergroup conflict research. The additive approach emphasizes the differences between both ideological attitudes and does not account for their commonalities (e.g. see Carvacho, Manzi, Haye, González, & Cornejo, under review), neither for an interactive relationship as suggested elsewhere (e.g. Altemeyer, 2004; Wilson & Sibley, 2013).

On the relationship between social class and prejudice: The roles of education, income, and ideological attitudes

As mentioned before, the prevalence of authoritarian attitudes among people from the working class has been widely documented (Houtman, 2003; Lipset, 1959; Napier & Jost, 2008). In this paper we assessed a theoretical model in which we assumed that social class membership is an antecedent of ideological attitudes—RWA and SDO—which in turn predict prejudice. We expected that people from the working class would show higher levels of RWA and SDO, and therefore, higher levels of prejudice.

This model brings two important innovations for the literature in the topic. First, never before RWA and SDO have been included together in a full mediation model on the relationship between social class and prejudice. The role of RWA is well documented (e.g. Napier & Jost, 2008), but not the role of SDO. In fact, competing hypotheses are present in the literature. On the one hand, in the social dominance theory status is a direct antecedent of SDO. The higher the status the higher the level of SDO (Lee, Pratto, & Johnson, 2011; Pratto et al., 1994; Sidanius & Pratto, 1999). On the other hand, Pratto and colleagues (1994) were cautious regarding social class, because different authors have shown a negative relationship between social class and SDO (e.g. Küpper, Wolf, & Zick, 2010). Based in our previous findings (Carvacho, 2010), we expected RWA and SDO to work in the same way, this is both are negatively predicted by social class and mediate the relationship between social class and prejudice in the same direction.

Second, it is very clear that education is negatively related to prejudice and other system legitimizing attitudes (Adorno et al., 1950; Allport, 1954; Jost & Hunyady, 2002; Wagner & Zick, 1995), but it is not clear if different indicators of social class would have the same connection. In this paper, beside education, we focused on the role of income, to guarantee that the expected patterns do not depend uniquely of education, but of multiples elements of social class.

We presented four studies in which we tested the full model. Studies 1 and 2 were based in

multiple probability samples of Germany, France, Great Britain, and the Netherlands. In Studies 3 and 4 we tested the model using longitudinal data from Germany and Chile, to assess the causal relationship in our model.

Results showed that both education and income have independent negative effects on prejudice. The relationships of education and income with prejudice are mediated by both RWA and SDO. Although the results are not completely stable across studies, the patterns are very clear.

We concluded that the working class presents an ideological configuration specially suited to legitimize the status quo, and derogate multiple minority groups. Our results are consistent with the idea that especially low status groups justify the system (Jost & Hunyady, 2005) and contradict some recent claims arguing that the disadvantaged do not legitimize the system more than the privileged (Brandt, 2013).

Group identification leads to prejudice when people endorse group-based hierarchies

The question of when ingroup identification becomes outgroup derogation is still open (Brewer, 1999; Brown & Zagefka, 2005; Pehrson et al., 2009). To address that question we proposed an ideological configuration based on the interactive relationship between SDO and group identification. SDO moderates the relationship between group identification and derogatory attitudes toward outgroups, namely prejudice. Group identification is used to define a specific target group, whereas social dominance orientation fuels derogatory attitudes.

We tested this assumptions in three studies using cross-sectional data from probability samples of the general population and experimental data, in which we manipulated group identification. We used measurements of religious identification, gender identification, and national identification and multiple targets of prejudice, such us, Jews, Muslims, foreigners, gay people and women.

Results using correlational and experimental data converged in a similar patter. There was an

effect of identification on prejudice only among people displaying high levels of SDO. This interaction effect emerged when the target group was defined based on the same category as the activated identification.

The interaction between social dominance orientation and identification explains the conditions under which outgroup derogation arises in a novel and integrative way, bringing together social dominance theory (Sidanius & Pratto, 1999, 2012) and social identity theory (Tajfel & Turner, 1986). This approach contradicts the usual practice of using identification and SDO as two competitive predictors of prejudice (e.g. Reynolds et al., 2007), and on the contrary, we proposed to use both identification and SDO together as an ideological configuration.

Discussion

In three articles we illustrated that intergroup relationships can be studied using ideological configurations, this is an organization of ideological attitudes especially suited to provide a background for intergroup hostilities and system justification.

The use of ideological configurations goes beyond the most traditional approaches in social psychology in that it does not look for one concept that explains every individual difference, as it was intended for some ideological attitudes (e.g. Altemeyer, 1981; Pratto et al., 1994; Reynolds, 2001; Reynolds et al., 2007), nor stay in the additive level of predictors (e.g. Duckitt et al., 2002). The concept of ideological configuration implies that for different groups, socially available ideological attitudes could play specific roles, and the relationship between the ideological attitudes could vary depending upon the need of a group in a given situation. For instance, group identification might lead to outgroup derogation, but this is not an universal principle and only applies for certain groups in certain conditions (see Brewer, 1999), such as in combination with high levels of SDO.

The concept of ideological configuration allows to reconcile function and content of ideologies. Whereas research on ideological attitudes has been concentrated on the content of the attitudes, for example distinguishing the dimensions of RWA (Duckitt et al., 2010; Duckitt & Bizumic, 2013; Funke, 2005) or the dimensions of SDO (Ho et al., 2012; Jost & Thompson, 2000), system justification theory has been concentrated on the function of the attitudes (Jost & Hunyady, 2002). Using the concept of ideological configuration both content and function of the attitudes are connected, in a flexible way that varies from context to context.

This research has to be considered only as a first step in the development of the concept of ideological configurations. Many issues remain open and need further investigation. I would like to stress three of them. First, even though we showed that ideological configurations depend on socio structural antecedents such as social class (see also Carvacho & Haye, 2008; Haye, Carvacho,

González, Manzi, & Segovia, 2009), it is not yet clear how groups with unbalanced power and status develop different ideological configurations that explain behavioral asymmetries. At the moment we have identified ideological configurations in which groups differ in their levels of endorsement—whether members of a group tend to be high or low in a given set of attitudes—but not in the constitution of the ideological configuration. We have also identified ideological configurations that explain mainly the perspective of the majority, but not the perspective of the minority, for instance in the case of the interaction between group identification and SDO. Future research should be able to address this point by developing models that test complementary ideological configuration as a function of power and status.

Second, in the present research the focus has been to predict different forms of GFE, especially prejudice toward multiple outgroups. Ideological attitudes and prejudice are by definition very close. It remains as a challenge to move forward and use ideological configuration to explain actual behavior and other forms of discrimination. One example of this could be to combine ideological configurations to predict aggressive behavior, in a similar way as Diehl, Rees, and Bohner (2012) have done for the case of sexual harassment. Testing whether the ideological motives underlying prejudice generalize to behavior is of theoretical and practical relevance.

Third, the social dominance theory is the only, from the theories revised here, that openly present ideology as a multilevel phenomenon. In this theory ideologies can be both socially available legitimizing myths or individual endorsement of such myths (Levin et al., 1998; Sidanius & Pratto, 2012). None of the other theories address this issue and only consider the individual level of analysis. But not even in the social dominance theory there is a clear explanation on how levels are connected. This is a very good example of the need of multilevel theories in social psychology (Pettigrew, 2006) or theories that integrate of culture-specific processes with general social-psychological principles (Guimond et al., 2013). There have been many attempts to understand what exactly means that an ideology is socially available or what is the social level. Some of them

have used theoretical concepts such as shared reality (Jost, Ledgerwood, & Hardin, 2008), social representations (Corbetta, Cavazza, & Roccato, 2009), or social discourse (Purvis & Hunt, 1993; van Dijk, 1998), but still they have not found a reasonable way of connecting the social with the psychological level to explain the multilevel nature of ideologies (Augoustinos, 1999; Billig, 1999; Foster, 1999; Haye et al., 2011; Magnusson, 1999; Parker, 1999).

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Appendix

Paper 1:

Carvacho, H. (2010). Ideological Configurations and Prediction of Attitudes toward Immigrants in
Chile and Germany. *International Journal of Conflict and Violence*, *4*(2), 220 – 233. Retrieved
from http://ijcv.org/index.php/ijcv/article/view/83

Paper 2:

Carvacho, H., Zick, A., Haye, A., González, R., Manzi, J., Kocik, C., & Bertl, M. (accepted with
minor revisions). On the relation between social class and prejudice: The roles of education,
income and ideological attitudes. *European Journal of Social Psychology.*

It also includes the decision letter and status of the submission.

Paper 3:

Carvacho, H., Henseler, A.-K., Kocik, C., & Zick, A. (submitted). Group identification leads to
prejudice when people endorse group-based hierarchies. *Psychological Science.*

It also includes the Supplementary material submitted for review and a document indicating status
of the submission.

Ideological Configurations and Prediction of Attitudes toward Immigrants in Chile and Germany

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Ideological Configurations and Prediction of Attitudes toward Immigrants in Chile and Germany

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The concept of ideological configuration is proposed to refer to a complex of ideological attitudes – Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) – based on a shared core of derogation of outgroups. This concept is used in two surveys, in Chile and in Germany, to predict attitudes toward foreigners. Analyses using structural equation modeling (SEM) showed that a second-order factor involving RWA and SDO predicts hostility toward foreigners in Germany and affection toward Peruvian and Argentinean immigrants in Chile. This prediction was stronger in Germany than in Chile. The difference in strength is discussed in terms of the kind of measurements, different contexts of migration, and characteristics of the immigrants. Further research using the concept of ideological configuration is proposed.

Research in social sciences and particularly in social psychology has tried to explain the derogation of others using different notions of ideology (Billig 1982). Since *The Authoritarian Personality* was published (Adorno et al. 1950), most definitions in psychology describe ideology as an organization of attitudes, values, and beliefs giving meaning to political and social behaviors (Jost 2006). The concept of ideological configurations is proposed here to describe the articulation and constellation of certain ideological attitudes. One specific ideological configuration, encompassing the common core between Social Dominance Orientation (SDO) and Right-Wing Authoritarianism (RWA), is used to predict attitudes toward others.

This article compares the prediction of attitudes toward foreigners in Chile and Germany by using the ideological configurations of the general population in both countries,

employing a comparative perspective with cross-cultural data. Research on attitudes toward immigrants and immigration using this approach has increased recently (Ceobanu and Escandell 2010; Citrin and Sides 2008; Meuleman et al. 2009), but it has been mainly used in surveys in North America and Europe. This article takes up the challenge of including countries outside of these regions, where migration has different characteristics. The comparison of attitudes toward immigrants and immigration between European countries and the United States has shown that individual ideological variables (e.g. political orientation, preference for cultural and religious homogeneity, and so on) are stronger predictors than country-level variables such as GDP, unemployment rate, or size of the migrant population (Citrin and Sides 2008; Sides and Citrin 2007). Investigating whether these findings are replicated in a different cultural context, such as Chile, becomes particularly relevant.

In addition, the definition of ideological configurations used here enriches the theoretical discussion of attitudes toward immigrants, because it is based on ideological attitudes (RWA and SDO) that have been widely used in different cultural contexts. The approach laid out in this study could be used in further research in different regions as a way to avoid the problem of contextual dependence of more specific ideological issues, focusing on the cross-cultural comparison of relations between variables.

This article belongs to the research tradition of the study of attitudes and prejudice research, which takes up the challenge of predicting discriminatory behavior. For example, meta-analytic studies have shown an important correlation between attitudes and behavior (Dovidio et al. 1996; Schütz and Six 1996). More recently, using experimental designs (Dovidio et al. 2004) and longitudinal data (Wagner, Christ and Pettigrew 2008), the causal relationship has been tested, concluding that prejudice predicts behavior. Identifying how attitudes lead to discrimination is a central task in conflict research, because a better understanding of this phenomenon has great potential for preventing conflict and discrimination.

1. Ideological Configurations

Even though a psychological component has been part of the discussion of the concept of ideology from the very beginning – for example in the Marxist notion of false consciousness (as outlined in *The German Ideology*) – research on social psychology of intergroup conflict has just started to use this notion systematically, drawing on research into authoritarianism mainly since the publication of *The Authoritarian Personality* (Adorno et al. 1950; see also Fromm 1942). Initially, the impact of Theodor Adorno and his colleagues' writings was not widespread. For example, in Gordon Allport's *The Nature of Prejudice* (Allport 1954) – probably the most influential work in prejudice research – the concept of ideology does not play an important role in the author's arguments, although some of his propositions could be interpreted to include ideological components.

Criticisms of *The Authoritarian Personality,* especially concerning methodological issues (Funke 2005), kept research on authoritarianism in the background for many years. But after Robert Altemeyer published *Right-Wing Authori-*

tarianism (Altemeyer 1981), methodological problems were partially left behind while an increasing number of scholars have considered ideology as a relevant concept to explain the derogation of others. Since then, the measurement of RWA has been widely used in social psychology.

Research on authoritarianism has not been the only field to include ideology as a key concept. Starting in the seventies, Social Identity Theory, or SIT (Tajfel and Turner 1986) proposed the importance of "individuals' belief systems about the nature and the structure of the relations between social groups in their society" (p. 9) to understanding the stability of group hierarchies. More recently, two new theories have been proposed with a focus on ideology, based on some of the basic assumptions of SIT: Social Dominance Theory (Sidanius and Pratto 1999) and System Justification Theory (Jost and Banaji 1994). The former argues that a general orientation toward social dominance (SDO) can enhance or attenuate hierarchies (captured by the two dimensions of SDO: support for group-based dominance and opposition to equality), via legitimizing myths such as prejudices. System Justification Theory has concentrated on psychological mechanisms, such as stereotyping, that have the ideological function of justifying the system and the status quo – even among groups where this justification could work against self or group interests. Measurements of RWA and SDO have been extensively used in social psychology to predict attitudes such as prejudice toward outgroups. This prediction has been tested in different cultural contexts (Duriez, Van Hiel, and Kossowska 2005; Pratto et al. 2000; cf. Lehmiller and Schmitt 2007), and toward multiple groups, for example, in the form of a syndrome of prejudice (Bäckström and Björklund 2007; Zick et al. 2008).

RWA and SDO were developed to capture the ideological background of intergroup attitudes across societies. Authors of these theories were expecting to define a general ideological orientation that applies in many different contexts. The definition and operationalization of these concepts allowed researchers to find similar patterns independent of context. However, some evidence shows that both ideological attitudes are context-dependent and sensitive to group dynamics (Jetten and Iyer 2010). For example, Kreindler (2005) suggested that both variables depend on

group processes; SDO reflects category differentiation, based on group membership, whereas RWA reflects normative differentiation, based on group prototypicality.

In order to avoid this problem, here both concepts are treated as ideological attitudes, that is, as basic evaluations of ideological objects such as social hierarchies, norms, group boundaries, and so on. However, the definition of the concept of attitude itself is not free of problems, specially regarding the stability of attitudes. Attitudes have been defined as constructed on the spot from accessible information, and yet also as stable entities stored in memory (Bohner and Dickel 2011). According to recent findings, the proximity of the attitude's object strongly affects the stability of the attitude, with attitudes regarding proximal objects being more volatile than attitudes regarding distal objects (Ledgerwood, Trope, and Chaiken 2010). If this is so, ideological attitudes such as RWA and SDO, which refer to very abstract objects such as group hierarchies or norms, should be generally stable. Whether these constructs are stable enough to be shared in different contexts, with fixed meanings, as values seem to be (Fischer and Schwartz 2010), is an empirical question that remains open.

The relationship between RWA and SDO has been explored, first by Altemeyer (1998), who described how these measurements work in a complementary way, the dominant and the authoritarian being two complementary groups, although, he also found (Altemeyer 2004) that people with high levels of both variables are extremely prejudiced. Next, John Duckitt and his colleagues proposed a dual process model, distinguishing how each concept predicts prejudice based on different motivations: RWA is a response to perception of the world as dangerous, and SDO is a response to perception of the world as competitive (Duckitt et al. 2002). Taking up the challenge of disentangling the relationship between RWA and SDO, an increasing number of researchers have extended Duckitt's findings. J. Christopher Cohrs and Frank Asbrock (2009) found experimental evidence in support of Duckitt's theory regarding RWA, but not for SDO. Lotte Thomsen et al. (2008) showed that RWA predicts negative attitudes toward immigrant groups who do not assimilate into the dominant culture, because this violates ingroup conformity, and SDO predicts negative attitudes toward immigrant

groups who do assimilate into the dominant culture. Finally, in recent years, a new line of research has focused on identifying moderators of the relationship between the two concepts, finding, for example, that political interest heightens the correlation, whereas religious identity works in the opposite direction (Dallago et al. 2008). Michele Roccato and Luca Ricolfi (2005) found that the correlation between the two concepts was higher in countries with strong ideological contrasts and that, within these countries, the relation was greater in adult samples than in student samples.

However, there is not much research dealing with both concepts' shared derogation of others as a common defining core, although this derogation is differently motivated. Regarding RWA, this element refers mainly to justification of and support for punishing the deviants, which is captured in the notion of authoritarian aggression (see Passini 2008), one of the three components proposed by Altemeyer (1981). In SDO derogation is included in the idea of superiority of some groups over others, mainly present on the dimension of group-based dominance (Sidanius and Pratto 1999).

The concept of ideological configuration is proposed to refer to the organization of ideological attitudes. While ideological configurations can be defined at many levels (individual, group, society), in this article the configuration is assessed at the individual level. Specifically, one possible ideological configuration is used here to predict attitudes toward immigrants and immigration, based on the derogative component of RWA and SDO. Given the definition of RWA and SDO as ideological attitudes, this ideological configuration is expected to show (a) a certain stability across societies, even though under moderating influences; and (b) a strong prediction of attitudes toward outgroups.

