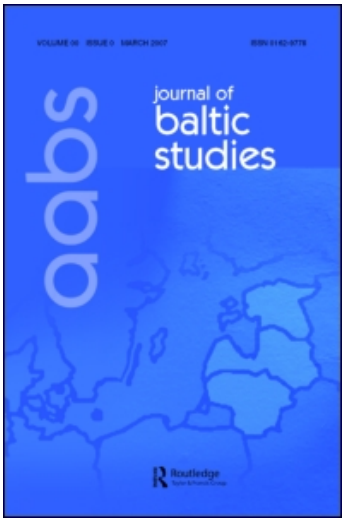

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INTERETHNIC DISCORDANCE AND STABILITY IN ESTONIA

Martin Ehala and Anastassia Zabrodskaja

This article proposes a theoretical model of perceived intergroup stability (STB) consisting of two factors: the perceived strength differential (PSD) between the groups, expressing the changeability of the power relations, and the level of intergroup discordance (D), expressing the level of aversion towards the outgroup combined with the perceptions of legitimacy of intergroup power relations. A quantitative study of Estonian ($N = 538$) and Russian-speaking ($N = 460$) communities revealed that the perceived stability was highest in monolingual Estonian regions while it was lowest in Russian-speaking eastern Estonia. The findings concur with the results of previous empirical studies, validating the conceptual structure of the theoretical model underlying the current study.

Keywords: interethnic relations; discordance; legitimacy; perceived stability; Estonians; Russians

Introduction

To a large extent, interethnic relations are based on a shared understanding of reality constructed in the public discourse and influenced by personal experiences. Because of differences in personal experiences and media consumption, the shared understanding of reality is never absolute, but varies among different subgroups within one ethnicity. It can also be manipulated by purposeful communication. This fact is well known to ethnic and political entrepreneurs who try to mobilize groups for collective action to change intergroup power relations. Yet these attempts are not always successful. How ready the general public is to be mobilized depends on the proportion of people in this group who see the interethnic situation as unstable and changeable.

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Our goal here is to propose a theoretical model of perceived stability (STB) and to develop a survey instrument for assessing the perceived stability of real-life interethnic situations. If researchers can assess the level of perceived stability among members of an ethnic group, they can predict to what extent this group is likely to engage in collective action in order to improve its standing in the interethnic setting. Such a model would need, of course, to be validated by comparative studies in different intergroup settings, but if successful, the model could be used to guide the choice of integration policies.

The empirical goal of this study is to assess the interethnic discordance and stability in Estonia, using such a theoretical model. For this purpose, the model was operationalized as a survey questionnaire, which was used in a large-scale ($N = 998$) quantitative study. The results present a sociopsychological overview of the Russian speakers' perceptions on interethnic stability. As the Estonian interethnic setting has been fairly well studied, a comparison of the results of our study with previous ones assessing the interethnic attitudes of Russian speakers and their integration to the Estonian society also makes it possible to assess the validity of the model and its operationalization.

In the next section, we outline the theoretical background and the structure of the perceived stability model and its subcomponents, perceived strength differential (PSD) and discordance (D), in more detail. In the third section, the principles of the study design are provided; these include operationalization of the model, design of the sample and calculation of the summary scales, which represent the key variables in the model. The fourth section presents the results for the key variables and the perceived stability, broken down across Estonian linguistic groups and regions. The discussion section assesses the results in comparison with previous studies addressing interethnic relations in Estonia in order to evaluate the validity of the model and its use in comparative studies of interethnic settings.

Theoretical Model

According to social identity theory (Tajfel & Turner 1979), people strive to maintain positive social identity. Social identity is 'that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership' (Tajfel 1978, p. 63). Maintaining positive social identity is easier for people who belong to powerful groups with high status. As minority groups often have little power and prestige, their members' social identity is relatively weak. It is generally believed that the members of low status groups attempt to enhance their social identity through social mobility (Ellemers *et al*. 1993; Hirschman 1970; Tajfel 1975).

Social mobility is an individual strategy to enhance one's social identity by abandoning a low status group for another of higher status. Social mobility is the main reason for assimilation of minority communities into mainstream society. It is based on the belief that the boundaries between groups in the society are permeable, so it is possible to move into a higher status group. If the social mobility strategy could not be

used because the boundaries are not permeable, the subordinate groups may choose to use collective identity enhancement strategies, such as an attempt at social change (Tajfel & Turner 1986; Scott 1990; Spears *et al*. 2001). Social change is a collective strategy to create social movements aiming to renegotiate the existing intergroup power relations.

Giles *et al*. (1977) argued that the perception of cognitive alternatives to existing intergroup relations is an important determinant of whether a group will prefer strategies of social mobility or social change. If the members of disfavored groups see cognitive alternatives to the prevailing societal power relations, they are more prone to use collective strategies; if alternatives are not seen, social mobility is preferred. According to Turner and Brown (1978), the perception of cognitive alternatives depends on three structural factors: (1) stability of the intergroup situation, i.e. how unlikely it is that the status hierarchy can be changed; (2) legitimacy of the intergroup setting, i.e. the extent to which the status differential is perceived to be just and moral; and (3) the permeability of group boundaries. According to Tajfel and Turner (1979), permeability of group boundaries depends much on the level of intergroup conflict: as hostility of group relations increases, permeability in group boundaries decreases.