2. Migration and Prejudice in Chile and Germany

There is a great disparity in the number of studies conducted in Germany and Chile. Germany has a longstanding research tradition in social psychology involving intergroup and ideological attitudes. For instance, in recent years German researchers have shown that prejudice toward immigrants is related to ideologies of assimilation and segregation in acculturation preferences among majority-group members (Zick et al. 2001); that the differentiated prediction

of prejudice proposed by Duckitt et al. (2002) works better for RWA than for SDO (Cohrs and Asbrock 2009); that RWA and SDO are some of the strongest predictors of prejudice toward immigrants (Pettigrew, Wagner, and Christ 2007); and that both attitudes strongly predict Group-Focused Enmity, a syndrome of generalized prejudice against several groups at the same time (Zick et al. 2008).

Yet research in Chile concerning these topics is relatively scare, with only a few studies published to date. SDO and RWA measurements have been rarely used, with some exceptions: A panel study with students explored the relationship between social attitudes and religion (González et al. 2008). An SDO scale was recently tested and validated in Chile (Cárdenas et al. 2010). Published results on the relationship between RWA and political identity showed that RWA is, as expected, stronger among right-wingers (González et al. 2005); that it is predicted by a nonlinear interaction between socioeconomic level and political identity (Haye et al. 2009); and that it decreases with high income, although not for right-wingers after controlling for education (Carvacho and Haye 2008).

Publications concerning prejudice or intergroup attitudes toward immigrants are not common in Chile. Roberto González (2005) presented some research about prejudice toward different minorities, showing that levels of prejudice toward Peruvian immigrants are among the highest in Chile, just below prejudice toward poor people and Romanies. Manuel Cárdenas and his colleagues (Cárdenas 2006; Cárdenas et al. 2007) published some results showing high levels of subtle and blatant prejudice toward Bolivian immigrants among student samples. The only current article the author is aware of that explores the relationship between RWA and attitudes toward immigrants in Chile (Bolivians in this case) describes the expected pattern: prejudiced people show a high level of RWA (Cárdenas 2007).

The evidence of these Chilean studies leads us to expect the same results observed in most western societies to be replicated in Chile. Consequently, a strong relationship be-

tween SDO, RWA, and attitudes toward immigrant groups is hypothesized. However, a detailed description of this relationship is required to illustrate immigration in Chile from a psychological viewpoint.

There are two important reasons for the disparity in the amount of research on immigration and ideological attitudes between Germany and Chile. First, research on these topics in social psychology in Chile started just in the last decade, with the field still in the process of consolidation. Second, until now the phenomenon of immigration has been more relevant in Germany than in Chile (Martínez Pizarro 2005; Pettigrew et al. 2007; Zick, Pettigrew, and Wagner 2008). According to estimates by the United Nations, in 2005, 12.9% of the German population were foreigners, while in Chile only 1.4% of the population came from other countries. The number of immigrants in Germany has greatly increased since 1960, when they constituted only 2.8% of the population. In Chile, the percentage of immigrants was the same in 2005 as in 1960 (United Nations 2009). However, the Chilean government estimated a 71.9% increase in the number of foreigners living in Chile from 2002 to 2008, most of them being Peruvians (33.9%) and Argentineans (18.7%). Peruvians are the group with the most significant rise in the immigration rate (Martínez Pizarro 2003; Ministry of the Interior, Chile, 2009).

A comparison of Germany and Chile could indicate whether there are similarities in the structure of the relationship between ideological attitudes and attitudes toward foreigners in those different contexts. It is hypothesized that both countries have a similar ideological configuration that predicts attitudes toward immigrants.

3. The Chilean Study
3.1. Sample
The relationship among RWA, SDO, and positive attitudes toward Peruvian and Argentinean immigrants was explored in a survey of the general population in Santiago, Chile, in the context of a large study of the political culture of Chileans.[1] The sample is composed of 663 Chilean adults living

in Santiago. It was selected in a two-stage procedure. The first stage resulted in a random selection of an equal number of city blocks from each of three socioeconomic levels. In the second stage, a maximum of five interviews per block – based on assigned quotas of sex and age – were conducted by trained interviewers at participants' residences.

3.2. Measurements

Right-Wing Authoritarianism was measured using a four-item scale based on Altmeyer's RWA scale (Altemeyer 1981; Altemeyer 1998). As usual, items including the dimensions of authoritarian aggression (3 items) and authoritarian submission (1 item) loaded on one factor in the factor analysis. The conventionalism dimension was not included.

Social Dominance Orientation was measured via a 4-item scale assessing the first dimension of SDO, group-based dominance. The items were translated into Spanish from the SDO_6 scale (Sidanius and Pratto 1999).

Affection toward Immigrants was measured with a three-item scale used with two target groups, Argentineans and Peruvians, as these are the biggest migrant groups. The items contained questions about how much people like the target group; how much people admire the target group; and how much they trust them. All the scales present good enough reliability statistics, as can be seen in Table 1. The full list of the used items in Spanish is in Appendix 1.

Table 1: Cronbach's Alpha of scales used in the Chilean study

Scales	Cronbach's Alpha	No. of items	n	Missing values
RWA	0.78	4	650	13
SDO	0.65	4	650	13
Affection toward Peruvians	0.88	3	636	27
Affection toward Argentineans	0.86	3	639	24

3.3. Results
3.3.1. Measurement Models

Confirmatory factor analysis was used to test the proposed model. All the analyses presented in this and the following sections were carried out using the software Mplus, version 5.21 (Muthén and Muthén 1998–2007). Full information maximum likelihood (FIML) estimation for missing values was used to deal with incomplete data (1.15% of missing values).

A first measurement model (M1), using the maximum likelihood estimator (as in all the following estimations), was computed. In this model all the scales described in the previous section were built as latent variables predicting the observed variables (items). A second-order factor based on the latent variables of RWA and SDO was calculated in order to identify the common core shared by these ideological attitudes. Thus, the ideological configuration in M1 was built as a second-order latent variable predicting the ideological attitudes. A second-order factor of affection toward immigrants was also built, based on the attitudes toward Argentineans and Peruvians (first-order latent variables). One additional path correlating the measurement error of two similar items from the scales of affection toward Peruvians and Argentineans (which differ only in the target) was included in order to improve the model, which presented adequate fit indices (χ^2 = 167.106; df = 71; p < 0.01; CFI = 0.973; RMSEA = 0.045; SRMR = 0.039). In Table 2, the standardized coefficients of the items' loadings are provided.

In addition, a second model (M2) was estimated. Whereas M1 included second-order latent variables, M2 did not, using the first-order ideological factors instead. This model was based on the theoretical definitions of RWA and SDO as two differently motivated predictors of intergroup attitudes (e.g., Duckitt et al. 2002), which led us to expect that both variables predict intergroup attitudes separately. Hence, the only difference between M1 and M2 was that the latter did not include the second-order ideological factor and the first-order ideological factors were correlated. The fit indices of M2 were identical to those in M1 since the models are equivalent, which means that they have the same number of estimated parameters, identical fit indices, covariance, correlation and other moment matrices, and residuals (Hershberger 2006). The standardized coefficients for this model are also in Table 2. The structural equation modeling (SEM) presented in the next section was carried out using both measurement models in order to compare the prediction of prejudice based on

a single ideological factor with the one based on RWA and SDO as different predictors.[2]

Table 2: Standardized coefficients for M1 and M2

Observed and latent variables	M1	M2
RWA		
RWA1	0.47*	0.47*
RWA2	0.83*	0.83*
RWA3	0.83*	0.83*
RWA4	0.63*	0.63*
SDO		
SDO1	0.52*	0.52*
SDO2	0.52*	0.52*
SDO3	0.65*	0.65*
SDO4	0.58*	0.58*
Affection toward Peruvians		
AFEPER1	0.83*	0.83*
AFEPER2	0.82*	0.82*
AFEPER3	0.89*	0.89*
Affection toward Argentineans		
AFEARG1	0.83*	0.83*
AFEARG2	0.80*	0.80*
AFEARG3	0.83*	0.83*
Affection toward Immigrants		
Affection toward Peruvians	0.90*	0.90*
Affection toward Argentineans	0.68*	0.68*
Ideological Configuration		
RWA	0.91*	
SDO	0.58*	
Affection toward Immigrants	−0.37*	
Correlations		
AFEPER2 with AFEARG2	0.33*	0.33*
RWA with SDO		0.53*
Affection toward Immigrants with RWA		−0.34*
Affection toward Immigrants with SDO		−0.22*

* Coefficient is significant at p < 0,001.

2 Additional models including the second dimension of SDO, opposition to equality, were also computed. However, since they didn't show the expected behavior they were excluded from analyses in both surveys. Theoretically opposition to equality should show identical but mirrored relations as group-based dominance. Whether this is a measurement problem, for instance based on the wording of the items, or a conceptual difference, as Jost and Thompson (2000) suggested,

should be solved with additional evidence.

3 Statistically the models are equivalent, hence they have identical number of parameters estimated. For the concept of parsimony see Preacher 2006.

3.3.2. Structural Equation Modeling

In M1, the ideological configuration explained 83% of the variance of RWA and 33.3% of the variance of SDO. Therefore, as expected, ideological configuration strongly predicts ideological attitudes because they share a central core. Once regressed, the ideological configuration negatively predicted affection toward immigrants, with the more authoritarian and social dominant reporting less affection toward immigrants. The standardized regression coefficient had a medium strength ($\beta = -0.37$; $p < 0,01$) and explained 14% of the variance of the criterion.

In M2, affection toward immigrants was regressed on RWA and SDO. Due to the correlation of both predictors, they competed in the prediction of attitudes toward immigrants. As a result, SDO did not predict significantly the criterion ($\beta = -0.05$). On the contrary, RWA was negatively and significantly related with affection toward immigrants ($\beta = -0.31$; $p < 0.01$). Both predictors together explained 12% of the variance of the criterion.

According to the dual process model (Duckitt et al. 2002), the stronger prediction of RWA should be explained by the assumption that in Chile immigrants are perceived as dangerous for the ingroup, probably threatening the ingroup's values. Further research should test this assumption.

Even though both models have the same fit indices and explained almost the same variance of affection toward immigrants, M1 is preferable as an explicative model because of its theoretical parsimony.[3] This parsimony is expressed by the explained variance in the criterion, which is based on one single path coming from a unique ideological indicator. Thus, the common core of derogation of others between RWA and SDO proposed here as an ideological configuration was successfully used to predict attitudes toward immigrants in Chile, with at least the same explanatory power as the prediction based on the separate ideological attitudes.

4. The German Study

4.1. Sample

The second survey included the same ideological attitudes and indicators of hostility toward foreigners in a German national representative sample of people older than sixteen with no migration background (n = 1740). Those variables were employed in a larger study on prejudice, conducted in 2006 using telephone interviews.[4]

4.2. Measurements

Right-Wing Authoritarianism was measured with a three-item scale, based on Altmeyer (1981; 1998). As in the Chilean study, only the dimensions of authoritarian aggression (2 items) and authoritarian submission (1 item) were included, but not conventionalism.

Social Dominance Orientation: In the German survey, SDO was measured with a three-item scale. These items were taken from the SDO_6 scale (Sidanius and Pratto 1999).

Hostility toward Foreigners.[5] A four-item scale was used asking participants about topics such as considering foreigners a burden for the welfare system, that there are too many foreigners living in Germany or in the educational system, and that when jobs are scarce foreigners should be send it back. The content of the items refers to what the literature calls attitudes toward immigration, which has been shown to be very difficult to distinguish from attitudes toward immigrants. In fact, both variables are strongly connected, empirically and theoretically (Ceobanu and Escandell 2010).

A full item list in German is in Appendix 2. The reliability of the scales was satisfactory (see Table 3).

Table 3: Cronbach's Alpha of scales used in the German study

Scales	Cronbach's Alpha	No. of items	n	Missing values
RWA	0.74	3	1681	59
SDO	0.63	3	1677	63
Hostility to foreigners	0.81	4	1593	147

4.3. Results

4.3.1. Measurement Models

As in the Chilean survey, FIML estimation for missing values was used to complete the data (1.59% of missing values), and all the analyses were carried out in Mplus, version 5.21, using the maximum likelihood estimator.

Measurement models with the same structure were computed. First, M3 included a second-order ideological factor built with both ideological measurements, in order to identify the common core of the ideology of derogation. This model also included the indicators of hostility against foreigners, a latent variable predicting four observed variables. The fit indices of M3 were acceptable (χ^2 = 172.206; df = 32; p < 0.01; CFI = 0.973; RMSEA = 0.050; SRMR = 0.034). No additional path was needed to fit the model. The standardized coefficients of this model are shown in Table 4.

Second, M4 was computed without the second-order ideological factor, and it included the correlations between all the latent variables (see Table 4). This model presented the same fit indices as M3 because these are also equivalent models.

In order to confirm whether the strong relationship between the latent variables in both models is due to multicollinearity, additional factor analyses were carried out. Models where the observed variables loaded on one factor, on two independent factors (an ideological and a hostility factor), on two related factors, and on three independent factors were computed. Even though these models were more parsimonious than M3 and M4, none of them explained sufficient variance to fit the data properly.[6] Since the equivalent solutions, one based on

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4 This study was conducted by the Institute of Interdisciplinary Research in Conflict and Violence (IKG), Universität Bielefeld.

5 "Foreigner" is used to refer to the German word Ausländer (Zick et al. 2001).

6 Fit indices for alternative models: 1 factor χ^2 = 1002,312; df = 35; p < 0,01; CFI = 0,813; RMSEA = 0,126; SRMR = 0,071), 2 independent factors (χ^2 = 1413,688; df = 35; p < 0,01; CFI = 0,734; RMSEA = 0,150; SRMR = 0,198), 2 re-

lated factors (χ2 = 671,105; df = 34; p < 0,01; CFI = 0,877; RMSEA = 0,104; SRMR = 0,065), 3 independent factors (χ^2 = 1131,196; df = 35; p < 0,01; CFI = 0,789; RMSEA = 0,134; SRMR = 0,203).

three related factors and the other including a second-order ideological factor, were the best available solutions, the alternative models were not considered for additional analyses.

In the two selected models, further statistics were taken into account to check multicollinearity. The correlations of the parameter estimates were checked. No values above 0.95 were detected, meaning that the parameters in the model were estimated independent of each other. Since multicollinearity can affect the stability of the parameter estimates, the standard errors tend to be larger than usual. However, this is not the case in any of the models, where standard errors stay below 0.1. Finally, considering this statistical evidence and the fact that the measurements were based on conventional scales widely tested in prejudice research, the problem of multicollinearity could be ruled out.

Table 4: Standardized coefficients for M3 and M4

Observed and latent variables	M3	M4
RWA		
RWA1	0.72*	0.72*
RWA2	0.84*	0.84*
RWA3	0.57*	0.57*
SDO		
SDO1	0.63*	0.63*
SDO2	0.65*	0.65*
SDO3	0.57*	0.57*
Hostility to Foreigners		
HF1	0.74*	0.74*
HF2	0.86*	0.86*
HF3	0.54*	0.54*
HF4	0.71*	0.71*
Ideological Configuration		
RWA	0.71*	
SDO	0.63*	
Hostility to Foreigners	0.93*	
Correlations		
RWA with SDO		0.44*
Hostility to Foreigners with RWA		0.73*
Hostility to Foreigners with SDO		0.59*

* Coefficient is significant at p < 0.001.

4.3.2. Structural Equation Modeling

An SEM was conducted based on M3. RWA and SDO had a strong loading in the second-order ideological factor (see Table 4). Hostility toward foreigners was regressed on ideological configuration. Results showed a very strong relationship between both variables: 87% of the variance of hostility toward foreigners was explained by the ideological configuration.

Using M4, hostility toward foreigners was regressed on RWA and SDO. As a result, both predictors presented significant standardized regression coefficients: RWA = 0.50 and SDO = 0.37 (p < 0.001). Thus, the ideological attitudes together explained 54% of the variance of hostility toward foreigners. In contrast with the results in Chile, in the German survey both predictors play a role in explaining attitudes toward foreigners. It could be interpreted that this group is perceived as both dangerous for the ingroup and competitive with it.

When hostility toward foreigners was predicted by the ideological configuration, the explained variance is over 30% greater than when predicted by the ideological attitudes separately. In addition to the theoretical parsimony of the model involving ideological configuration, the relevant difference in explanatory power supports the use of this model when predicting attitudes toward foreigners. Choosing the model with more explanatory power is considered to be a valid criterion in cases of statistical equivalence (Hershberger 2006).

4.4. Summary of Results

Ideological configurations were suggested as a way to improve the understanding of derogative behaviors. This article presented one possible ideological configuration operationalized as a second-order factor built using ideological attitudes (RWA and SDO). As expected, in both samples the ideological attitudes loaded strongly on the second-order factor involving the proposed ideological configuration.

With regard to the prediction of attitudes toward foreigners, both models showed equivalent good fit. In both cases the ideological configuration predicted attitudes toward

immigrants. However, the regression coefficients showed a stronger prediction for hostility toward foreigners in the German sample than for affection toward immigrants in the Chilean sample (see Table 5).

When the ideological configuration models were compared with alternative models based on approaches emphasizing the differentiated prediction of ideological attitudes on attitudes toward immigrants, results suggested that ideological configuration is an equal (Chilean survey) or even superior predictor (German survey) compared with the separate ideological attitudes.

Table 5: Ideological configuration and ideological attitudes predicting attitudes toward foreigners

Latent variables	β	r^2
M1 (Chile)		
Affection toward Immigrants on Ideological Configuration	−0.37*	0.14
M2 (Chile)		
Affection toward Immigrants on:		0.12
RWA	−0.31*	
SDO	−0.05	
M3 (Germany)		
Hostility toward Foreigners on Ideological Configuration	0.93*	0.87
M4 (Germany)		
Hostility toward Foreigners on:		0.54
RWA	0.50*	
SDO	0.37*	

* Coefficient is significant at p < 0.001.

5. Discussion

Results indicated empirical evidence for an ideological configuration based on the derogation of others with Chilean and German participants. Moreover, this ideological configuration could be considered as a valid way to explore the relationship between ideological attitudes in different cultural contexts. The second-order ideological construct could be understood as an extreme, socially available form of adhesion to norms and hierarchies that led to the derogation of others.

Nevertheless, there is a difference between surveys regarding the loadings of RWA and SDO on the second-order factor. In the Chilean sample the strongest loading was from RWA. In Germany, the two components were more or less equivalent. These results suggest that in Chile the ideological configuration is based mainly on the punishment of deviants, whereas in Germany both mechanisms, punishment of deviants and group hierarchies, are included. This difference between countries suggests that the ideological attitudes can be organized differently across societies, but share a common core regarding the function of the ideology, which is to justify and fuel the derogation of outgroups. However, these results should be examined carefully, because no multigroup comparison was carried out to test the measurement invariance, as the scales were not based on exactly the same items. Further research should help test whether ideological configuration shares the same meaning across different cultures.

Ideological configuration was successfully used in Chile and Germany to predict attitudes toward immigrants. Its explanatory power was even greater than when the variables were used separately. This evidence suggests that the exploration of the common core of RWA and SDO should be included in the agenda of prejudice research. However, since the present studies are cross-sectional, additional research should also address the problem of causality, for example with a longitudinal design.

The difference between the countries in the prediction of attitudes toward foreigners can be accounted for by three factors. First, in the Chilean study the dependent variable is operationalized as affection toward Argentineans and Peruvians; thus, it is a positive attitude specifically directed toward concrete target groups. In Germany, by contrast, the dependent variable is hostility toward foreigners, a negative attitude focused on a general target, with items that can be considered related to the general topic of immigration. This problem has been previously detected in the literature (Ceobanu and Escandell 2010, Meuleman et al. 2009); however, it is not clear if the strong relationship (theoretical and empirical) between both kinds of attitudes can be empirically distinguished. For that reason, the results presented here have to be carefully interpreted. We might

expect a stronger relationship of the ideological attitudes with negative attitudes toward outgroups than with positive attitudes. But the Chilean survey's identification of specific target groups could have moderated the relationship of the ideological attitudes with attitudes toward outgroups, by inhibiting the expression of negative feelings toward these specific outgroups.

Second, it is relatively easy to find a superordinate identity among Chileans, Argentineans, and Peruvians – perhaps a larger Latin American identity – because their countries share the same majority language, Spanish; the same majority religion, Catholic; and the same majority ethnic background, *mestizo* (a mixture between Europeans and Native Americans).[7] In contrast, in Germany the prevalent migrant groups come from countries in which a different language is spoken, such as Poland, the former Soviet Union, or Turkey; some have a different religious background, particularly migrants from Muslims countries; and some have a different ethnic background, mainly the non-European immigrants. In this case the perceived similarity between the migrant group and the host country's inhabitants would differ between Chile and Germany. Previous research within Europe and the United States has shown that the issue of

language is one of the most important concerns in public opinions regarding the integration of immigrants (Citrin and Sides 2008).

The third factor is the history of migration. Chile has experienced significant immigration only in recent years, whereas in Germany migration has been a permanent phenomenon for the last five decades. These historical experiences could also produce a differentiation in the structure of prejudice. It would be interesting to observe if in the future the relationship between ideological configuration and attitudes toward foreigners becomes stronger in Chile because of the consolidation of migration groups living in the country.

Finally, further research regarding the concept of ideological configuration could be useful to improve the understanding of discrimination toward foreigners, specially if this approach includes a broader cross-cultural comparison that allows generalizing the findings presented here to other societies where migration is also becoming relevant. In the same way, other ideological attitudes and different targets should be included in the analyses to provide a more comprehensive model of ideological configuration.

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[7] It should be taken into account that Uhlmann and others (2002) found that Chileans show higher preferences for white-skinned people than for mestizos, and thus the argument of homogeneity among Latin Americans should be considered carefully.

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Appendix 1: Items included in the Chilean survey

Right-Wing Authoritarianism:

Voy a leerle un conjunto de frases que se refieren a distintos aspectos del mundo político, y para cada una de ellas le pido que me diga, de 1 a 5, su grado de acuerdo o desacuerdo (1 = muy en desacuerdo; 5 = muy de acuerdo):

· Más que partidos y programas políticos, lo que nos hace falta es un líder que resuelva los problemas.

· Los gobiernos deben ocupar mano dura cada vez que hay dificultades.

· En vez de tanta preocupación por los derechos de las personas, lo que este país necesita es un gobierno firme.

· Las verdaderas claves para una sociedad exitosa son la obediencia y la disciplina.

Social Dominance Orientation:

Voy a leerle un conjunto de frases que se refieren a distintos aspectos del mundo político, y para cada una de ellas le pido que me diga, de 1 a 5, su grado de acuerdo o desacuerdo (1 = muy en desacuerdo; 5 = muy de acuerdo):

· Algunos grupos dentro de nuestro país son simplemente inferiores a otros.

· En realidad no está mal que existan grupos que estén arriba y otros que estén abajo.

· En realidad no está mal que algunas personas tengan más oportunidades en la vida que otras.

· Los grupos inferiores debieran quedarse donde les corresponde.

Affection toward Immigrants:

Piense ahora en los peruanos/argentinos que han venido a vivir o trabajar a Chile. Usando la siguiente tarjeta (1 = muy poco; 5 = mucho), por favor dígame, de 1 a 5:

· ¿Cuánto le agradan los peruanos/argentinos?

· ¿Cuánto los admira?

· ¿Cuánto confía en ellos?

Appendix 2: Items included in the German survey

Right-Wing Authoritarianism:

Es gibt Meinungen die man immer wieder mal hört. Sagen Sie mir bitte für die folgenden Meinungen jeweils, ob sie

1. voll und ganz zustimmen

2. eher zustimmen

3. eher nicht zustimmen

4. oder überhaupt nicht zustimmen.

· Verbrechen sollten härter bestraft werden.

· Um Recht und Ordnung zu bewahren, sollte man härter gegen Außenseiter und Unruhestifter vorgehen.

· Zu den wichtigsten Eigenschaften, die jemand haben sollte, gehören Gehorsam und Respekt vor dem Vorgesetzten.

Social Dominance Orientation, group-based dominance:

In Deutschland leben verschiedene Bevölkerungsgruppen. Wie beurteilen Sie die folgenden Meinungen

1. voll und ganz zustimmen,

2. eher zustimmen,

3. eher nicht zustimmen, oder

4. überhaupt nicht zustimmen

· Die Gruppen, die in unserer Gesellschaft unten sind, sollen auch unten bleiben.

· Es gibt Gruppen in der Bevölkerung, die weniger wert sind als andere.

· Einige Bevölkerungsgruppen sind nützlicher als andere.

Hostility toward Foreigners:

Wie beurteilen Sie die folgenden Meinungen. Sagen Sie mir bitte jeweils, ob sie

1. voll und ganz zustimmen

2. eher zustimmen

3. eher nicht zustimmen

4. oder überhaupt nicht zustimmen.

· Die in Deutschland lebenden Ausländer sind eine Belastung für das soziale Netz.

· Es leben zu viele Ausländer in Deutschland.

· Die vielen ausländischen Kinder in der Schule verhindern eine gute Ausbildung der deutschen Kinder.

· Wenn Arbeitsplätze knapp werden, sollte man die in Deutschland lebenden Ausländer wieder in ihre Heimat zurückschicken.

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Running head: Social class, prejudice and ideological attitudes.

On the relation between social class and prejudice: The roles of education, income, and

ideological attitudes

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Abstract

Prejudice is more prevalent among members of the working class than among members of the middle or upper class. It is still matter of discussion whether education works to suppress prejudice among upper class members or, on the contrary, to enhance genuinely tolerant attitudes. We propose that (1) two indicators of social class–income and education–independently predict prejudice toward multiple targets as follow: lower levels of income and education are associated with higher levels of prejudice. (2) The connection between social class and prejudice is explained by the endorsement of system-legitimating ideological attitudes, namely right-wing authoritarianism (RWA) and social dominance orientation (SDO). We tested these hypotheses in four studies using cross-sectional surveys in Europe (Studies 1 and 2, Ns = 11,330 and 2,640) and longitudinal data from Germany and Chile (Studies 3 and 4, Ns = 343 and 388). Results show that education and income exert independent negative effects on prejudice. The effect of education is stronger than the effect of income, which is not stable across countries. The relationships between income and prejudice and education and prejudice are mediated by RWA and SDO. We conclude that people of the working class generally endorse an ideological configuration that is well-suited for legitimating the social system.

Keywords: ideology, social dominance, authoritarianism, justification, prejudice

On the relation between social class and prejudice: The roles of education, income, and

ideological attitudes.

The prevalence of prejudice among people of the working class has been widely

documented and heavily debated (e.g. Adorno, Frenkel-Brunswik, Levinson, & Sanford,

1950; Federico & Sidanius, 2002; Harvey & Bourhis, 2011; Houtman, 2003; Lipset,

1959; Napier & Jost, 2008; Pettigrew et al., 2008). Many explanations for this

phenomenon have been raised, many of which give education a central role. Most of

them have assumed that high levels of educational attainment lead to decreased levels of

prejudice. Other approaches have assumed that education is an institutional device that

is used for reproducing hierarchies among social classes, based on the socialization of

groups with respect to specific ideologies that function to justify and maintain the

current social order. Differences in levels of prejudice as a function of education would

then be a manifestation of the ideological configuration of each social class.

In this paper we explore the link between social class and prejudice by focusing

on the role of education and the development of ideological attitudes–such as right wing

authoritarianism (RWA) and social dominance orientation (SDO)–which might help to

account for the social class-prejudice relationship.

Social class and prejudice

Although it was not the first contribution to this topic, the influential work by

Lipset (1959) on working class authoritarianism became a classic in the literature,

generating reactions for decades (e.g. Dekker & Ester, 1987; Grabb, 1979; Houtman,

2003; Lipsitz, 1965; Middendorp & Meloen, 1990; Miller & Riessman, 1961; Napier &

Jost, 2008). Lipset (1959) suggested that working-class individuals are exposed to

negative experiences that often produce deep-rooted hostilities expressed through ethnic prejudice and political authoritarianism. The idea is that low educational attainment and associated restrictions in cultural, intellectual, or family resources prevent members of the working class from expanding their understanding of different groups and ideas. Thus, working-class individuals are more likely to develop authoritarianism as well as low levels of political interest.

There have been many critiques of the working-class authoritarianism hypothesis, most of which focused on the definition of social class. Authors advocating a narrow definition suggested that Lipset's definition was confounded with other variables, especially education (Case, Greeley, & Fuchs, 1989; Dekker & Ester, 1987; Halperin, Pedahzur, & Canetti-Nisim, 2007; Lipsitz, 1965; see also van der Waal, Achterberg, Houtman, de Koster, & Manevska, 2010). For instance, Houtman (2003) suggested that the more the operationalization of social class is based upon differences in educational levels, the stronger the relation between class and authoritarianism. Early on, Jackman (1973) questioned the working-class authoritarianism hypothesis and argued that the method used by Lipset was subject to education-related response biases.

Authors adopting a broader definition usually operationalize class with a combination of indicators such as income, education, and occupational status (Argyle, 1994; Kraus, Piff, & Keltner, 2011). Under this definition of social class, the question is what it is about the working class that makes people more prejudiced. As a consequence, there has been a long discussion of whether education simply helps people to conceal prejudice or genuinely reduces it. Some scholars have proposed that advanced formal education promotes an "enlightened" perspective on human relations,

which leads to less outgroup negativity (Weil, 1985). However, this idea is not consensually embraced by scholars. It has been proposed that higher levels of education allow people to hide their real attitudes if these are not socially desirable. This explanation, however, was convincingly questioned by experimental and observational studies that compared measures that were specifically developed to avoid social desirability with regular survey items and did not find relevant differences (Knudsen, 1995; Wagner & Zick, 1995). Others have suggested that different levels of education go along with different sets of values and that the effect of such value differentiation is more important than, for instance, cognitive sophistication (Stubager, 2008). From this approach it follows that education should be considered as an element of social class and not a control variable, because education has the function of socializing members to adopt the values of the group (Haley & Sidanius, 2005; Sidanius, 1986; Stubager, 2009). It has also been found that formal education leads to the endorsement of an abstract principle of tolerance but not necessarily to the implementation of concrete measures or policies (Jackman, 1978), and that education is only associated with a superficial attachment to democratic values (Jackman & Muha, 1984).

Two approaches to explain the education-attitudes link facilitated deeper understanding by testing many of the available competing hypotheses. First, Jenssen and Engesbok (1994) tested six competing explanations for the effects of education on ideology and prejudice against immigrants in Norway: (1) education transmits democratic norms and values; (2) education provides a knowledge base for breaking down stereotypic beliefs about immigrants; (3) education leads to cognitive competence, which enables people to resist propaganda and understand social conflicts;

(4) high education is a precondition for jobs with high social status, and the latter protect people from direct competition with immigrants in the labor market; (5) education fosters the ability to master one's life circumstances and therefore reduces the risk of confronting situations of conflict; and (6) education promotes the motivation and ability to act opportunistically by adopting desirable behaviors in conflict situations. Jenssen and Engesbok found strongest empirical support for the fourth hypothesis, implying that education is used to stratify the labor market and, in turn, maintain social hierarchies.

Second, Hello, Scheepers, and Sleegers (2006) tested four explanations for the education-ethnic prejudice connection and found that authoritarianism and perceived threat mediated the relationship, whereas cognitive sophistication and open-mindedness did not. This result was similar to what Pettigrew and colleagues (2007) found, namely that the link between education and anti-immigrant feelings was mediated by RWA and SDO. Both studies stressed the relevance of ideological attitudes that stem from class membership and education.

Social class and ideological attitudes

This paper focuses on the role of two ideological attitudes–RWA and SDO–in the social class-prejudice relation. It is rather clear that both attitudes are consistent predictors of prejudice (Altemeyer, 1998; McFarland, 2010; Whitley, 1999; Zick et al., 2008), and both have been considered to be conservative, system-legitimating ideologies (Jost & Hunyady, 2005). Research on the topic has concentrated on individual differences underlying RWA and SDO, such as demonstrations that RWA and SDO mediate the personality-prejudice link (Cohrs, Kämpfe-Hargrave, & Riemann,

2012; Duckitt & Sibley, 2010). We propose instead to explore the relations between RWA and SDO and social-structural variables, such as social class. Although both theoretical traditions–authoritarianism and social dominance theory–acknowledge the relevance of social class membership, focused investigations have been scarce. Adorno et al. (1950) described authoritarianism as a phenomenon that was more common in working-class individuals. Sidanius and Pratto (1999) expected that group status should positively predict SDO, although they were cautious about specifying the nature of the relationship with social class (Pratto, Sidanius, Stallworth, & Malle, 1994).

Perhaps the most relevant discussion of the links between ideological attitudes and social class was started by Lipset (1959).Previous research has addressed a wide range of constructs, including democratic values, authoritarian attitudes, and intergroup attitudes, without identifying a clear social psychological process or moderating variables that specify the precise relationship between authoritarianism and prejudice. At the moment it seems that these elements are connected as follows: social class membership produces a certain ideological configuration–characterized by authoritarian attitudes–which in turn leads to intergroup hostilities, as demonstrated by Napier and Jost (2008).

With respect to SDO, the research literature is somewhat ambiguous. Social dominance theory predicts that members of high-status groups will display higher levels of SDO, and this has been confirmed repeatedly for gender and racial/ethnic hierarchies (Lee, Pratto, & Johnson, 2011; Pratto et al., 1994; Sidanius & Pratto, 1999; cf. Küpper & Zick, 2010). However, the case of social class is much less clear. Initially, Pratto et al. (1994) considered the available evidence to be mixed. More recently, Küpper, Wolf, and

Zick (2010) tested the relationship suggested by social dominance theory, using income as a proxy for social class and focusing on ethnic prejudice as an outcome variable. They observed a negative relationship between income and SDO. An extended exploration, using other indicators of social class and measures of intergroup attitudes in addition to ethnic prejudice, is of critical importance for the current debate, because it would allow us to draw conclusions about the specific nature of the relationship between social class, SDO, and negative intergroup attitudes.

According to the dual process model of ideological attitudes, different motivations underlie RWA and SDO (Duckitt, Wagner, Plessis, & Birum, 2002). People who are high in RWA tend to perceive the world as a threatening place and search for security, whereas people who are high in SDO perceive the world as a competitive jungle. Although this model has not yet been tested with respect to social class, it might be hypothesized that deprivation connected to working class status would enhance perceptions of the world as both competitive and threatening. Therefore, it can be expected that both types of ideological attitudes would play a similar role with respect to social class. This theoretical logic is also consistent with realistic conflict theory (Bobo, 1983; Sherif & Sherif, 1979), which suggests that scarce resources drive intergroup conflict. As a consequence, working class status should be connected with intergroup hostility.

RWA not only serves the function of derogating deviants but also of protecting the ingroup against threat (Duckitt, & Fisher, 2003; Brandt & Henry, 2012), as well as increasing intragroup cohesion (Kessler & Cohrs, 2008). These features of RWA might be especially relevant for working-class individuals, insofar as their model of agency

reflects a normative preference for similarity to others (Stephens, Markus, & Townsend, 2007).