It should be noted that in the case of ethnic groups, the phenomena of social mobility and social change involve different time depths. While the effects of social change strategies may become evident within a decade in the form of collective actions for the change (such as demonstrations, political organization, etc.), the effects of the social mobility strategies are mostly intergenerational. There are short-term indicators of social mobility, though, such as a lack of ethnic mobilization, successful integration into the structures of the mainstream society, and an increase in bilingualism. It is important to keep these differences in mind when reviewing the sociopsychological results presented in section 4 in order to decipher what strategies are selected by the relevant groups.

Perceived Intergroup Stability

Based on the previously introduced theoretical background, we propose a model for measuring perceived intergroup stability. Our main hypothesis is that the choice between social mobility and social change strategy in intergroup behavior is a function of perceived stability of intergroup setting (STB), which in turn is mediated by two complex factors: the perceived strength differential (PSD) between the dominant and subordinate group, expressing the changeability of the power relations, and the level of intergroup discordance (D), expressing the permeability of group boundaries (see also Ehala 2010). This relationship can be formalized as the following formula: $STB = PSD + D$.

STB has a different nature for dominant and subordinate groups.[1] For a dominant group, STB is lowest when the perceived strength differential is small and the level of discordance is low. Such a situation exists when the members of the dominant group perceive the subordinate group to be relatively strong and feel that the current interethnic situation is not entirely legitimate, indicating that the subordinate group

TABLE 1 The effect of stability perceptions (S) on intergroup processes

		Dominant group	
		Low STB	High STB
Subordinate group	Low STB	Consensual social change	Intergroup struggle
	High STB	Minority empowerment	Consensual system stability

members deserve higher status. For a subordinate group, STB is lowest when PSD is small and D is high. In this situation, the low status group may feel strongly enough to demand a change in the unequal relationship.

The combination of the dominant and subordinate group stability perceptions leads to a four-member typology, presented in Table 1. For example, the most unstable situation is one in which the dominant group perceives itself as (relatively) weak, the minority perceives itself as (relatively) strong, and both recognize the current intergroup situation as illegitimate. In this situation, the previous intergroup power relations are likely to be modified consensually. Such a situation can best be illustrated by the breakup of the Soviet Union.

The most stable situation is one in which the dominant group feels strong, the minority weak, and both agree that the situation is legitimate. This leaves the minority little motivation and/or opportunity to challenge the intergroup situation. In the long run, this could mean the prevalence of social mobility, leading to possible assimilation, or, if social mobility is not possible (as in the case of Roma in many societies), to a permanent stigmatized situation. If the subordinate group perceives low stability, but the dominant group high stability, an intergroup struggle for dominance could emerge. The result is often an intense intergroup conflict which may turn intractable. The fourth type is that in which the dominant group has a low stability perception, but the subordinate group does not. Such a situation is typical of settings in which a mainstream society valuing linguistic and cultural diversity would make efforts to promote the vitality of a small minority while the latter is already undergoing a language and identity shift.

Perceived Strength Differential

PSD expresses how strong the ingroup is perceived in comparison with the most relevant outgroup. By the term ingroup we mean the group which the respondent could characterize as 'we'; the outgroup may be any group which the respondent would characterize as 'they,' usually this is the most relevant outgroup in this setting. PSD is formalized as the following formula: $PSD = S_{we} - S_{they}$.

Above, S_{we} signifies the perceived strength of the ingroup and S_{they} the perceived strength of the outgroup. The symbols S_{we} and S_{they} have different references depending whose perceptions are measured. For example, in the Estonian setting, if the PSD of Estonians is measured, S_{we} refers to the strength of Estonians (as perceived by Estonians), and S_{they} refers to the strength of the Russian-speaking group

(as perceived by Estonians). If the PSD of the Russian-speaking group is measured, S_{we} refers to the strength of Russian-speaking group (as perceived by Russian speakers), and S_{they} refers to the strength of Estonians (as perceived by Russian speakers). Generally, for subordinate groups, PSD has a negative value, as the strength of the ingroup (S_{we}) is perceived smaller than that of the dominant outgroup's (S_{they}). In contrast, the PSD for dominant groups typically has a positive value, as the dominant group members perceive their ingroup's relative strength (S_{we}) to be higher than that of the subordinate outgroup (S_{they}).

Perceived Intergroup Discordance

Intergroup discordance (D) expresses the perceived illegitimacy of the intergroup power relations as well as distrust towards the outgroup. On the one hand, Tajfel and Turner (1979) argue that if the low status of the ingroup is perceived to be legitimate, its members are more likely to abandon the group, i.e. they would choose the strategy of social mobility. In such situations, the subordinate group members may even exhibit outgroup favoritism (Batalha *et al*. 2007), which encourages even greater identity and language shift. On the other hand, if the situation is perceived to be illegitimate, the subordinate group will be more prone to choose the strategy of social change in order to fight collectively for a stronger social position. This means that, for subordinate groups, legitimacy perceptions have a negative correlation with distrust perceptions. The lower the sense of legitimacy (i.e. there is a strong feeling of injustice), the higher the perception of distrust towards the powerful outgroup.

For dominant groups, the relationship between legitimacy and distrust is the inverse: the more legitimate the low status of the subordinate group is perceived to be, the more likely the members of the dominant group are to feel aversion toward this outgroup, particularly if the subordinate group questions the legitimacy of interethnic relations. The more illegitimate status differences are perceived to be by the dominant group members, the more likely they are to show sympathy toward this group. This reverse correlation between legitimacy and outgroup distrust in the dominant group as compared to the subordinate group is called ideological asymmetry (Levin *et al*. 1998; Mitchell & Sidanius 1993; Sidanius *et al*. 1994).[2]

Summary of the Model

The general formula for the intergroup stability is $STB = PSD + D$, which signifies that intergroup stability is the sum of perceived strength differential between the groups and perceived discordance. Perceived strength differential is itself a composite variable that is calculated by subtracting the strength of the outgroup (S_{they}) from the strength of the ingroup (S_{we}): $PSD = S_{we} - S_{they}$.

Discordance D is also a composite variable summarizing the perceptions of legitimacy of the intergroup situation and distrust towards the outgroup. For a subordinate group, perceptions of illegitimacy are positively correlated with distrust. For this reason the subordinate group's perceived discordance (D_s) is calculated as the sum of illegitimacy and distrust: $D_s = \text{Illegitimacy} + \text{Distrust}$. For the dominant

group, distrust (D_d) is positively correlated to the perception of legitimacy of the interethnic situation $D_d = \text{Legitimacy} + \text{Distrust}$.

As the discordance is calculated differently for the dominant and subordinate group, the fully detailed formula for intergroup stability is slightly different for either group. Note that also the variables S_{we} and S_{they} are different in either formula as 'we' and 'they' are defined from the viewpoint of the group whose stability perception is calculated. Thus, the formula for the dominant group is $STB_d = (S_d - S_s) + \text{Legitimacy} + \text{Distrust}$, and the same for the subordinate group is $STB_s = (S_s - S_d) + \text{Illegitimacy} + \text{Distrust}$, where subscripts d and s stand for dominant and subordinate.

The Design of the Study

To measure intergroup stability (STB), a 30-item questionnaire, using Likert-scale statements, was developed and tested for internal consistency in a pilot study (see Zabrodskaja 2009). Twenty items addressed the strength of the ingroup and outgroup (ten items each). The remaining ten items measured perceived intergroup discordance (D), of which four items measured legitimacy and six items concerned intergroup distrust. Below, we characterize each block of items in more detail.

The strength of an ethnolinguistic group can be expressed by four sets of factors: status, demographic factors, institutional support, and control factors (Giles *et al*. 1977). Although these factors are traditionally treated as components of a group's ethnolinguistic vitality, the term vitality is often used interchangeably with the term strength (see Abrams *et al*. 2009; Harwood *et al*. 1994). Therefore, it will be appropriate to use the long-established subjective vitality questionnaire as a basis for measuring the perceived strength of a group.

The subjective vitality questionnaire (SVQ) was introduced in the early 1980s (Bourhis *et al*. 1981), and has been used as a reliable research instrument with slight modifications in diverse intergroup settings (for an overview, see Abrams *et al*. 2009). To measure the PSD between the ingroup and outgroup from both the viewpoint of the Estonians and the Russian speakers, a modified version of SVQ, containing twenty questions, was adopted in the current study. All items used a seven-level Likert scale for responses, ranging from 1 (very strong) to 7 (very weak). The descriptives for individual items in this group are presented in Table 3 in Appendix 1.

A 17-item original questionnaire was designed to measure discordance D (eight items measuring legitimacy and nine items measuring distrust). All items used six-level Likert scales allowing for the following choices: 1 – strongly agree, 2 – agree, 3 – somewhat agree, 4 – somewhat disagree, 5 – disagree, and 6 – strongly disagree. The validity and reliability of the scale were tested in a pilot study of 159 Estonian and Russian-speaking students of Tallinn University in March 2008 (see Zabrodskaja 2009). It was found that only four statements out of eight adequately measured the factors that play a role in legitimacy perception and were included in the final questionnaire. After analyzing the other nine items, the best-performing six statements expressing the extent of mutual distrust were incorporated into the final

TABLE 2 Design of the sample selection

Language environment	Proportion of Russian speakers	Respondents		Total
		Russian-speaking	Estonian-speaking	
Rural settlements	1–10%	50	150	200
Towns and settlements	10–20%	70	130	200
Western Tallinn	30–50%	70	130	200
Harjumaa and Lasnamäe	50–80%	120	80	200
Towns of Ida-Virumaa	80–100%	150	50	200

questionnaire. The items for legitimacy and distrust and the descriptives of the main study are presented in Tables 6 and 7 in Appendix 1.