Overview of the present research

In the following sections we aim to (1) replicate previous findings concerning the relationship between social class and prejudice in multiple contexts using measurements of an especially wide range of potential prejudices; (2) extend those findings by testing whether education works to suppress outgroup negativity connected with upper class membership or, on the contrary, to enhance genuinely liberal, tolerant attitudes on the part of middle and upper class members; (3) investigate the mediation of both types of ideological attitudes, RWA and SDO, with respect to the social class-prejudice link. The inclusion of SDO is especially important, because it is yet not clear whether SDO is positively or negatively associated with socioeconomic status.

The studies presented here test the following hypotheses: (H1) Members of the working class are more likely to exhibit high levels of prejudice. This general idea is further developed in light of two additional hypotheses. (H1a) Education and income are both independent predictors of prejudice. This would imply that education does not counteract the effect of social class socialization as indicated by income, but works additively, possibly as part of the same process. (H1b) The effect of education on prejudice is stronger than the effect of income.

(H2) The effect of social class on prejudice is mediated by ideological attitudes. This hypothesis may be decomposed as follow: (H2a) the effect of education on prejudice is mediated by RWA and SDO; (H2b) the effect of income on prejudice is also mediated by RWA and SDO; and (H2c) the effects of income and education on RWA

and SDO are negative, so that higher levels of income and education are associated with stronger ideological endorsement.

Study 1

We tested the mediational hypotheses using structural equation models (SEM) to analyze public opinion data from eight representative German samples.

Method

Samples

Computer-assisted telephone interviews (CATI) were conducted as part of the Group-Focused Enmity project (Zick et al., 2008). Samples were collected in 2004 (N=3,000), 2005 (N=2,000), 2006 (N=2,000), 2008 (N=2,000), 2009 (N=2,000), 2010 (N=2,000), and 2011 (two surveys N_a=2,000 and N_b=808). Missing data were deleted listwise.

Measurements

Income was measured as monthly equivalent net household income. Educational attainment was measured according to the highest school degree achieved. The attitudinal measures were RWA (items on authoritarian aggression and authoritarian submission), SDO, prejudice toward foreigners, prejudice toward Muslims, anti-Semitism, prejudice toward the homeless, sexism, prejudice against gay people, prejudice toward newcomers, racism, and prejudice toward people with disabilities. The full item list is provided in Appendix A. All attitudinal items were answered using a four-point Likert scale indicating strength of agreement or disagreement.

Analyses

For every sample we calculated a SEM that included all types of prejudice at the

same time. All the models in this and the following studies were computed using MPlus,

version 5.2 (Muthén & Muthén, 2007), with the maximum likelihood estimator. RWA,

SDO, and all forms of prejudice were computed as latent variables, whereas income and

education were single-item observed variables. The mediations were tested by

calculating the indirect effects of income and education on prejudice, using

bootstrapping (k = 5,000) to generate percentile-based confidence intervals (see Hayes,

2009; Rucker, Preacher, Tormala, & Petty, 2011). Figure 1 depicts the basic model,

showing only the latent level of ideological attitudes and one type of prejudice. In the

actual models, the residuals of all prejudice variables were free to correlate.

Results

Results of the eight models are presented with a focus on the specific test of the

mediation hypotheses. All models presented adequate fit indices and all factor loadings

were higher than .4. All models included only the paths depicted in Figure 1 plus an

error correlation between two RWA items measuring authoritarian aggression. Table 1

summarizes the model fit statistics for the eight samples.

We begin by describing the results from 2008 on prejudice toward foreigners, for

illustration purposes (see Table 2). Both education and income were negative predictors

of prejudice, which means that more education and more income were associated with

lower prejudice. Additionally, the effects of income and education were mediated by

RWA and SDO. That is, higher education predicted lower levels of RWA and SDO,

which in turn led to lower levels of prejudice. Likewise, higher income predicted lower

levels of RWA and SDO, both of which were positively related to prejudice against

foreigners. In this case, there were no direct effects of income or education on prejudice.

Table 2 shows all the direct and indirect effects for each model, via SDO and RWA, of education and income on every form of prejudice. All significant indirect effects should be interpreted as supporting the mediation hypothesis.

The overall pattern indicates that for all types of prejudice included in the analyses in all but one of the surveys (2011_b) there was a significant mediation effect of ideological attitudes. This mediation was present in every survey for education and in most for income (see Table 3). These effects of income and education were independent of each other because both social class indicators were free to covary. All mediations were in the negative direction, as expected. A direct effect of education and income on all types of prejudice was observed, but not in every survey. Altogether, the mediation of the ideological attitudes explained 63% of the effect of income on prejudice and 82% of the effect of education on prejudice.

Results confirmed the social class-prejudice link (H1) and strongly supported the mediation hypotheses (H2). Education was the most stable predictor of prejudice (H1b), and its effect was in large part mediated by RWA and SDO (H2a). Income explained additional variance in prejudice (H1a), and its effect was predominately mediated by RWA (H2b). Both ideological attitudes linked social class indicators and prejudice in the same way (H2c), ruling out the assumption that, as for ethnic and gender hierarchies, higher social class would be connected with higher levels of SDO.

These results raise at least two pressing questions. First, can we expect to find the same pattern of results in samples outside of Germany? In Study 2, we replicate the mediation model in other European countries, and in Study 4 we studied a Chilean sample. Second, can we test the assumptions about causality implied in the mediation

model? We approach this issue by investigating longitudinal data in Studies 3 and 4.

Study 2

The mediation models were replicated in representative samples from four

European countries.

Method

Samples

In each of the countries approximately 1,000 participants (France 1,007,

Germany 1,000, Great Britain 1,000, the Netherlands 1,011), all of whom were older

than 16 and held the local citizenship, were randomly selected and contacted in 2008

using CATI (see Zick, Küpper, & Hövermann, 2011).[1] Missing data was deleted

listwise. It must be noted that there were a considerable number of cases with missing

data for income (9.0% in France, 12.2% in Germany, 19.3% in Great Britain, and 12.1%

in the Netherlands). In the Results section, details on the remaining cases are presented.

Measurements

Variables were measured in a similar way as in Study 1. Education was coded

based upon local educational systems; therefore, the range varied according to country-

specific norms. Income was recoded into three categories within countries, with each

group representing approximately one third of the population (see Zick et al., 2011).

The types of prejudice measured were: sexism, racism, anti-Semitism, prejudice toward

foreigners, homeless, gay people, Muslims, and people with disabilities. The full item

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[1] The samples were part of the "Group-Focused Enmity in Europe" study, which also included Hungary, Italy, Portugal and Poland. These countries were not included here because of poor psychometric properties of some of the measures and severe problems of missing data for some variables, especially income.

list is provided in Appendix A.[2]

Analyses

For every country we conducted SEM including the eight types of prejudice as outcome variables. As in Study 1, RWA, SDO and prejudice were latent variables, whereas income and education were single-item observed variables. The mediations were tested using the same approach as in Study 1.

Results

We tested measurement invariance of the model across countries. Results revealed a similar pattern with respect to ideological attitudes but some differences in the prejudice measurements. As a consequence, a direct model comparison between countries was not possible. The models presented here include only those paths suggested by our hypotheses; all models present adequate fit indices (see Table 4).

Table 5 reports the direct and indirect effects of the two social class indicators on prejudice. It can be seen that for all countries education predicted prejudice (H1), and these effects were always mediated by at least one of the ideological attitudes (H2a). This mediation always exhibited the same pattern: the higher the level of education, the lower the level of ideological endorsement and, subsequently, the lower the level of prejudice (H2). Overall, the mediation of ideological attitudes accounted for 69% of the effect of education on prejudice. Of the two social class indicators, only education was found to predict prejudice, contrary to what we expected (H1a and H2b). RWA and SDO mediated the effect of education in the same direction (H2c). Table 6 summarizes

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[2] For psychometric reasons, one racism item in France and one item measuring prejudice toward the homeless in Germany were excluded from the analyses.

all effects.

Study 2 replicated most results from Study 1, but the effects of income disappeared. The fact that in Study 2 even in the German sample there was no effect of income suggests a possible measurement problem with the rough income categories. This issue needs further exploration.

Study 3

The mediation hypotheses were tested in a German panel survey.

Method

Participants and measurements

The sample is part of the panel study of the Group-Focused Enmity project and includes three waves (2006, 2008, and 2010). The panel was originally representative of the German adult population (N=1,740), and was conducted using the same methodology as in Study 1. Three hundred and forty-three participants completed all three waves. Missing data was deleted listwise. In this study, racism ($\alpha_1 = .57$, $\alpha_2 = .60$, $\alpha_3 = .58$), sexism ($\alpha_1 = .74$, $\alpha_2 = .76$, $\alpha_3 = .70$), anti-Semitism ($\alpha_1 = .71$, $\alpha_2 = .74$, $\alpha_3 = .74$), prejudice against the homeless ($\alpha_1 = .61$, $\alpha_2 = .65$, $\alpha_3 = .65$), Muslims ($\alpha_1 = .73$, $\alpha_2 = .76$, $\alpha_3 = .70$), foreigners ($\alpha_1 = .74$, $\alpha_2 = .74$, $\alpha_3 = .73$), and gay people ($\alpha_1 = .68$, $\alpha_2 = .75$, $\alpha_3 = .67$), were measured, as well as RWA ($\alpha_1 = .73$, $\alpha_2 = .77$, $\alpha_3 = .78$) and SDO ($\alpha_1 = .63$, $\alpha_2 = .67$, $\alpha_3 = .65$). All items are listed in Appendix A.

Analyses

Given the restricted sample size and the complexity of the models we used only manifest variables in the models for this study. Indicators of ideological attitudes and prejudice were calculated by averaging across individual items.

We analyzed the data by following two strategies. First, we ran simple mediation models, in which every step of the mediation was measured at a different wave, testing the mediation over time. For instance, we used social class indicators in 2006 to predict ideological attitudes in 2008, which in turn were used to predict prejudice in 2010. The direct paths from the social class indicators to prejudice were also included; therefore, the models were saturated, so fit indices are meaningless.

The second strategy used cross-lagged models, testing the longitudinal prediction after controlling for the autoregressive paths, providing a strong basis for drawing inferences about causality (see Little, Preacher, Selig, & Card, 2007; MacKinnon, 2008). In these models, all variables at time 1 predicted all variables at time 2, and the latter predicted all variables at time 3. In addition, residual covariances within each year were also estimated. Figure 2 depicts the structure of this model, with the bold paths indicating those of specific interest for testing our hypotheses.

Results

According to the first strategy, results revealed longitudinal effects from education and income measured in 2006 to prejudice measured at 2010 (H1 and H1a). In addition, for all types of prejudice, the effects of education and income were mediated by RWA (H2, H2a, and H2b). SDO mediated the effect of education (supporting H2a but not H2b). The mediational effects of RWA and SDO were negative (H2c). All coefficients are listed in Table 7.

Table 8 presents the fit indices for the seven cross-lagged models (one for each type of prejudice), which were adequate given the complexity of the data. Results showed that there were significant effects of income on anti-Semitism, prejudice toward

Muslims, and racism (H1 and H1a but not H1b); these effects were mediated by RWA (H2, H2a and H2b), but not SDO. Thus, higher income in 2006 predicted decreased RWA in 2008, which predicted decreased prejudice in 2010 (see all coefficients in Table 9).

Social class indicators at time 1 predicted prejudice four years later, and this effect was consistently mediated by ideological attitudes. Moreover, even after controlling for previous levels of prejudice and ideological attitudes, there were still indirect effects of income through RWA. This conservative test of the mediation hypothesis displayed the expected pattern.

Study 4

The first of the longitudinal analyses concerning attitudes toward immigrants was replicated with a sample of Chilean adults.

Method

Participants

In Santiago de Chile, 388 adults were interviewed three times (2005, 2006, and 2008). Face-to-face interviews were conducted with a random selection of participants. Because these data were taken from a research project comparing political generations, the sample included participants belonging to three specific cohorts at the time of the first measurement point: aged 17–21, 33–40, or 50–60.

Measurements and analysis

Income was measured with a single item indicating 14 levels of monthly family income, and education was measured with one item listing seven categories of educational attainment. RWA was estimated by taking the mean of five items assessing

authoritarian aggression and submission (α = .76). SDO was estimated by taking the average of two items (α = .47). Attitudes toward immigrants were measured with three questions about positive attitudes toward two specific target groups, Argentineans (α = .86) and Peruvians (α = .88). Responses for all attitudinal measures were provided on five-point Likert scale. All items are listed in Appendix A.

The data were analyzed according to the first strategy from Study 3. Attitudes toward immigrants were not measured at every wave, so it was not possible to replicate the second strategy.

Results

As expected, the model yielded appropriate fit indices; χ^2 = 1.39; df = 3; p = 0.71; CFI = 1.00; RMSEA = 0.00; SRMR = 0.01. Attitudes toward Argentineans and Peruvians were highly correlated, and so a latent variable, capturing attitudes toward immigrants in general, worked properly.

The mediation model showed that education in year 1 predicted attitudes toward immigrants in year 3 (H1); income in year 1 did not (H1a). The effect of education was observed to be direct and indirect through SDO in year 2 (H2) but not through RWA (H2a, for all effects see Table 10).

It is an open question as to whether the fact that intergroup attitudes were measured in terms of positive rather than negative aspects affected the observed relationships. It is also noteworthy that, in contrast to the results from European samples, RWA was not a significant mediator of the effect of social class on prejudice.

Discussion and Conclusion

After analyzing public opinion data from eight representative samples from

Germany (Study 1), four representative samples from European countries (Study 2), as well as longitudinal data from Germany (Study 3) and Chile (Study 4), we observed that income and education both predicted a wide range of prejudice (supporting H1). These effects were independent (H1a), with the effect of education being stronger in most cases (H1b). However, these relationships were not identical across different studies and settings. In particular, although the effect of education on prejudice was present in most studies, the effect of income on prejudice was significant in Studies 1 and 3, involving German cross-sectional and longitudinal data, but not for the European samples in Study 2 nor the Chilean panel in Study 4. All in all, these results confirmed, first, that the relationship between social class and prejudice is not purely driven by education, and second, that the effects of education and income are in the same direction, suggesting that social class socialization may be reinforced by the educational system, as some theories have suggested (e.g. Haley & Sidanius, 2005; Sidanius & Pratto, 1999).

In line with the ideological consistency hypothesis (H2c), SDO and RWA were negatively predicted by income and education, and both independently mediated the effects of income and education on prejudice (H2, H2a and H2b). This general pattern was supported by the cross-sectional and longitudinal data, and it was similar in most of the countries we studied. RWA was the most consistent mediator, especially concerning the effect of education; SDO mediated the relationship between social class and prejudice less frequently than RWA.

In light of these results, the relationship between SDO and social class should be revised. Contrary to the cases of ethnic and gender hierarchies, higher social class status

is connected with lower levels of SDO. As a consequence, two aspects need to be discussed. First, further research should test for moderators of the status-SDO link, checking, for instance, whether threat to the hierarchical relationship between groups intensifies the connection. The uncertainty and threat elicited by a possible change to the status quo should increase endorsement of conservative ideologies, perhaps especially among the disadvantaged (Jost, Glaser, Kruglansky, & Sulloway, 2003).

Second, RWA and SDO are conservative, system-legitimizing ideologies that in this research program were more strongly endorsed by members of the low-status group, in this case the working class (Jost & Hunyady, 2005). Recently, the idea that members of the working class ever legitimize the system more than others do was questioned sharply (Brandt, 2013). Our findings, however, demonstrate that lower social class is consistently linked to the endorsement of social hierarchies in the form of SDO and prejudice, as well as the preservation of the current social order in the form of RWA. Moreover, the working class seems to develop and reproduce an ideological configuration that is generally well-suited for legitimating the social system.

Finally, we would like to emphasize the importance of putting social class back on the agenda of social psychology, as has been suggested elsewhere (e.g. Kraus & Stephens, 2012), to enrich our understanding of intergroup conflict and the legitimation of social inequality.

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Appendix A: Item lists

Items from Studies 1 and 3[3]
RWA:
- Crimes should be punished more severely.
- To preserve law and order, outsiders and troublemakers should be pursued more rigorously.
- Some of the most important values someone should have are obedience and respect for superiors. (Not in 2005)
- We should be grateful for leaders who tell us what to do. (Only in Study 3)

SDO:
- Some groups of people are simply worth more than others.
- Inferior groups should stay in their place. (Not in 2005)
- Some groups of people are more useful than others. (Not in 2005)

Sexism:
- Women should pay more attention to their roles as wives and mothers.
- It is more important for a wife to help her husband's career than to have one herself.

Prejudice towards the homeless:
- Most homeless people tend to avoid work. (Not in Study 3)
- Begging homeless people should be banned from pedestrian precincts. (Not in 2011_b)
- The homeless in towns are unpleasant. (Only 2004)

Prejudice towards disabled people (not in Study 3):
- In Germany, too many efforts are being made for handicapped people. (Not in 2004, 2011_b)
- In my view many demands of handicapped people go too far. (Not in 2004, 2011_b)
- Handicapped people receive too many benefits. (Not in 2004, 2011_b)
- Sometimes I feel uncomfortable in the presence of handicapped people. (Only 2004)
- Sometimes I am unsure how to behave in face of handicapped people. (Only 2004)

Prejudice toward homosexuals:
- It is disgusting when homosexuals kiss in public.
- Homosexuality is immoral. (Not in 2004, Study 3)
- Marriages between two women or two men should be permitted. (Not in 2005, 2011_b)

Prejudice toward foreigners:
- There are too many foreigners living in Germany.
- When jobs get scarce, foreigners living in Germany should be sent back home.