The Composition of the Sample

The main study is based on a sample of 998 respondents (460 Russian-speakers and 538 Estonians) drawn by a professional survey company. As the subpopulations vary considerably in geographic distribution, stratified sampling method was used, based on two dimensions: first language (Estonian, Russian) and regional concentration of two sociolinguistic communities (see Table 2). As for the latter, five types were specified on the basis of a classification of language environments by Rannut (2005). Her classification takes the proportion of Russian speakers and Estonians in the region as the main criterion for defining different language environments.

As Table 2 shows, the proportion of the Russian speakers (46%) and Estonians (54%) in the sample does not reflect the actual ethnolinguistic composition of Estonia as the Russian speakers are over-represented in the sample. The actual proportion is 68% Estonian speakers and 31% Russian speakers. The sample bias is justified by the aim of the study which is to enable meaningful quantitative analysis of both ethnolinguistic groups in all five sociolinguistic regions. For this reason, at least 50 representatives of each language group were selected from every region so that the relative proportion of both linguistic groups in the region is approximated and the whole sample would not exceed 1000 individuals. For this sampling method, the number of Russian speakers in the sample is over represented in the areas of their low distribution. Consequently, the sample as a whole is not representative for the whole of Estonia. However, inferences for regions with different concentrations of Russian and Estonian speakers and sociodemographic categories are feasible as the sample bias does not affect the representativeness of these categories.

Calculation of the Summary Scales

As the theoretical model requires single quantitative measures for all key variables (S_{we}, S_{they} and D) to calculate the stability (STB), summary scales were calculated as the mean values for all questionnaire items representing a particular variable. This operation is justified provided that all the initial items representing a variable have

strong intercorrelations. The Cronbach (1971) method was used to test internal consistency. This statistical procedure calculates the inter-item correlations among the items, which are hypothesized to represent one broader variable, in order to determine whether there is a pattern in responses and whether this pattern is stable for all respondents. The strength of internal consistency is expressed by Cronbach alpha, which can have values up to 1.0. Generally, one can conclude that all the items in the set express the same phenomenon if the Cronbach alpha is larger than 0.7, in which case it is justified to calculate a summary scale for this particular set of items. The Cronbach alphas for all sets of items representing the key variables are presented in Tables 4 and 8 in Appendix 2. As all of the alpha values meet acceptable levels, summary scales were calculated for all key variables.

The values in the summary scales for S_{we} and S_{they} ranged from 1 to 7, and the values in the index for D ranged from 1 to 6, due to different Likert scales used for marking responses. To facilitate analysis, all summary scales were transformed to the 0 to 1 scale. Finally, a further theoretically motivated transformation was applied to the index D to account for the phenomenon of outgroup favoritism (see Batalha *et al*. 2007; Jost *et al*. 2004; Sachdev & Bourhis 1991). Outgroup favoritism is a particularly positive attitude towards the outgroup, a logical opposite of intergroup discordance. To make the index scale to match this opposition, the scale was shifted to the form -0.25 to $+0.75$. In the result of this transformation, the responses indicating outgroup favoritism have negative values whereas the responses indicating discordance have positive values. The zero represents the lack of both feelings, in other words, an emotionally neutral attitude towards the outgroup. The theoretical justification and technical details of the described above transformation are outlined in Appendix 3.

The Results

To calculate PSD, the summary scales (S_{we} and S_{they}) were formed as the mean values of items belonging to these groups (see the first two lines in Table 5). As expected, both groups assessed the Estonians as quite strong (0.72 by Estonians and 0.75 by Russian speakers). In fact, Russian speakers assessed Estonians as being stronger than Estonians themselves did. Likewise, the two groups assessed Russians as weaker than Estonians (0.46 by Russian speakers and 0.49 by Estonian speakers). In fact, Estonians assessed Russian speakers to be stronger than they assessed themselves to be. This pattern is called 'perceptual distortions in favor of outgroup' (Harwood *et al*. 1994). In this case, the minority perceives the strength difference between its own group and the dominant outgroup to be larger than that perceived by the dominant majority. This pattern has been found among first-generation Chinese immigrants in London and Toronto, as well as for Germanophone students in Francophone Switzerland (Sachdev & Bourhis 1987; Young *et al*. 1988). The distortions show typical low self-esteem among new immigrants, who often seek a way to assimilate into the dominant group, if possible (see Harwood *et al*. 1994 for further discussion).

TABLE 5 Perceived strength differential of Russian-speakers and Estonians

	Estonians		Russian-speakers	
	Mean	Std. D	Mean	Std. D
Ingroup strength (S_{we})	0.72	0.115	0.46	0.412
Outgroup strength (S_{they})	0.49	0.138	0.75	0.143
PSD ($S_{we}-S_{they}$)	0.23	0.159	−0.29	0.213

TABLE 9 Indices of perceived legitimacy, distrust and discordance

Subjects	Legitimacy (scale 0...1)		Distrust (scale 0...1)		Discordance (scale −0.25...+0.75)	
	Mean	Sd. D	Mean	Sd. D	Mean	Sd. D
Estonian	0.80	0.166	0.41	0.179	0.14	0.160
Russian	0.33	0.179	0.43	0.159	0.07	0.156

PSD was calculated by subtracting the index of outgroup strength from the index of ingroup strength (see the last line in Table 5). As expected, PSD was positive for Estonians and negative for Russian speakers. Ideally, the values should differ only in sign, but the perceptual distortion in favor of the outgroup shifted the balance. The moderately low magnitude of the values (around 25 percentage points of the scale) indicates that the groups were perceived to be not very uneven in strength by both of the groups.

Discordance

To calculate the summary scale for D, the indexes for Legitimacy and Distrust were calculated first. As Table 9 reveals, Estonian subjects perceived the current interethnic power relations as highly legitimate (0.8 out of 1.0), whereas the Russian subjects perceived a fair amount of illegitimacy (0.33) in the prevailing setting, where a score of 0.5 would indicate a neutral, or indifferent feeling. The values for perceived distrust are quite close to the neutral zone for both groups, being slightly on the side of outgroup favoritism (below the 0.5 level). However, one must bear in mind that these are the mean values for the whole sample, while internal diversity was high in both groups. We also remind the reader that the Russian speakers from the area of their low density were somewhat overrepresented in the sample. As further analysis shows, this subgroup has higher than average perceptions of legitimacy and trust. Therefore, the averages for the whole Russian-speaking group are slightly more positive than it would be in the case of a random representative sample.

Based on the methodology presented in Appendix 3, the D values were calculated for both the dominant group respondents (Estonians) and the subordinate group respondents (Russian speakers) and are presented in the last column in Table 9. Both groups show slight discordance towards the other. The Estonians' D value is

7 percentage points higher than the Russian speakers' D value. This suggests a very high perception of legitimacy by Estonian speakers. Since the Estonian political system possesses features of an ethnic democracy where 'the state is by definition appropriated and ruled by the core ethnic nation' (Smooha 2001, p. 35), a strong perception of legitimacy of this system contributes towards higher level of D among Estonians. Although the Russian speaking respondents perceived a fair amount of illegitimacy of the current interethnic situation, their mean assessment is not very extreme. The main factor where the legitimacy perceptions of Estonians and Russians significantly diverge is the question of whether Russian is a possible second official language in Estonia. For this factor, Estonians had a mean response value 4.94 (close to 'disagree') while the Russian speakers had 1.94 (close to 'agree').

To obtain the socio-demographic profiles of respondents with different D levels, a two-step cluster analysis[3] was conducted using the variables D, Legitimacy and Distrust. We would like to reiterate that the variable D, as a composite variable, expresses the complex relationship between Legitimacy and Distrust.

Russian Speakers' Perceptions of Interethnic Discordance

The cluster analysis classified the Russian speaking respondents ($N = 432$)[4] into two clusters, which were labeled as Medium Discordant ($D = 0.21$) and Pro-outgroup ($D = -0.05$). The Medium Discordant cluster was characterized by a neutral attitude on the trust scale but a high sense of illegitimacy. The Pro-outgroup cluster was characterized by a neutral attitude on the legitimacy issue and a noticeable level of trust towards Estonians.

When the socio-demographic characteristics of these clusters were compared to the whole sub-sample of Russian speakers, some significant differences emerged and are described in Table 10 (the data in parentheses indicate the percentage of the category in the cluster and how many times this exceeds the corresponding percentage in the whole sub-sample; only deviations that exceed 1.1 are indicated).

The cluster characteristics suggest that citizenship and area of residency are factors that might be related to the discordance level among Russian speakers. Comparing the mean D values for different types of citizenship revealed that the

TABLE 10 Socio-demographic profiles for Russian speakers' discordance clusters

Cluster	N	%	Characteristics
Medium Discordant	247	57.2%	Russian citizen (27%; 1.13), between 26 and 40 years (32%; 1.12), having secondary vocational education (46%; 1.11), working in public sector (29%; 1.12), having a below average income (39%; 1.10), living in eastern Estonian urban centres (41%; 1.28).
Pro-outgroup	185	42.8%	Estonian citizen (57%; 1.11), under 25 years (20%; 1.14) or over 60 years (20% 1.14), working in private sector (34%; 1.18), or retired (23%; 1.15), living in towns or settlements (35%; 1.34).

lowest level of D characterized Estonian citizens and the highest level characterized Russian citizens. This difference was significant at the 0.05 level. However, the value of eta squared was only 0.03, indicating that only 3% of the variation in D is explained by citizenship. In terms of the area of residency, the mean value of D for eastern Estonia was significantly higher than the mean value for all other regions ($p < 0.05$), but the other differences were not statistically significant. The effect of the region on the discordance level was somewhat larger (eta squared 0.07), explaining 7% the variation of D.

Estonians' Perceptions of Interethnic Discordance

For the Estonian sub-sample ($N = 509$), the two-step cluster analysis led to a four-cluster solution. The clusters were labeled similarly to the Russian sample but, as the range of D values was wider, High and Low Discordant clusters have also emerged (see Table 11).