Prejudice towards newcomers (not in Study 3):
- Those who are new somewhere should be content with less.
- Those who have always been living here should have more rights than those who came later.

Racism:
- German re-settlers should be better off than foreigners because they are of German origin.
- It is right that whites are leading in the world.

Anti-Semitism:
- Jews have too much influence in Germany.

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[3] These are translations of items originally in German.

- As a result of their behavior, Jews are not entirely without blame for being persecuted.

Prejudice toward Muslims:
- With so many Muslims in Germany, one feels increasingly like a stranger in one`s own country.
- Immigration to Germany should be forbidden for Muslims.

Items from Study 2
RWA:
- To maintain law and order, stronger action should be taken against troublemakers.
- School should primarily provide pupils with a sense of discipline.

SDO:
- Inferior groups should stay in their places.
- It is probably a good thing that certain groups are at the top, while others are at the bottom.

Sexism:
- Women should take their roles as wives and mothers seriously.
- When jobs are scarce men should have more rights to a job than women.

Prejudice towards the homeless:
- The homeless somewhat like to live on the street.
- The homeless should be removed from pedestrian zones. (Not in Germany)

Prejudice towards disabled people:
- Disabled persons are too demanding.

Prejudice towards homosexuals:
- It is a good thing to allow marriages between two men or two women.
- There is nothing immoral about homosexuality.

Prejudice toward foreigners:
- Because of the number of immigrants I sometimes feel like a stranger in [country].
- There are too many immigrants in [country].
- When jobs are scarce, in [country] people should have more rights to a job than immigrants.

Racism:
- There is a natural hierarchy between black and white people. (In France: There is no natural hierarchy between black and white people).
- Preferably blacks and whites should not get married. (Not in France)

Anti-Semitism:
- Jews in general do not care about anything or anyone but their own kind.
- Jews have too much influence.
- Jews try to take advantage of having been victims in the Nazi era.

Prejudice toward Muslims:
- There are too many Muslims in [country].
- Muslims in [country] are too demanding.

Items from Study 4[4]
RWA:

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[4] These are translations of items originally in Spanish.

- Instead of political parties and programs, what we need is a leader who solves problems.
- Governments should use firm hand when difficulties arise.
- Instead of so much concern about peoples' rights, this country needs a strong government.
- In this country, sentences for criminals are too soft.
- The real keys to a successful society are obedience and discipline.

SDO:
- Some groups in our country are just inferior.
- In this country too much importance has been given to social inequality.

Attitudes toward foreigners:
- How much do you like Peruvians/Argentinians?
- How much do you admire them?
- How much do you trust them?

FIGURES

Figure 1: SEM testing the mediation by RWA and SDO.
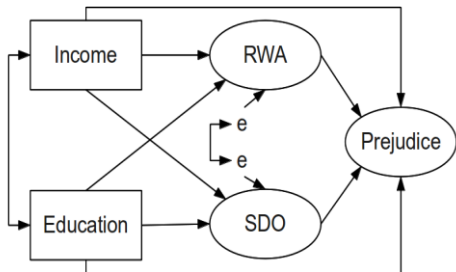
Figure 2: SEM testing the longitudinal cross-lagged mediation by RWA and SDO.
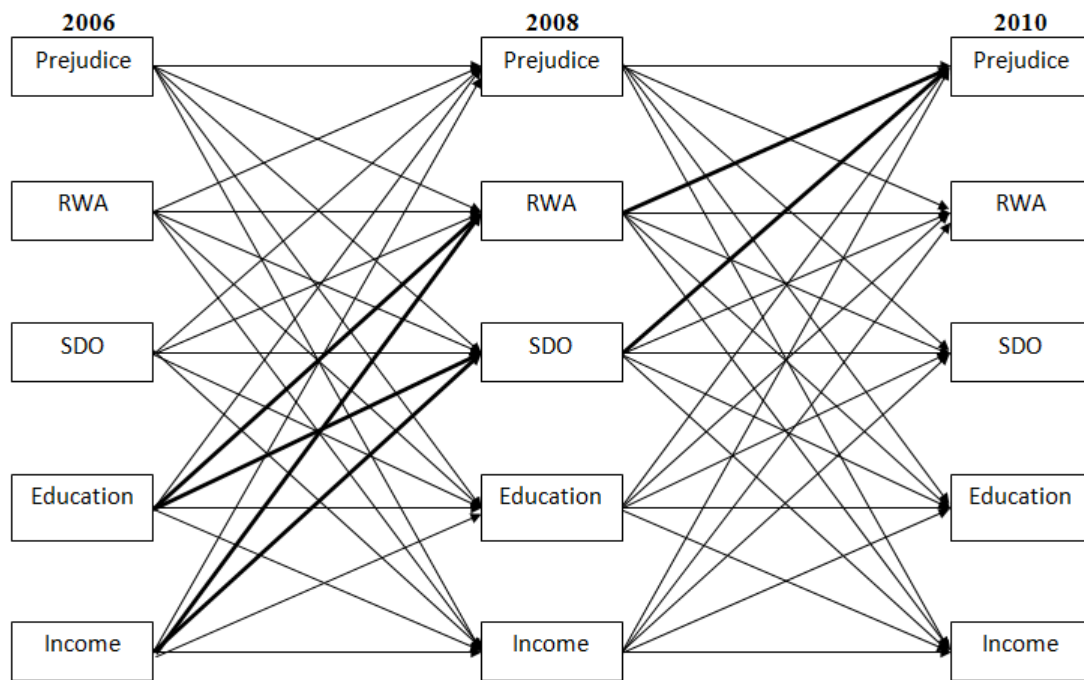
Note: Bold paths indicate the mediation hypotheses. The model also includes residual covariances within each year.

Table 1: Fit indices for the models of each German survey.

Fit indices	2004	2005	2006	2008	2009	2010	2011a	2011b
χ^2	746.71	437.57	729.25	840.14	648.86	743.18	695.81	260.89
DF	222	200	273	273	273	273	273	155
p	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
CFI	.97	.98	.97	.97	.98	.97	.97	.96
RMSEA	.03	.03	.03	.04	.03	.03	.03	.05
SRMR	.03	.02	.03	.03	.02	.03	.03	.04
N	2,156	1,463	1,454	1,484	1,485	1,547	1,433	308

Note: χ^2 = chi-square, DF = degrees of freedom, p = p-value, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual, N = number of observations.

Table 2: Direct and indirect effects of education and income on prejudice for the German surveys.

Prejudice	Effects	2004	2005	2006	2008	2009	2010	2011a	2011b
People with disabilities	Direct income	-.004	.037	.011	.102*	.052	-.025	.042	
		[-.060, .053]	[-.022, .096]	[-.040, .063]	[.039, .164]	[-.005, .109]	[-.032, .088]	[-.016, .101]	
	Income via RWA	.005	-.019*	-.007	-.023*	-.008	-.006	-.013	
		[-.005, .015]	[-.034, -.004]	[-.019, .005]	[-.039, -.007]	[-.023, .007]	[-.018, .007]	[-.033, .006]	
	Income via SDO	-.009	-.006	-.033*	-.045*	-.040*	-.023	-.001	
		[-.019, .002]	[-.017, .005]	[-.066, -.001]	[-.072, -.018]	[-.073, -.008]	[-.057, .011]	[-.032, .031]	
	Direct education	.058	-.007	.001	.006	.039	-.035	.001	
		[-.005, .120]	[-.075, .061]	[-.061, .064]	[-.060, .073]	[-.029, .106]	[-.099, .029]	[-.064, .066]	
	Education via RWA	.058	-.089*	-.026	-.082*	-.025	-.017	-.030	
		[-.005, .120]	[-.118, -.061]	[-.068, .015]	[-.130, -.033]	[-.069, .019]	[-.052, .018]	[-.073, .013]	
	Education via SDO	-.054*	-.048*	-.134*	-.149*	-.152*	-.124*	-.146*	
		[-.084, -.024]	[-.066, -.030]	[-.177, -.091]	[-.192, -.106]	[-.196, -.107]	[-.164, -.084]	[-.196, -.097]	
Foreigners	Direct income	-.031	-.056*	-.050	-.041	-.056*	-.038	-.063	-.015
		[-.072, .010]	[-.106, -.006]	[-.103, .004]	[-.091, .009]	[-.105, -.007]	[-.089, .013]	[-.010, .044]	[-.143, .112]
	Income via RWA	-.071*	-.046*	-.063*	-.063*	-.068*	-.061*	-.105*	-.070
		[-.107 -.035]	[-.080, -.012]	[-.102, -.024]	[-.095, -.031]	[-.099, -.036]	[-.090, -.032]	[-.151, -.058]	[-.169, .030]
	Income via SDO	-.014	-.005	-.019	-.038*	-.031*	-.019	.000	-.012
		[-.029, .001]	[-.015, .005]	[-.039, .000]	[-.061, -.015]	[-.057, -.006]	[-.046, .008]	[-.017, .016]	[-.078, .054]
	Direct education	.039	-.117*	-.064	-.043	.006	-.038	.003	.011
		[-.012, .089]	[-.173, -.060]	[-.129, .002]	[-.103, .017]	[-.053, .064]	[-.094, .018]	[-.057, .064]	[-.145, .166]
	Education via RWA	-.303*	-.220*	-.235*	-.225*	-.204*	-.182*	-.236*	-.226*
		[-.354, -.253]	[-.261, -.180]	[-.297, -.172]	[-.278, -.171]	[-.257, -.151]	[-.226, -.138]	[-.297, -.174]	[-.444, -.007]
	Education via SDO	-.086 *	-.043*	-.078*	-.125*	-.118*	-.101*	-.074*	-.131
		[-.114, -.058]	[-.059, -.028]	[-.111, -.044]	[-.162, -.088]	[-.155, -.081]	[-.135, -.066]	[-.113, -.034]	[-.317, .054]
Anti-Semitism	Direct income	.073*	.037	-.011	.043	.042	.012	-.020	-.007
		[.020, .125]	[-.020, .093]	[-.068, .047]	[-.019, .106]	[-.015, .099]	[-.045, .068]	[-.084, .045]	[-.135, .121]
	Income via RWA	-.025*	-.024*	-.021*	-.003	-.033*	-.032*	-.038*	-.015
		[-.040, -.010]	[-.043, -.005]	[-.040, -.003]	[-.018, .013]	[-.054, -.012]	[-.050, -.013]	[-.063, -.012]	[-.093, .064]
	Income via SDO	-.021	-.008	-.029	-.057*	-.039*	-.020	-.001	-.019
		[-.043, .001]	[-.022, .007]	[-.058, .000]	[-.091, -.023]	[-.070, -.008]	[-.048, .009]	[-.032, .031]	[-.118, .079]
	Direct education	-.030	-.102*	-.092*	-.064	.022	-.043	.035	.035
		[-.088, .028]	[-.164, -.040]	[-.167, -.017]	[-.138, .009]	[-.049, .092]	[-.111, .025]	[-.034, .105]	[-.141, .210]

	Education via RWA	-.105*	-.117*	-.092*	-.009	-.101*	-.094*	-.085*	-.048
		[-.143, -.067]	[-.147, -.087]	[-.167, -.017]	[-.063, .044]	[-.148, -.053]	[-.135, -.054]	[-.135, -.035]	[-.295, .198]
	Education via SDO	-.129*	-.063*	-.117*	-.191*	-.147*	-.105*	-.146*	-.207
		[-.163, -.094]	[-.084, -.042]	[-.161, -.072]	[-.241, -.140]	[-.191, -.104]	[-.142, -.068]	[-.198, -.093]	[-.469, .055]
Gay people	Direct income	.047	.023	.038	.047	.055*	.082*	.041	.097
		[-.002, .095]	[-.030, .076]	[-.018, .094]	[-.013, .107]	[.001, .108]	[.027, .138]	[-.018, .100]	[-.024, .218]
	Income via RWA	-.048*	-.025*	-.030*	-.027*	-.041*	-.047*	-.055*	-.017
		[-.074, -.023]	[-.043, -.006]	[-.051, -.008]	[-.044, -.009]	[-.064, -.018]	[-.072, -.023]	[-.084, -.025]	[-.083, .050]
	Income via SDO	-.011	-.005	-.018	-.043*	-.023*	-.013	.000	-.014
		[-.023, .002]	[-.016, .005]	[-.036, .001]	[-.068, -.017]	[-.043, -.004]	[-.032, .007]	[-.013, .013]	[-.086, .059]
	Direct education	.060*	-.103*	-.084*	-.031	-.026	-.041	-.030	-.048
		[.003, .118]	[-.168, -.039]	[-.154, -.014]	[-.101, .038]	[-.094, .043]	[-.103, .021]	[-.093, .033]	[-.221, .125]
	Education via RWA	-.207*	-.117*	-.111*	-.095*	-.124*	-.142*	-.123*	-.054
		[-.250, -.163]	[-.147 -.088]	[-.160, -.063]	[-.143, -.047]	[-.173, -.076]	[-.183, -.100]	[-.173, -.074]	[-.252, .144]
	Education via SDO	-.065*	-.044*	-.071*	-.143*	-.088*	-.068*	-.057*	-.149
		[-.095 -.035]	[-.062, -.025]	[-.104, -.038]	[-.185, -.101]	[-.122, -.054]	[-.097, -.039]	[-.098, -.017]	[-.343, .045]
Muslims	Direct income	-.007	-.068*	-.056	-.002	-.067*	-.025	-.011	.038
		[-.053, .038]	[-.124, -.012]	[-.111, .000]	[-.053, .049]	[-.119, -.016]	[-.073, .024]	[-.063, .041]	[-.089, .165]
	Income via RWA	-.049*	-.046*	-.059*	-.050*	-.068*	-.052*	-.094*	-.073
		[-.075, -.023]	[-.080, -.012]	[-.095, -.022]	[-.076, -.023]	[-.100, -.036]	[-.077, -.027]	[-.138, -.051]	[-.175, .030]
	Income via SDO	-.024	-.005	-.015	-.042*	-.030*	-.017	.000	-.009
		[-.049, .001]	[-.014, .004]	[-.031, .001]	[-.067, -.017]	[-.055, -.006]	[-.042, .008]	[-.017, .016]	[-.063, .046]
	Direct education	.058*	-.035	-.016	-.037	.091*	-.045	.001	.046
		[.004, .112]	[-.098, .028]	[-.087, .056]	[-.102, .029]	[.031, .151]	[-.103, .012]	[-.060, .063]	[-.117, .210]
	Education via RWA	-.211*	-.219*	-.219*	-.177*	-.205*	-.155*	-.213*	-.236*
		[-.254, -.167]	[-.258, -.179]	[-.281, -.157]	[-.229, -.125]	[-.258, -.151]	[-.196, -.115]	[-.272, -.153]	[-.456, -.016]
	Education via SDO	-.149*	-.039*	-.060*	-.140*	-.113*	-.092*	-.076*	-.095
		[-.186, -.112]	[-.056, -.022]	[-.092, -.028]	[-.181, -.099]	[-.150, -.077]	[-.124 -.060]	[-.116, -.035]	[-.277, .088]
Racism	Direct income	-.039	-.044	-.061*	-.105*	-.081*	-.107*	-.024	-.047
		[-.090, .013]	[-.106, .018]	[-.121, -.001]	[-.161, -.049]	[-.138, -.024]	[-.166, -.048]	[-.088, .041]	[-.231, .137]
	Income via RWA	-.006	-.025*	-.021*	-.029*	-.025*	-.031*	-.044*	.016
		[-.015, .003]	[-.045, -.006]	[-.040, -.003]	[-.048, -.010]	[-.045, -.005]	[-.051, -.011]	[-.073, -.014]	[-.117, .148]
	Income via SDO	-.047	-.011	-.045*	-.069*	-.058*	-.033	-.001	-.034
		[-.096, .002]	[-.033, .010]	[-.088, -.002]	[-.109, -.029]	[-.104, -.012]	[-.080, .014]	[-.041, .039]	[-.213, .144]