The clustering of Estonian respondents is quite interesting. The cluster of High Discordant subjects is characterized by very high assertion of legitimacy, combined with fairly noticeable distrust towards Russian speakers. Nearly 22% of the respondents fall into this group. The cluster of Mid Discordant has nearly as high an assertion of legitimacy but a noticeably more trustful attitude towards Russian speakers. The cluster of Low Discordant is characterized by slight doubt in the legitimacy of Estonia's interethnic situation and a fairly unemotional attitude towards Russian speakers. The cluster of Pro-outgroup has a neutral standing in regard to the legitimacy issue, and the highest level of trust towards Russian speakers. The clusters are related to the socio-demographic profiles presented in Table 12.

As in the case of Russian-speaking respondents, the area of residency was a significant factor influencing the discordance level, although its effect was smaller (eta squared .03) than for Russian speakers. The pattern was partly a mirror image of that of the Russian sample. The highest level of discordance was characteristic of the mono-ethnic ingroup environment (rural areas and settlements for Estonians and eastern Estonian cities for Russians). The lowest levels of discordance toward the outgroup were felt in areas where the ingroup formed only a small fraction of the total population (rural areas and settlements for Russian speakers and eastern Estonian cities for Estonians).

TABLE 11 Discordance clusters for Estonians

	Discordance		Legitimacy		Trust	
Clusters	Mean	Std. D	Mean	Std. D	Mean	Std. D
High Discordant	0.39	0.09	0.92	0.08	0.37	0.12
Mid Discordant	0.22	0.07	0.90	0.07	0.68	0.11
Low Discordant	0.12	0.06	0.71	0.07	0.52	0.10
Pro Outgroup	−0.05	0.07	0.55	0.16	0.76	0.12
Combined	0.19	0.16	0.80	0.17	0.59	0.18

TABLE 12 Socio-demographic profiles for Estonians' discordance clusters

Cluster	N	%	Characteristics
High Discordant	111	21.8%	Public sector employee (30%; 1.24), retired (16%; 1.13) or student (15%; 1.35), significantly lower than average income (14%; 1.38), living in Tallinn or its surroundings (44%; 1.14)
Mid Discordant	194	38.1%	Over 60 years old (24%; 1.23), retired (18%; 1.26) or private sector employee (38%; 1.16), living in rural areas or settlements (35%; 1.29)
Low Discordant	115	22.6%	Under 25 years old (36%; 1.63), student (18%; 1.62), living in Estonian dominant cities (33%; 1.35)
Pro Outgroup	89	17.5%	Between 26 and 40 years old (32%; 1.12), higher education (27%; 1.31), average income (63%; 1.16), living in eastern Estonian cities (21%; 2.24) or in Estonian dominant cities (30%; 1.22)

Perceived Intergroup Stability

As proposed at the beginning of the paper at hand, the perceived intergroup stability is a sum of the perceived strength differential and the level of interethnic discordance: STB = PSD + D. In order to interpret the outcome of the calculation, it is important to bear in mind the range of the scales of the component factors and that of the composite variable STB. As the values for ingroup and outgroup strength can vary between 0 and 1, the range of PSD is from −1 to 1. Negative values indicate that the ingroup is assessed as being weaker than the outgroup, while positive values indicate the opposite. The discordance level can vary from maximal outgroup favoritism (−0.25) to maximal outgroup aversion (0.75). Therefore, the combination of PSD and D can lead to STB values from −1.25 to 1.75. As a rough approximation, the values between −0.1 and +0.1 would indicate low stability, from 0.1 to 0.3 in either direction would mean medium stability, from 0.3 to 0.6 would be high stability, and higher than 0.6 would mean very high stability. It is likely that values above 1.0 are just theoretical possibilities that rarely, if ever, are attested. This calibration of the scale is an estimation, which needs to be refined when comparative studies provide more data from different settings.

Russian Speakers' Perceived Stability

The STB value was calculated for each Russian speaking respondent by summing the scores for D and PSD. Then a two-step cluster analysis was run using STB, D and PSD as input variables. The analysis led to a seven-cluster solution, presented in Table 13.

The cluster labels reflect the characteristics of its input values. A total of four perceived stability types emerged: High Stability (HS), Medium Stability (MS), Low Stability (LS). These types had subtypes that differed from each other in respect to PSD and D configurations. So, HS type was divided into Pessimists (characterized by markedly low PSD values and medium D values) and the Pro-outgroup type

TABLE 13 Perceived stability clusters in the Russian sample

		Stability		PSD		Discordance	
Clusters		Mean	Std. D	Mean	Std. D	Mean	Std. D
High S	1 HS Pessimists	−0.49	0.13	−0.60	0.09	0.11	0.09
	2 HS Pro-Outgroup	−0.37	0.09	−0.31	0.09	−0.06	0.07
Medium S	3 MS Moderates	−0.19	0.07	−0.33	0.07	0.14	0.07
	4 MS Discordant	−0.10	0.13	−0.47	0.10	0.37	0.10
	5 MS Pro-Outgroup	−0.09	.08	−0.06	0.07	−0.03	0.07
Low S	6 LS Discordant	0.14	0.11	−0.15	0.09	0.29	0.10
	7 LS Superior	0.41	0.18	0.34	0.13	0.06	0.18
Combined		−0.19	0.23	−0.29	0.21	0.10	0.16

(characterized by medium PSD values and high outgroup favoritism). The MS type included three clusters: Moderates, Discordant and Pro-outgroup. The Low STB type had two subtypes – Discordant and Superior. The last cluster was characterized by a highly positive PSD value, which is surprising for a subordinate group. The socio-demographic profiles of the clusters are presented in Table 14.

In the Russian sample, there was an unexpected negative correlation between PSD and D ($r = -.307$, $p < .001$). This indicates that those respondents who had a higher sense of discordance perceived their ingroup as being weaker in comparison to the outgroup. As both PSD and D are composite variables, the initial source of this correlation originated from the relationship between perceived ingroup strength (S_{we}) and discordance. In contrast, there was no relationship between outgroup strength (S_{they}) and discordance. Furthermore, the correlation was the highest between legitimacy and S_{we} ($r = .407$, $p < .001$), but distrust also had a small effect, even after the impact of legitimacy was controlled for ($r = .111$, $p = .024$). Altogether these two factors accounted for 18% of the variation in S_{we} ($r = .423$, $p < .001$).

This relationship indicates that as the perception of interethnic discordance among Russian speakers increases, the weaker they perceived the Russian community in Estonia. Such a relationship could be characteristic of threatened identity (see Ehala 2009b; Hornsey & Hogg 2000).

Estonian Respondents' Perceived Stability

In the Estonian-speaking sample, there was no similar correlation between D and PSD. Also, the solution of the two-step cluster analysis led to a less detailed configuration, i.e. two broad clusters emerged characterized by High Stability ($S = 0.57$) and Medium Stability respectively ($S = 0.22$). The HS cluster had higher values for both PSD and D than did the MS cluster. The socio-demographic characteristics of respondents in Table 15 indicate that higher education and income levels contributed towards more relaxed and tolerant attitude towards the ethnic minority, which characterizes the Medium Stability cluster – lower mean D value ($D = 0.03$) as compared to High Stability cluster ($D = 0.21$).

TABLE 14 Socio-demographic profiles for perceived stability clusters in the Russian sample

No.	Cluster	N	%	Characteristics
1	HS Pessimists	50	12.7	Estonian citizen (64%, 1.25), public sector employee (30%, 1.16), resident of western Tallinn (22%, 1.38), Estonian dominant city or settlement (20%, 1.47)
2	HS Pro-Outgroup	78	19.7	Private sector employee (39%,1.33), higher education (26%, 1.28), slightly or significantly higher than average income (16%, 1.84) living in Tallinn or Estonian dominant city (67%, 1.33)
3	MS Moderates	109	27.6	Russian citizen or stateless (62%, 1.32), secondary vocational education (59%, 1.43), male (56%, 1.37), private sector employee (33%, 1.15) or self-employed (10%, 2.51), slightly or significantly lower than average income (46%, 1.26), living in eastern Estonia (46%, 1.44)
4	MS Discordant	39	9.9	Russian citizen (29%, 1.23), living in eastern Estonia (42%, 1.30)
5	MS Pro-Outgroup	72	18.2	Estonian citizen (65%, 1.27), secondary school or university student (10%, 1.38), average income family (64%, 1.17), living in eastern Tallinn or surroundings (33%, 1.27)
6	LS Discordant	36	9.1	Stateless (31%, 1.36), secondary or vocational education (47%, 1.17), secondary school or university student (14%, 1.98), significantly below average income (22%, 1.60), living in eastern Tallinn or its surroundings (36%, 1.37) or in eastern Estonia (44%, 1.39)
7	LS Superior	11	2.8	Basic or secondary education (64%, 1.9), public sector employee (45%, 1.75), living in Estonian dominant city (73%, 2.81)

Regional Perceived Stability

Regional perceived intergroup stability is an index that characterizes the perceived stability of the interethnic relations from the perspective of both the dominant and the subordinate groups living in this region. Both of them may have their own perceptions, which could be consensual, but might also differ (see Bourhis *et al*. 1997; Harwood *et al*. 1994). It might be proposed that the ethnic composition of a region affects the dominant and subordinate groups perceptions of stability in that region. Furthermore, we might hypothesize that as a region's ethnic diversity decreases, both groups' perception of stability will increase.

Therefore, to calculate the overall perceived intergroup stability in a given region (STB_r), the stability perception of the dominant group (STB_d) must be added to the stability perception of the subordinate group (STB_s). Due to ideological asymmetry, the relationship is best expressed by subtraction: $STB_r = STB_d - STB_s$.