	Direct education	-.038	-.187*	-.120*	-.021	.026	-.042	-.042	.068
		[-.095, .018]	[-.258, -.116]	[-.196, -.045]	[-.093, .050]	[-.046, .097]	[-.112, .028]	[-.115, .032]	[-.207, .344]
	Education via RWA	-.025	-.121*	-.080*	-.103*	-.075*	-.092*	-.098*	.051
		[-.063, .012]	[-.155, -.087]	[-.130, -.029]	[-.154, -.051]	[-.128, -.022]	[-.137, -.048]	[-.154, -.042]	[-.362, .463]
	Education via SDO	-.289*	-.094*	-.181*	-.230*	-.219*	-.175*	-.188*	-.372
		[-.347, -.230]	[-.122, -.066]	[-.237, -.124]	[-.285, -.174]	[-.279, -.159]	[-.229, -.121]	[-.249, -.127]	[-.793, .049]
Sexism	Direct income	.035	-.008	.045	.020	.010	.038	-.030	.031
		[-.011, .081]	[-.063, .048]	[-.008, .099]	[-.036, .076]	[-.048, .069]	[-.020, .097]	[-.090, .031]	[-.116, .178]
	Income via RWA	-.030*	-.024*	-.027*	-.032*	-.041*	-.028*	-.029*	.004
		[-.046, -.013]	[-.042, -.006]	[-.047, -.008]	[-.053, -.012]	[-.065, -.017]	[-.047, -.010]	[-.053, -.005]	[-.090, .098]
	Income via SDO	-.021	-.006	-.026	-.040*	-.022*	-.018	.000	-.024
		[-.044, .002]	[-.017, .005]	[-.052, .000]	[-.064, -.015]	[-.042, -.003]	[-.044, .008]	[-.026, .025]	[-.145, .097]
	Direct education	-.048	-.136*	-.107*	-.081*	-.050	-.081*	-.072*	-.052
		[-.100, .003]	[-.200, -.072]	[-.179, -.035]	[-.147, -.015]	[-.124, .025]	[-.144, -.017]	[-.141, -.003]	[-.292, .188]
	Education via RWA	-.126*	-.114*	-.102*	-.114*	-.124*	-.084*	-.066*	.013
		[-.164, -.089]	[-.143, -.084]	[-.148, -.056]	[-.166, -.062]	[-.178, -.070]	[-.123, -.045]	[-.114, -.018]	[-.283, .310]
	Education via SDO	-.132*	-.049*	-.104*	-.114*	-.084*	-.096*	-.116*	-.258
		[-.166, -.097]	[-.068, -.029]	[-.143, -.065]	[-.166, -.062]	[-.121, -.046]	[-.131, -.060]	[-.164, -.068]	[-.543, .028]
Homeless	Direct income	.061*	.034	.022	.104*	.061	.063	.068*	
		[.010, .112]	[-.026, .095]	[-.042, .087]	[.035, .173]	[-.012, .134]	[-.003, .129]	[.003, .133]	
	Income via RWA	-.049*	-.042*	-.046*	-.060*	-.076*	-.059*	-.097*	
		[-.075, -.024]	[-.073, -.010]	[-.077, -.015]	[-.091, -.028]	[-.114, -.038]	[-.090, -.029]	[-.143, -.051]	
	Income via SDO	-.013	-.003	-.028	-.047*	-.037*	-.023	.000	
		[-.027, .001]	[-.011, .004]	[-.056, .000]	[-.076, -.019]	[-.068, -.006]	[-.057, .011]	[-.025, .024]	
	Direct education	.158*	-.027	.047	.055	.139*	.052	.094*	
		[.096, .220]	[-.095, .042]	[-.035, .129]	[-.029, .139]	[.059, .219]	[-.023, .127]	[.023, .165]	
	Education via RWA	-.210*	-.198*	-.172*	-.212*	-.228*	-.178*	-.219*	
		[-.256, -.164]	[-.240, -.157]	[-.237, -.107]	[-.282, -.143]	[-.293, -.163]	[-.233, -.123]	[-.285, -.153]	
	Education via SDO	-.078*	-.029*	-.114*	-.158*	-.140*	-.125*	-.113*	
		[-.110, -.046]	[-.047, -.011]	[-.159, -.069]	[-.207, -.110]	[-.186, -.094]	[-.168, -.081]	[-.163, -.063]	
Newcomers	Direct income	.000	-.077*	-.010	-.019	.029	-.029	.015	-.133
		[-.051, .052]	[-.141, -.012]	[-.069, .050]	[-.076, .038]	[-.032, .091]	[-.085, .027]	[-.045, .075]	[-.281, .014]
	Income via RWA	-.032*	-.033*	-.040*	-.027*	-.045*	-.047*	-.040*	-.065
		[-.050, -.013]	[-.059, -.008]	[-.068, -.013]	[-.046, -.008]	[-.070, -.020]	[-.071, -.022]	[-.067, -.013]	[-.160, .030]

Income via SDO	-.038	-.010	-.034*	-.070*	-.044*	-.022	-.001	-.010
	[-.077, .002]	[-.028, .008]	[-.066, -.001]	[-.110, -.030]	[-.079, -.009]	[-.053, .010]	[-.044, .042]	[-.070, .050]
Direct education	.075*	-.095*	.034	-.004	.038	-.033	.052	.070
	[.016, .134]	[-.169, -.021]	[-.037, .105]	[-.072, .064]	[-.030, .106]	[-.100, .034]	[-.015, .118]	[-.114, .254]
Education via RWA	-.135*	-.159*	-.150*	-.096*	-.136*	-.139*	-.090*	-.211
	[-.180, -.090]	[-.200, -.118]	[-.205, -.095]	[-.149, -.043]	[-.189, -.083]	[-.186, -.092]	[-.141, -.039]	[-.425, .003]
Education via SDO	-.233*	-.080*	-.134*	-.233*	-.166*	-.116 *	-.200*	-.107
	[-.282, -.183]	[-.104, -.055]	[-.179, -.089]	[-.289, -.177]	[-.212, -.119]	[-.153, -.079]	[-.257, -.144]	[-.287, .072]

Note: Each cell indicates the standardized coefficients and the 95% confidence intervals in brackets. * Coefficient is significant at the 95% confidence level.

Table 3: Summary of significant effects in German surveys.

Prejudice	Direct income	Income via RWA	Income via SDO	Direct education	Education via RWA	Education via SDO
People with disabilities	1/7	2/7	3/7	0/7	2/7	7/7
Foreigners	2/8	7/8	2/8	1/8	8/8	7/8
Anti-Semitism	1/8	6/8	2/8	2/8	6/8	7/8
Gay people	2/8	7/8	2/8	3/8	7/8	7/8
Muslims	2/8	7/8	2/8	2/8	8/8	7/8
Racism	4/8	6/8	3/8	2/8	6/8	7/8
Sexism	0/8	7/8	2/8	5/8	7/8	7/8
Homeless	3/7	7/7	2/7	3/7	7/7	7/7
Newcomers	1/8	7/8	3/8	2/8	7/8	7/8
Total	16/70	56/70	21/70	20/70	58/70	63/70

Note: Each cell indicates the proportion of significant effects for the given prejudice.

Table 4: Fit indices for the models of each European country

Fit indices	Germany	Great Britain	Netherlands	France
χ^2	317.29	272.83	371.69	32.94
DF	147	167	167	147
p	<.01	<.01	<.01	<.01
CFI	.96	.98	.96	.96
RMSEA	.04	.04	.04	.04
SRMR	.03	.03	.03	.03
N	661	530	718	731

Note: χ^2 = chi-square, DF = degrees of freedom, p = p-value, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual, N = number of observations.

Table 5: Direct and indirect effects of education and income on prejudices for the European surveys.

Prejudice	Effects	Germany	Great Britain	Netherlands	France
People with disabilities	Direct income	.024	.012	.027	-.003
		[-.059, .108]	[-.074, .099]	[-.049, .103]	[-.081, .074]
	Income via RWA	-.003	-.006	-.002	.002
		[-.019, .012]	[-.020, .007]	[-.012, .007]	[-.007, .010]
	Income via SDO	-.004	-.024	-.016	.004
		[-.021, .013]	[-.070, .021]	[-.048, .015]	[-.035, .043]
	Direct education	-.072	.048	.016	.011
		[-.162, .018]	[-.053, .148]	[-.079, .112]	[-.076, .098]
	Education via RWA	-.063	-.051	.021	-.018
		[-.131, .005]	[-.105, .003]	[-.032, .074]	[-.059, .023]
	Education via SDO	-.045	-.093*	-.097*	-.046
		[-.105, .014]	[-.141, -.044]	[-.154, -.040]	[-.091, .000]
Foreigners	Direct income	-.031	-.023	-.050	-.054
		[-.106, .043]	[-.109, .063]	[-.129, .030]	[-.129, .021]
	Income via RWA	-.011	-.021	.013	.017
		[-.051, .030]	[-.060, .017]	[-.015, .040]	[-.036, .070]
	Income via SDO	-.012	-.026	-.025	.002
		[-.051, .028]	[-.074, .022]	[-.072, .022]	[-.019, .023]
	Direct education	-.098*	-.074	-.038	-.019
		[-.185, -.011]	[-.174, .025]	[-.141, .065]	[-.104, .065]
	Education via RWA	-.197*	-.172*	-.121*	-.201*
		[-.276, -.117]	[-.242, -.102]	[-.180, -.063]	[-.265, -.138]
	Education via SDO	-.124*	-.098*	-.149*	-.024
		[-.195, -.054]	[-.148, -.048]	[-.222, -.077]	[-.055, .008]
Anti-Semitism	Direct income	.016	-.071	.016	.032
		[-.073, .104]	[-.171, .030]	[-.076, .108]	[-.050, .114]
	Income via RWA	-.007	-.005	.004	.009
		[-.034, .020]	[-.020, .010]	[-.008, .015]	[-.019, .037]
	Income via SDO	-.010	-.025	-.021	.002
		[-.047, .026]	[-.072, .022]	[-.063, .020]	[-.023, .027]
	Direct education	-.112*	-.063	-.075	-.119*
		[-.212, -.012]	[-.188, .062]	[-.190, .041]	[-.215, -.023]
	Education via RWA	-.124*	-.041	-.034	-.105*
		[-.211, -.038]	[-.111, .029]	[-.093, .026]	[-.155, -.055]

	Education via SDO	-.112*	-.096*	-.128*	-.028
		[-.189, -.035]	[-.151, -.040]	[-.194, -.062]	[-.061, .006]
Gay people	Direct income	.036	-.035	-.121*	.050
		[-.061, .133]	[-.125, .055]	[-.210, -.031]	[-.041, .142]
	Income via RWA	-.010	-.013	.012	.012
		[-.047, .028]	[-.038, .012]	[-.014, .038]	[-.025, .048]
	Income via SDO	-.002	-.014	-.013	.001
		[-.016, .012]	[-.042, .014]	[-.040, .013]	[-.016, .019]
	Direct education	.044	-.146*	.086	-.053
		[-.066, .153]	[-.257, -.035]	[-.016, .188]	[-.153, .048]
	Education via RWA	-.177*	-.102*	-.114*	-.137*
		[-.266, -.087]	[-.168, -.037]	[-.166, -.062]	[-.196, -.078]
	Education via SDO	-.025	-.053*	-.080*	-.018
		[-.092, .041]	[-.091, -.015]	[-.133, -.027]	[-.045, .010]
Muslims	Direct income	-.008	-.023	-.060	-.051
		[-.088, .072]	[-.107, .061]	[-.138, .017]	[-.133, .030]
	Income via RWA	-.013	-.019	.015	.019
		[-.060, .035]	[-.054, .015]	[-.017, .048]	[-.039, .076]
	Income via SDO	-.005	-.027	-.026	.001
		[-.025, .015]	[-.077, .023]	[-.074, .023]	[-.011, .012]
	Direct education	-.054	-.096	-.030	-.053
		[-.156, .047]	[-.196, .004]	[-.130, .070]	[-.147, .041]
	Education via RWA	-.231*	-.156*	-.144*	-.217*
		[-.321, -.141]	[-.222, -.090]	[-.207, -.081]	[-.287, -.147]
	Education via SDO	-.056	-.103*	-.154*	-.007
		[-.117, .006]	[-.154, -.052]	[-.224, -.085]	[-.031, .017]
Racism	Direct income	-.092	-.079	-.052	.020
		[-.200, .016]	[-.193, .036]	[-.148, .044]	[-.058, .099]
	Income via RWA	-.005	-.008	.013	.001
		[-.025, .015]	[-.027, .011]	[-.016, .042]	[-.006, .009]
	Income via SDO	-.020	-.044	-.025	.001
		[-.087, .047]	[-.124, .037]	[-.073, .023]	[-.012, .013]
	Direct education	-.181*	-.194*	-.185*	-.141*
		[-.303, -.058]	[-.334, -.054]	[-.309, -.060]	[-.225, -.057]
	Education via RWA	-.085	-.068	-.127*	-.018
		[-.190, .020]	[-.146, .011]	[-.191, -.063]	[-.058, .023]
	Education via SDO	-.211*	-.166*	-.150*	-.007
		[-.326, -.097]	[-.247, -.085]	[-.226, -.075]	[-.034, .020]

Sexism	Direct income	-.113*	-.146*	-.077	-.133*
		[-.216, -.010]	[-.252, -.039]	[-.166, .012]	[-.237, -.029]
	Income via RWA	-.003	-.011	.010	.013
		[-.017, .012]	[-.034, .012]	[-.012, .031]	[-.029, .055]
	Income via SDO	-.017	-.021	-.021	.003
		[-.076, .042]	[-.061, .019]	[-.061, .019]	[-.034, .040]
	Direct education	-.157*	-.150*	-.183*	-.183*
		[-.268, -.046]	[-.283, -.016]	[-.290, -.075]	[-.295, -.072]
	Education via RWA	-.046	-.087*	-.091*	-.156*
		[-.147, .054]	[-.171, -.004]	[-.145, -.037]	[-.226, -.085]
	Education via SDO	-.182*	-.081*	-.125*	-.041
		[-.291, -.074]	[-.134, -.027]	[-.187, -.063]	[-.090, .009]
Homeless	Direct income	.011	.019	.029	-.017
		[-.073, .094]	[-.103, .140]	[-.085, .144]	[-.119, .085]
	Income via RWA	-.002	-.034	.005	.009
		[-.015, .010]	[-.096, .027]	[-.010, .020]	[-.019, .036]
	Income via SDO	-.003	-.020	-.038	.006
		[-.019, .012]	[-.059, .020]	[-.111, .034]	[-.055, .067]
	Direct EDUCATION	-.040	.077	.016	-.098
		[-.137, .056]	[-.073, .227]	[-.124, .155]	[-.208, .012]
	Education via RWA	-.045	-.278*	-.049	-.100*
		[-.119, .029]	[-.393, -.162]	[-.123, .026]	[-.162, -.038]
	Education via SDO	-.036	-.075*	-.230*	-.073*
		[-.096, .024]	[-.126, -.023]	[-.337, -.124]	[-.143, -.004]

Note: Each cell indicates the standardized coefficients and the 95% confidence intervals in brackets. * Coefficient is significant at the 95% confidence level.

Table 6: Summary of significant effects in the European surveys.

Prejudice	Direct income	Income via RWA	Income via SDO	Direct education	Education via RWA	Education via SDO
People with disabilities	0/4	0/4	0/4	0/4	0/4	2/4
Foreigners	0/4	0/4	0/4	1/4	4/4	3/4
Anti-Semitism	0/4	0/4	0/4	2/4	2/4	3/4
Gay people	1/4	0/4	0/4	2/4	4/4	2/4
Muslims	0/4	0/4	0/4	0/4	4/4	2/4
Racism	0/4	0/4	0/4	4/4	1/4	3/4
Sexism	3/4	0/4	0/4	4/4	3/4	3/4
Homeless	0/4	0/4	0/4	0/4	2/4	3/4
Total	4/32	0/32	0/32	13/32	20/32	21/32

Note: Each cell indicates the proportion of significant effects for the given prejudice.

Table 7: Longitudinal direct and indirect effects of education and income on prejudices in Germany.

Prejudice	Education direct	Education indirect via SDO	Education indirect via RWA	Income direct	Income indirect via SDO	Income indirect via RWA
Anti-Semitism	.001	-.045*	-.094*	-.112*	-.016	-.052*
	[-.104, .107]	[-.076, -.013]	[-.141, -.046]	[-.187, -.037]	[-.048, .015]	[-.085, -.019]
Foreigners	-.082	-.032*	-.120*	-.075	-.012	-.066*
	[-.178, .013]	[-.061, -.003]	[-.174, -.067]	[-.166, .016]	[-.035, .012]	[-.109, -.024]
Muslims	-.097	-.041*	-.104*	-.014	-.015	-.057*
	[-.198, .004]	[-.074, -.008]	[-.151, -.057]	[-.107, .079]	[-.044, .014]	[-.095, -.019]
Sexism	-.185*	-.031*	-.081*	.033	-.011	-.045*
	[-.286, -.084]	[-.059, -.002]	[-.128, -.034]	[-.058, .125]	[-.034, .011]	[-.075, -.014]
Gay people	.024	-.030*	-.103*	.032	-.011	-.057*
	[-.081, .128]	[-.060, -.001]	[-.152, -.054]	[-.066, .130]	[-.034, .012]	[-.094, -.019]
Homeless	.055	-.045*	-.068*	.028	-.016	-.037*
	[-.051, .162]	[-.078, -.011]	[-.114, -.022]	[-.064, .120]	[-.047, .015]	[-.066, -.009]
Racism	-.115*	-.048*	-.090*	-.089*	-.017	-.050*
	[-.214, -.015]	[-.083, -.013]	[-.135, -.046]	[-.177, -.001]	[-.050, .016]	[-.081, -.018]

Note: Each cell indicates the standardized coefficients and the 95% confidence intervals in brackets. * Coefficient is significant at the 95% confidence level.

Table 8: Fit indices for the cross-lagged models for each prejudice.

Fit indices	Anti-Semitism	Homeless	Gay people	Muslims	Racism	Sexism	Foreigners
χ^2	229.32	234.95	219.97	222.32	188.73	237.40	225.24
DF	23	23	23	23	23	23	23
p	<.01	<.01	<.01	<.01	<.01	<.01	<.01
CFI	.94	.94	.95	.94	.95	.93	.93
RMSEA	.17	.17	.16	.16	.15	.17	.16
SRMR	.03	.03	.03	.03	.03	.03	.03
N	323	325	326	324	324	326	325

Note: χ^2 = chi-square, DF = degrees of freedom, p = p-value, CFI = comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual, N = number of observations.

Table 9: Longitudinal direct and indirect effects of education and income on prejudices in the cross-lagged models in Germany.

Prejudice	Education direct	Education indirect via SDO	Education indirect via RWA	Income direct	Income indirect via SDO	Income indirect via RWA
Anti-Semitism	-.075	-.002	-.011	-.022	-.001	-.016*
	[-.266, .116]	[-.010, .006]	[-.028, .006]	[-.141, .098]	[-.009, .007]	[-.030, -.001]
Foreigners	-.053	-.001	-.003	-.055	.000	-.005
	[-.204, .099]	[-.008, .005]	[-.011, .004]	[-.189, .080]	[-.007, .006]	[-.014, .003]
Muslims	-.070	-.002	-.008	.009	-.001	-.013*
	[-.231, .090]	[-.012, .007]	[-.021, .004]	[-.106, .123]	[-.010, .008]	[-.025, -.001]
Sexism	-.216*	-.001	-.005	.052	-.001	-.008
	[-.382, -.049]	[-.009, .006]	[-.015, .005]	[-.131, .236]	[-.008, .006]	[-.019, .003]
Gay people	-.032	.000	-.004	.082	.000	-.006
	[-.177, .113]	[-.005, .006]	[-.011, .003]	[-.037, .200]	[-.004, .005]	[-.014, .002]
Homeless	.008	-.008	-.007	-.010	-.005	-.010
	[-.199, .216]	[-.025, .009]	[-.019, .005]	[-.138, .118]	[-.022, .012]	[-.021, .001]
Racism	.016	-.002	-.011	-.070	-.002	-.017*
	[-.143, .176]	[-.011, .007]	[-.026, .005]	[-.199, .060]	[-.011, .008]	[-.031, -.002]

Note: Each cell indicates the standardized coefficients and the 95% confidence intervals in brackets. * Coefficient is significant at the 95% confidence level.

Table 10: Longitudinal direct and indirect effects of education and income on attitudes toward immigrants in Chile.

Effects	Estimates [95% C.I.]
Direct education	.212*
	[.065, .359]
Education via RWA	.040
	[-.001, .082]
Education via SDO	.046*
	[.002, .090]
Direct income	.067
	[-.068, .201]
Income via RWA	.012
	[-.007, .032]
Income via SDO	.011
	[-.011, .033]

Note: The cells indicate the standardized coefficients and the 95% confidence intervals (C.I.) in brackets.

Decision Letter (EJSP-12-0337.R2)

From: ejsp@easp.eu

To: hscarvac@uc.cl

CC:

Subject: EJSP-12-0337.R2 - decision

Body: Dear Hector and colleagues:

I am writing once again concerning your revised submission entitled "On the relation between social class and prejudice: The roles of education, income, and ideological attitudes" (EJSP Ms. # 13-0337-R2).

I am very close to accepting your paper and feel that it makes an important and valuable contribution to the research literature as a whole, but there were a few typos and a number of places where I felt that the language needed to be clearer and more precise, so I have taken the liberty of entering the proposed edits myself (mainly to save time and effort). The document that contains my proposed changes is attached.

You are by no means obligated to accept my fixes, but they should know that if I changed something it was because I found it to be unclear, so you will need to propose an alternative fix, if you would like. If you are OK with these changes, then I believe that we can move forward to the production phase.

I have not proofread your extensive tables or appendices, so please also ask them to make sure that those are entirely correct!

As you know, we are on an extraordinarily tight schedule by now. We will need to receive your final, publication-ready version by April 19 (if not sooner). In addition, we are going to rush page proofs to you right after we move your manuscript into production and ask that you clear your schedule in advance to review the proofs and make any corrections by April 30 at the very latest (again, sooner is better).

Many thanks once again!

John

Date Sent: 11-Apr-2013

File 1: Carvacho-et-al.-EJSP-12-0337.R2--w.-Jost-proposed-edits-.docx

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Manuscripts with Decisions

Manuscript ID	Manuscript Title	Date Submitted	Date Decisioned	Status	Actions
EJSP-12-0337.R2	On the relation between social class and prejudice: The roles of education, income and ideological attitudes. [View Submission]	20-Mar-2013	11-Apr-2013	▪ Accepted with minor revisions (11-Apr-2013) ▪ Due on: 06-Apr-2014 view decision letter	create a revision
EJSP-12-0337.R1	On the relation between social class and prejudice: The roles of education, income and ideological attitudes. [View Submission]	13-Feb-2013	27-Feb-2013	▪ Major revision (27-Feb-2013) ▪ a revision has been submitted view decision letter	a revision has been submitted (EJSP-12-0337.R2)
EJSP-12-0337	On the relation between social class and prejudice: The roles of education, income and ideological attitudes. [View Submission]	17-Sep-2012	02-Dec-2012	▪ Major revision (02-Dec-2012) ▪ a revision has been submitted view decision letter	a revision has been submitted (EJSP-12-0337.R1)

▲ top

Group identification leads to prejudice when people endorse group-based hierarchies.

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Abstract

Several studies indicate that ingroup identification does not systematically correlate with prejudice. In this paper we test the moderating role of social dominance orientation (SDO), a group-based ideological attitude that strongly predicts prejudice, for the identification-prejudice relationship. Studies 1 and 2 are based on national representative surveys from Germany (N_1=2000 and N_2=808), whereas in Study 3 ingroup identification was experimentally manipulated (N_3=122). Results show that the relationship of religious identification with anti-Semitism (Study 1) is stronger for those high in SDO; gender identification predicts sexism and prejudice toward gay people only for people high in SDO (Study 2); and the effect of national identification on prejudice toward foreigners (Study 2) and Muslims (Study 3) is also moderated by SDO. We conclude that prejudice follows from an ideological configuration in which identification defines the specific target of prejudice for people holding group-based ideologies.

Keywords: ideology, social dominance, identity, prejudice, ideological configuration

Group identification leads to prejudice when people endorse group-based hierarchies.

Every person has experienced what group identification is. People feel strong ties with members of the groups they belong to, they share a history, values and social practices, and their self-esteem is connected with group memberships (Tajfel & Turner, 1986). However, ingroup identification sometimes becomes outgroup derogation (Brewer, 1999). In this article we describe how the connection between ingroup identification and manifestations of derogatory attitudes toward outgroups, depends upon the level of endorsement for group-based social hierarchies, i.e. social dominance orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994). We are therefore bringing together social identity theory (Tajfel & Turner, 1986) and social dominance theory (Sidanius & Pratto, 1999).

The question whether ingroup identification is specifically connected with outgroup derogation has been a matter of discussion for a long time (see Brewer, 1999; Brown & Zagefka, 2005). Based on social identity theory, scholars have successfully proved that ingroup identification may lead to ingroup bias (Hewstone, Rubin, & Willis, 2002), even for people who belong to meaningless groups (Tajfel, Billig, Bundy, & Flament, 1971). But so far the distinction between ingroup bias and derogatory attitudes toward outgroup members, such as prejudice, has been neglected (Brown & Zagefka, 2005; Brown, 2000). Evidence about the specific connection between derogatory attitudes toward outgroup members and group identification is not conclusive, because positive, negative and zero correlations between ingroup identification and prejudice have been reported (see Pehrson, Brown, & Zagefka, 2009).

This unclear evidence constitutes a challenge, which might be solved taking a closer look at possible moderators that may explain such variation. Previously, some scholars showed that the relationship between strength of identification and endorsement of negative attitudes often depends on a given identity's content. For instance, a strong identification with the national group leads to negative

attitudes toward immigrants when there is an essentialist definition of the national identity (Pehrson et al., 2009), or when the national identity is conceived in comparative terms with other countries (Mummendey, Klink, & Brown, 2001).

Addressing this challenge, Brewer (1999) suggested a list of conditions under which ingroup identification might be connected with outgroup derogation: (1) the outgroup is perceived as competitive and threatening; (2) groups are under common threat and have common goals, which might lead to mutual blaming; (3), the need for more distinctiveness might be a source of conflict if groups have common values; (4) under the manipulation of powerful leaders; and (5) when people believe that the ingroup has moral superiority over the outgroup.

According to social dominance theory, prejudices are specific manifestations of an ideological attitude that expresses preference for and endorsement of group-based social hierarchies, namely SDO (Pratto et al., 1994; Sidanius & Pratto, 1999). To our understanding, moral superiority of the ingroup is a specific way of endorsement of hierarchies and SDO might play the same role as what Brewer (1999) proposed for moral superiority. Hence, SDO would moderate the relationship between group identification and prejudice.

Using the minimal group paradigm Sidanius, Pratto, and Mitchell (1994) found some evidence of the interactive nature of the relationship between SDO and group identification. Results of that study suggested that those who strongly identified and had high levels of SDO were more likely to desire social distance to outgroup members. However Reynolds et al. (2007) could not replicate the results.

Later on, Heaven and Quintin (2003) experimentally tested the interaction of SDO and the salience of national vs. personal identity. They found that only the interaction of the salient national identity with SDO predicted attitude toward foreigners. This finding was replicated by Perry and Sibley (2011), but not by Bergh, Akrami and Ekehammar (2010). Using correlational data, Meeus, Duriez,

Vanbeselaere, Pahlet and Kuppens (2009) did not find an interaction between national identification and SDO for predicting attitudes toward foreigners.

Although the aforementioned studies provide some initial evidence, results are mixed. Moreover, none of those studies was designed for or specifically test the interactive relationship between level of group identification and SDO to predict outgroup derogation. The studies were conducted either using the minimal group paradigm, which is especially suited for studying ingroup bias and not outgroup derogation; or focused uniquely on the case of national identification, without addressing the issue of generalization and using measurements of intergroup attitudes that were not necessarily derogatory.

In this article, we aim to explore the relationship between group identification and social dominance orientation in multiple intergroup contexts. Specifically, we posit that the category that underlies the identification with a social group should lead to the definition of specific outgroups as targets. Therefore, we hypothesize that, for people high in SDO, group identification leads to prejudice toward a group defined by the same category used for building the own identity. Identification activates the specific attitudinal domain in which the ideological orientation is applied. Thus, when identity is defined in terms of the category of nation, relevant outgroups should be defined by the same category, e.g. foreigners. The general and abstract ideological attitude is connected with a concrete attitudinal object depending upon relevant identities in a given context.

Different from prior conceptualizations, in our approach identification and SDO are neither competing predictors of prejudice nor alternative explanations. Instead, we propose that prejudice might be explained by the interactive relationship between the level of group identification and SDO. In this interactive account, the presence of both group identification and SDO forms a specific ideological configuration that explains outgroup derogation.

We tested our leading hypothesis in three studies, each focused on identification with different groups. In Study 1, we tested the interaction of religious identification with SDO to predict prejudice toward a religious outgroup. In Study 2, we investigated the interaction between national identification and SDO to predict prejudice toward foreigners, and the interaction between gender identification and SDO to predict both sexism and prejudice toward gay people. In Study 3, we manipulate national identification and test its interaction with SDO to predict prejudice toward foreigners and Muslims.

Study 1: Religious Identity and Anti-Semitism

The hypothesis that SDO moderates the relationship between religious identification and prejudice toward a religious outgroup, namely Jews, was tested in a representative survey of the German adult population.

Method

The data if this study stem from a survey conducted in 2006 as part of the Group-Focused Enmity project (Zick et al., 2008). Using computer assisted telephone interviews, a professional survey institute contacted, a probability sample of 2000 participants based on the landline telephone directory of households in Germany. Participants' age ranged from 16 to 91 years (M = 45, SD = 16.23), and slightly more females (54.8%; $N = 1096$) than males participated. The sample included three major religious groups: Protestants (33.1%), Catholics (23.8%) and non-religious people (37.6%). About 2.2% belonged to other Christian denominations such as evangelical free churches. The remaining participants were distributed among non-Christian religions: Muslims (1.2%), other religions (2%), and six people who did not report their religion.

Anti-Semitism was used as dependent variable and measured by three items on classical anti-Semitism, e.g. "Jews have too much influence in Germany" (Heyder, Iser, & Schmidt, 2005). SDO was

measured by three items taken from the first dimension of the SDO-6 scale, assessing support for

group-based dominance (Sidanius & Pratto, 1999). Religious identification was measured with a single

item asking people to indicate how religious they are on a four-point Likert scale ranging from *not at*

all to *very religious*.

We analyzed the data in a two-step procedure. First we tested a measurement model including a

confirmatory factor analysis for the variables with more than one indicator, using the software Mplus,

version 5.21 (Muthén & Muthén, 2007). Results of this analysis can be found in the Supplemental

Material available online. In the second step we tested the proposed interaction using latent moderated

structural equation modeling (LMS; Klein & Moosbrugger, 2000).

Results

The structural model showed that SDO ($b = 0.64$, SE $= .14$, $p < .01$) but not religious identity (b

$= 0.00$, SE $= .02$, $p = .98$) had a main effect on anti-Semitism. In addition, the latent interaction

between both factors significantly predicted anti-Semitism ($b = 0.12$, SE $= .06$, $p = .03$). The pattern of

the interaction revealed that the relation between religious identity and anti-Semitism became positive

under high levels of SDO, whereas under low levels of SDO this relation became negative (see Figure

1).

Figure 1: Interaction between SDO and religious identification on anti-Semitism.
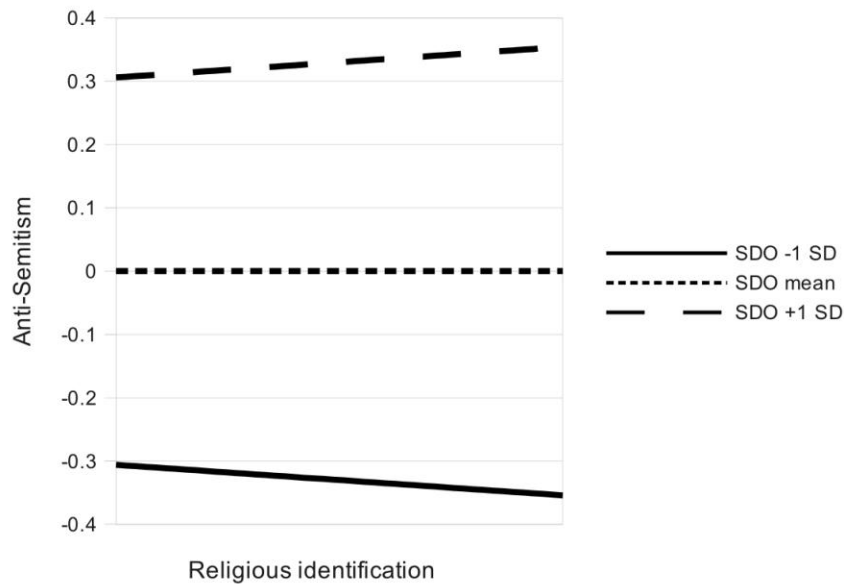
Note: Separate regression lines represent three possible values of SDO, the mean value, one standard deviation below the mean, and one standard deviation above the mean.

Discussion

Results showed that religious identification positively predicts derogatory attitudes toward a religious outgroup—Jews—for people who displayed high levels of SDO. For participants with lower levels of SDO the relationship between identification and prejudice was not positive. However, this study was not without limitations. First, we measured religious identification with a single-item. Second, it does not allow for generalization of this pattern to domains different from religion. To confront these limitations we conducted a second study including other group identities and targets.

Study 2: Gender and National Identification

In a representative sample of the German adult population, we extended the findings of Study 1 by testing the interaction of SDO with gender identification as well as national identification, to predict

sexism and prejudice toward gay people, and prejudice toward foreigners, respectively.

Method

In 2011, we conducted a survey including multiple measurements of social attitudes and

prejudice. Using computer assisted telephone interviews, a professional survey institute collected a

probability sample of 808 participants. Selection of participants followed a two-step procedure. First, a

household was selected from the directory of landlines in Germany. Second, the last birthday method

was used to randomly determine a respondent within households. Participants were German citizens

older than 18.

As part of this survey we included items addressing both gender and national identification.

Gender identification was measured with two items adapted from Becker and Wagner (2009), to be

applied to both genders (e.g. "I am a person who identifies with women/men"). National identification

was assessed using two items adapted from Cohrs (2004; e.g. "I identify myself with Germans"). SDO

was measured using the same three items as in Study 1. We measured three types of prejudices using

two items for each of them. Specifically we included items on prejudice toward foreigners (e.g. "There

are too many foreigners in Germany"), sexism (e.g. "It is more important for a wife to support her

husband's career than to have a career herself"), and prejudice toward gay people (e.g. "Homosexuality

is immoral"). All items were answered on five-point Likert scales ranging from *fully disagree* to *fully*

agree.

As in Study 1, we first tested the measurement models and then used LMS. Measurement

models are presented in the Supplemental Material available online.

Results

In two of the three proposed models SDO interacted with group identification to predict

prejudice. These interactions were: (a) national identification with SDO on prejudice toward foreigners

($b = 0.66$, SE $= .20$, $p < .01$, $N = 808$), with additional main effects of SDO ($b = 1.28$, SE $= .20$, $p < .01$)

and national identification ($b = 0.38$, SE $= .07$, $p < .01$); and (b) gender identification with SDO on

prejudice toward gay people ($b = 0.46$, SE $= .19$, $p = .02$, $N = 396$), with a main effect of gender

identification ($b = 0.09$, SE $= .05$, $p = .05$), but not of SDO ($b = -0.41$, SE $= .67$, $p = .54$). In the

remaining model—gender identification with SDO on sexism—although none of the effects were

statistically significant (interaction: $b = 0.21$, SE $= .17$, $p = .21$, $N = 403$; main effect SDO: $b = 0.20$, SE

$= .63$, $p = .75$; and main effect of gender identification: $b = 0.03$, SE $= .04$, $p = .56$), the pattern was

similar to the previous two models. The patterns of the interactions were always in the expected

direction, i.e. the relationship between identification and prejudice was stronger and positive for those

displaying high levels of SDO. As an example, Figure 2 depicts the pattern for the case of national

identification and prejudice toward foreigners.

Figure 2: Interaction between SDO and national identification on prejudice toward foreigners.
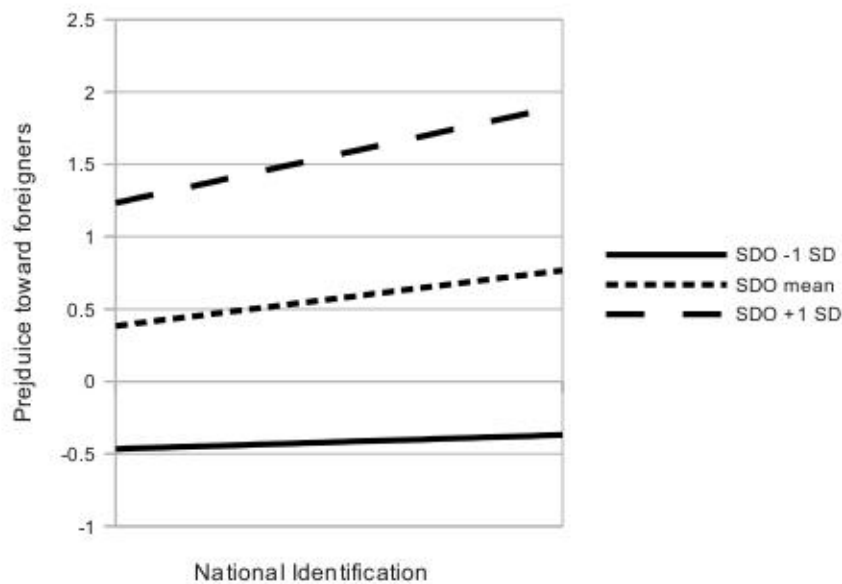
Note: Separate regression lines represent three possible values of SDO, the mean value, one standard

deviation below the mean, and one standard deviation above the mean.

Discussion

Findings of this study extend the results from Study 1 to a greater number of identities and

target groups. In general terms, the results offer strong support for our leading hypothesis, suggesting

that the process involved is quite general and applicable to multiple situations. However, there are still

some issues that have to be considered carefully. First, there is one model which, although displayed

the same pattern, did not reach statistical significance. This might be due to the difficulties detecting

interactions using survey data, which have been widely discussed in the specialized literature (i.e.

McClelland & Judd, 1993). Second, there are still some limitations concerning the measurements, such

as two-item scales or the impossibility to build latent factors for every construct to control

measurement error by attenuation. Third, survey methodology is restrictive when it comes to testing the

situational process of identification, for instance when one specific identity becomes salient. Testing the

process directly would lend greater support to the idea that prejudicial targeting is caused by

identification. To deal with these issues we designed an experiment focusing on national identification.

Study 3: Experiment on National Identity

Using an experimental design we manipulated the salience of participants' national

identification and investigated its proposed interaction with SDO on prejudice toward foreigners,

prejudice toward Muslims, anti-Semitism and sexism. Due to the specificity of the identification, we

expected to find an interaction only on prejudice toward target groups that are relevant for the salient

category, namely prejudice toward foreigners and Muslims, but not on sexism and anti-Semitism.

Muslims, immigrants and foreigners in Germany share the same category (Asbrock, 2010), and

therefore, we expect Muslims also to be a target of prejudice derived from the national category.

Method

One hundred and twenty two (38 male, 84 female) participants took part in a paper-based experiment. All of them were born in Germany, and 117 of them had at least one parent with the German nationality. The age of the participants ranged from 20 to 71 years (M = 25.5, SD = 7.5) and roughly 94% of them were students at Bielefeld University.

We randomly assigned participants to a subtle condition, a blatant condition, and a control condition. In the subtle condition ($n = 44$), identification was made salient merely by asking participants questions about their nationality: "What is your nationality?" (*German* or *other*), "In which country were you born?" (*Germany* or *other*), "In which country did you grow up?" (*Germany* or *other*), "Are your parents Germans?" (*yes*, *one of them*, or *no*), and "Do any of your grandparents have a nationality other than German?" (*yes* or *no*). In the blatant condition ($n = 35$), participants answered the same questions as in the subtle condition and additionally completed a 12-item scale on national identification with Germany (Cohrs, 2004). Hence, both manipulations aimed at heightening the salience of national identification and have been successfully employed in earlier research (i.e. Bergh et al., 2010; Esses, Wagner, Wolf, Preiser, & Wilbur, 2006). In the control condition ($n = 43$), participants first responded to the prejudice items. In the subtle and blatant conditions participants responded to the prejudice items immediately after the manipulation. Later, participants completed the SDO scale (Six, Wolfradt, & Zick, 2001), which was not affected by the manipulations (for details see Supplemental Material available online).

The dependent variables were self-reported prejudice toward foreigners (eight item; Zick et al., 2008), prejudice toward Muslims (six items; Streib, 2010), anti-Semitism (six items; Heyder et al., 2005), and sexism (five items; Glick & Fiske, 1996).

Analyses followed a two-step procedure. In the first step we conducted a confirmatory factor analysis on all the variables measured with multiple items. Results are presented in the Supplemental Material available online. In addition, we created two dummy variables to include the manipulations of identification in the models, one with the control condition (-1) and the subtle condition (1), and the other with the control condition (-1) and the blatant condition (1). In the second step, using LMS we calculated the moderation between the manipulations—indicated by the dummies—and SDO to predict the four kinds of prejudice, in a similar way as in the previous studies. We computed eight models, one for each dummy on each prejudice measure.

Results

Results of the LMS models showed that the interaction between SDO and identification reached significance in both control-subtle and control-blatant models involving prejudice toward Muslims. As illustrated in Figure 3, making national identification salient led to more prejudice only for people high in SDO. Table 1 presents the coefficients for all models.

Figure 3: Interaction between SDO and national identification on prejudice toward Muslims in the control-subtle model.
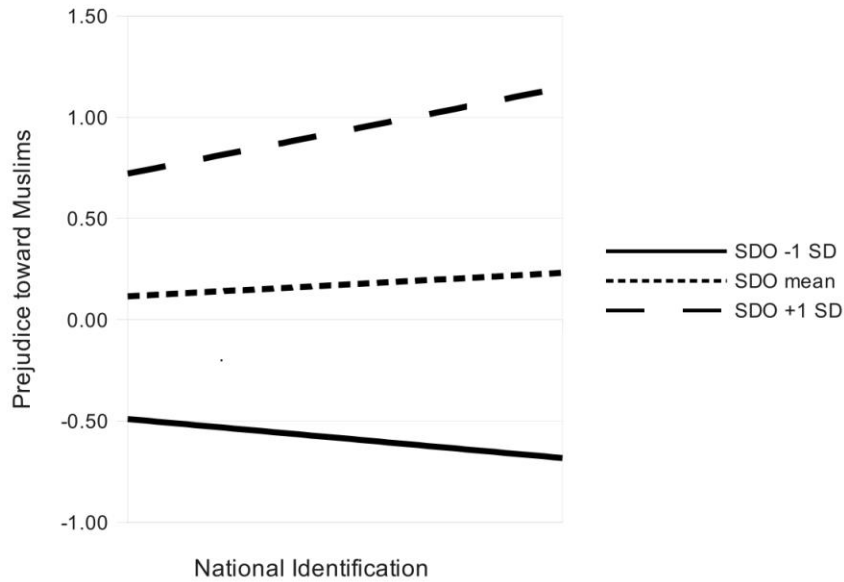
Note: Separate regression lines represent three possible values of SDO, the mean value, one standard deviation below the mean, and one standard deviation above the mean.

Although the models for prejudice toward foreigners did not show a statistically significant interaction, in the control-subtle model the tendency was similar to the models with Muslim targets. As expected, models involving anti-Semitism and sexism did not show any significant interaction.

Table 1: Main effects and interaction of SDO and identification, and the interaction on prejudice for the control-subtle and the control-blatant models.

	Control-subtle models				Control-blatant models			
	b	SE	*p*	*N*	*b*	SE	*p*	*N*
Prejudice toward Muslims				85				76
SDO	0.59	.25	.02		0.52	.17	.00	

	B	SE	p		B	SE	p
Identification manipulation	0.12	.09	.18		-0.02	.08	.78
SDO x Identification manipulation	0.61	.29	.04		.49	.23	.03
Prejudice toward Foreigners			86				76
SDO	0.65	.24	.01		0.45	.20	.03
Identification manipulation	0.05	.07	.43		0.12	.07	.10
SDO x Identification manipulation	0.32	.20	.10		-0.08	.14	.60
Anti-Semitism			86				75
SDO	0.27	.22	.23		0.13	.26	.62
Identification manipulation	0.04	.08	.62		0.04	.13	.75
SDO x Identification manipulation	0.32	.23	.17		-0.30	.47	.53
Sexism			87				78
SDO	0.40	.19	.03		1.02	.28	.00
Identification manipulation	0.09	.08	.26		0.01	.10	.94
SDO x Identification manipulation	-0.30	.19	.12		0.28	.17	.10

Discussion

Activating national identification resulted in higher prejudice for people high in SDO. This interaction was specific to target groups that are relevant for the salient category. Put more concretely, we showed the described pattern for the case of prejudice toward Muslims, who in Germany are commonly stereotyped in the same way as foreigners (Asbrock, 2010). For the case of prejudice toward

foreigners, the interaction did not reach significance, although presented the same pattern in the subtle condition.

General Discussion

In three independent studies we showed that, when people endorse group-based hierarchies, group identification positively predicts prejudice. Specifically, we tested this hypothesis for religious identification as predictor of anti-Semitism (Study 1), gender identification as predictor of both sexism and prejudice toward homosexuals (Study 2), and national identification as predictor of prejudice toward foreigners and Muslims (studies 2 and 3).

Results suggest that instead of testing competing hypotheses regarding the prediction of prejudice based on either ideological attitudes or group-based attitudes (as group identification), research may profit from developing more complex models that are based on ideological configurations (see for example Carvacho, 2010; Perry & Sibley, 2011; cf. Reynolds, 2001; Reynolds et al., 2007). This paper presented evidence for how a specific ideological configuration—the combination of SDO and group identification—predicts prejudice.

As a next step, future research should address mediation processes based on ideologies that are specific for certain contexts, e.g. the interactive effect of religious identity and SDO on religious prejudice would be mediated by religious beliefs. We are confident that the concept of ideological configuration has the potential to bring together research traditions that so far have been considered as competing approaches to the explanation of intergroup attitudes.

We conclude that SDO can be used as moderator of the relationship between group identification and prejudice. Whereas SDO fuels derogatory attitudes, group identification is used to define a specific target group.

Authorship

H. C., A.-K. H. and A. Z. developed the study concept. All authors contributed to the study design. Testing and data collection were performed by C. K., who also performed the data analysis under the supervision of H. C., and A.-K. H. The first draft of the paper was written by H. C., and A.-K. H., C. K. and A. Z. provided critical revisions. All authors approved the final version of the paper for submission.

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In both Studies 1 and 2, we treated missing data using full information maximum likelihood.

Study 1

Missing data were 2.1%.

Measurement model

Fit indices $\chi^2 = 32.25$; df $= 12$; p $= .001$; CFI $= .99$; RMSEA $= .03$; and SRMR $= .03$.

Factor loadings for SDO: $\beta_1 = .63$, SE $= .02$, p $< .01$; $\beta_2 = .64$, SE $= .02$, p $< .01$; and $\beta_3 = .57$, SE $= .02$, p $< .01$; and anti-Semitism: $\beta_1 = .79$, SE $= .02$, p $< .01$; $\beta_2 = .72$, SE $= .02$, p $< .01$; and $\beta_3 = .67$, SE $= .02$, $p < .01$.

Religious identity (one item) was not correlated with SDO, $r = .04$; SE $= .03$; $p = .15$, nor anti-Semitism, $r = .01$; SE $= .03$; $p = .62$, whereas SDO and anti-Semitism correlated on r $= .57$; SE $= .03$; $p < .01$. There were no modification indices above 10, therefore, the measurement models held.

Study 2

Due to the large number of questions, the sample was randomly split in two parts of 404 cases each, which received different versions of the questionnaire. For some of the analyses of this study only half of the sample was considered.

Measurement models

We computed three different models, encompassing the interaction of SDO with (a) national identity on prejudice toward foreigners, (b) gender identity on sexism, (c) and gender identity on prejudice toward gay people.

Measurement model (a) ($N = 808$):

Fit indices $\chi^2 = 26.72$; df = 11; p =.005; CFI = .99; RMSEA = .04; SRMR = .03.

Factor loadings for SDO: $\beta_1 = .51$, SE = .04, $p < .01$; $\beta_2 = .69$, SE = .04, $p < .01$; and $\beta_3 = .60$, SE = .04, $p < .01$; prejudice toward foreigners: $\beta_1 = .77$, SE = .03, $p < .01$; $\beta_2 = .76$, SE = .03, $p < .01$; and national identity: $\beta_1 = .67$, SE = .06, $p < .01$; $\beta_2 = .97$, SE = .08, $p < .01$.

National identity was significantly correlated with SDO, $r = .16$, SE = .05, $p = .0$; and with prejudice toward foreigners, $r = .29$, SE = .05, $p = .16$. SDO and prejudice toward foreigners were also correlated, $r = .59$, SE = .04, $p < .01$.

Measurement model (b) ($N = 404$):

Fit indices: $\chi^2 = 11.74$; df = 7; p =.109; CFI = .99; RMSEA = .04; SRMR = .02.

Factor loadings for SDO: $\beta_1 = .53$, SE = .05, $p < .01$; $\beta_2 = .66$, SE = .05, $p < .01$; and $\beta_3 = .63$, SE = .05, $p < .01$; sexism: $\beta_1 = .80$, SE = .05, $p < .01$; $\beta_2 = .83$, SE = .05, $p < .01$.

The item on gender identity was significantly correlated with SDO ($r = .17$, SE = .06, $p = .01$), but not with sexism ($r = .08$, SE = .06, $p = .16$), whereas SDO and sexism correlated on $r = .50$ (SE = .06, $p < .01$).

Measurement model (c) ($N = 404$):

Fit indices: $\chi^2 = 13.34$; df = 7; p =.067; CFI = .99; RMSEA = .05; SRMR = .03.

Factor loadings for SDO: $\beta_1 = .52$, SE = .05, $p < .01$; $\beta_2 = .65$, SE = .05, $p < .01$; and $\beta_3 = .65$, SE = .05, $p < .01$; and prejudice toward gay people: $\beta_1 = .83$, SE = .05, $p < .01$; $\beta_2 = .84$, SE = .05, $p < .01$.

The item measuring gender identity correlated significantly with SDO ($r = .17$, SE = .06, $p = .01$) and prejudice toward gay people ($r = .14$, SE = .05, $p = .01$). The correlation between SDO and prejudice

toward gay people was $r = .54$, SE = .06, $p < .01$.

In all three models there were no modification indices above 10.

Study 3

Measurement model

Fit indices: $\chi^2 = 134.14$; df = 94; $p = .004$; CFI = .95; RMSEA = .06; SRMR = .06.

Factor loadings for anti-Semitism: $\beta_1 = .64$, SE = .07, $p < .01$; $\beta_2 = .72$, SE = .06, $p < .01$; and $\beta_3 = .81$, SE = .05, $p < .01$; sexism: $\beta_1 = .73$, SE = .06, $p < .01$; $\beta_2 = .81$, SE = .05, $p < .01$; and $\beta_3 = .75$, SE = .06, $p < .01$; prejudice toward foreigners: $\beta_1 = .71$, SE = .06, $p < .01$; $\beta_2 = .72$, SE = .06, $p < .01$; $\beta_3 = .75$, SE = .06, $p < .01$; prejudice toward Muslims: $\beta_1 = .70$, SE = .06 $p < .01$; $\beta_2 = .79$, SE = .04, $p < .01$; and $\beta_3 = .80$, SE = .04, $p < .01$; $\beta_4 = .76$, SE = .05, $p < .01$; and SDO: $\beta_1 = .54$, SE = .08, $p < .01$; $\beta_2 = .82$, SE = .06, $p < .01$; $\beta_3 = .76$, SE = .06, $p < .01$. Additionally, all factors correlated (see Table S1).

Table S1: Correlations between latent factors

	Anti-Semitism	Sexism	Prejudice toward foreigners	Prejudice toward Muslims
Sexism	r = .32 (.11)			
Prejudice toward foreigners	r = .65 (.08)	r = .34 (.11)		
Prejudice toward Muslims	r = .79 (.06)	r = .48 (.09)	r = .75 (.07)	
SDO	r = .35 (.11)	r = .46 (.10)	r = .50 (.10)	r = .52 (.09)

For all estimates p < .01; SE in parenthesis.

Identification Manipulation and SDO

The manipulation did not have an effect on the levels of SDO, $F(2, 119) = 2.21$; $p = .11$ (see Table

S2).

Table S2: Means for SDO in each condition.

Condition	SDO Mean	n
Blatant	1.71	35
Subtle	1.60	44
Control	1.40	43
Total	1.56	122

Subject: Psychological Science - Manuscript ID PSCI-13-0675
From: psci@psychologicalscience.org
Date: 04/15/2013 04:01 AM
To: hscarvac@uc.cl

14-Apr-2013

Dear Mr. Carvacho:

Your manuscript entitled "Group identification leads to prejudice when people endorse
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any future correspondence.

To begin the review process, I and one of the Associate Editors will read your manuscript to
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Erklärung

Hiermit erkläre ich, dass ich die Manuskripte zum Dissertationsthema "Understanding social hierarchies: The role of ideological configurations for Group-Focused Enmity" selbstständig erarbeitet habe und diese weder in der gegenwärtigen Fassung noch in einer anderen Fassung einer anderen Fakultät vorgelegt habe. Ich versichere, dass keine anderen als die angegebenen Hilfsmittel benutzt wurde.

Bielefeld, im April 2013