The higher the positive value is for STB_r, the higher is the regional perceived intergroup stability. The closer the STB_r value drops to 0, the more unstable is the situation perceived. Theoretically, STB_r may even be negative, indicating an extremely low level of regional stability. First, STB was calculated for both groups in each ethnolinguistic region of Estonia. For both groups, the differences followed the

TABLE 15 Socio-demographic profiles for perceived stability clusters

	Cluster	N	%	Characteristics
1	High Stability	276	57.6	Over 60 years old (24%, 1.21), retired (16%, 1.11), living in Estonian dominant cities or rural areas (61%, 1.17)
2	Medium Stability	203	42.4	Between 26 and 60 years old (65%, 1.11), higher education (23%, 1.1), higher than average income (19%, 1.26), living in Tallinn (42%, 1.10) or eastern Estonia (16%, 1.66)

TABLE 16 Perceived regional stability in five language environments

	Eastern Estonia (80–100%)	Eastern Tallinn and surroundings (50–80%)	Western Tallinn (30–50%)	Estonian dominant cities (10–20%)	Rural areas and towns (0–10%)
Russians (STB_s)	−0.15	−0.18	−0.21	−0.23	−0.25
Estonians (STB_d)	0.28	0.38	0.40	0.43	0.49
Regional Stability (STB_r)	0.43	0.56	0.61	0.66	0.74

predicted direction, where ethnic diversity is indirectly related to regional stability, although not all regional stability scores were statistically significant. In the Estonian speaking sample, eastern Estonia differed significantly from all other environments except eastern Tallinn, and rural areas and settlements differed from all other regions except Estonian dominated cities. All differences were significant at the .05 level. The effect of the sociolinguistic composition of the region on STB was medium (eta squared = .075).

In the Russian-speaking sample, the differences also followed the predicted direction, although the effect of the difference was small (eta squared = .025). Only eastern Estonia differed significantly ($p < .05$) from all other regions, except for eastern Tallinn and its surroundings. Other differences were not statistically significant.

For each region, the overall stability was calculated according to the formula $STB_r = STB_d - STB_s$. The results are presented in Table 16.

As the values of STB_r indicate, the perceived stability of the current interethnic situation is the lowest in the eastern Estonian towns where the Russian-speaking population forms an absolute majority. The perceived stability increased in other regions proportionally as the percentage of Russian speakers decreased in population and reached the highest values in virtually monolingual Estonian regions, thus confirming the hypothesis proposed in this subsection.

Discussion and Conclusions

The results of this study revealed a number of interesting and significant regularities about interethnic relations in Estonia and about conceptual relationships between the

factors affecting stability perceptions. First, both linguistic groups perceived Estonians as the dominant group in this interethnic setting, but the perceived strength differential was not very large (roughly 25 percentage points). In this comparison, Russian speakers had a perceptual distortion in favor of the outgroup in assessing intergroup strength. Perceptual distortion in favor of the dominant outgroup signifies low collective self-esteem, and it has been widely attested among first generation immigrants in Western societies (see Harwood *et al*. 1994). Generally, this attitude is characteristic to the strategy of social mobility rather than social change. Considering the low level of political activity of the Russian-speaking community in Estonia, this may well confirm this interpretation.

While the perception of strength differential was largely consensual among both of the groups, the perceptions of legitimacy diverged quite sharply. Estonians perceived the interethnic situations in Estonia as strongly legitimate (80% of the maximum), while the Russian speakers perceived the situation as being fairly illegitimate (30% of the full legitimacy, where 50% would indicate a neutral perception, between legitimacy and illegitimacy). It is also interesting that the conflicting perceptions of legitimacy have not been transformed into intergroup aversion and distrust which was low among both Estonians and Russian speakers, being fairly close to the neutral point. These findings resemble the situation in Transilvania analyzed by Brubaker *et al*. (2006) where the intergroup conflict manifests on the political level, but has little affected peoples' intergroup attitudes on everyday level.

Although the mean levels of discordance were modest, the dispersion of the data was quite wide both among Estonians and Russian speakers. About 22% of the Estonians, predominantly living in Tallinn's surroundings and having lower than average income, had a very high perception of legitimacy (92% of maximum) accompanied by a noticeable distrust (63% of maximum). Among Russian speakers, 19% of respondents experienced high discordance. This group consists of predominantly Russian citizens and stateless people living in eastern Estonia.

By contrast, both linguistic groups possess members who manifest outgroup favoritism. This analysis classified more than 40% of Russian speakers and close to 20% of Estonian speakers as pro-outgroup (we remind the reader that the sample is not representative). Among the Russian-speaking respondents, 20% of the pro-outgroup cluster have slightly or significantly higher than average income, live in Tallinn or another Estonian-dominated city and have Estonian citizenship. In addition, this group had a very large PSD (−.37), indicating that the subgroup perceives the interethnic situation in Estonia as stable and should orient itself to towards a social mobility strategy. The higher income in this subgroup suggests that they have been relatively successful. Among the Estonian-speaking respondents, the pro-outgroup cluster is relatively young (under the age of 40), possesses higher education and lives in predominantly eastern Estonian cities.

The analysis also showed that regional perceived stability was lowest in the eastern part of Estonia, where the Russian-speaking community forms an absolute majority. If the Russian community there aimed for regional autonomy, the Estonian population in the region might be ready to accept it. However, the issue is hardly regional, and so the stability perceptions of Estonian speakers elsewhere would suggest an

intergroup struggle scenario (see Table 1) if this goal were publicly set and won popular support among the Russian-speaking community. As for the rest of Estonia, the results of this study suggest a consensual intergroup stability scenario, which orients the members of Russian-speaking population towards social mobility rather than social change, at least in smaller cities with large Estonian majorities.

All the results pertaining to the interethnic relations in Estonia confirm those of previous studies. For example, the European Social Survey polls in 2004 and 2006 showed that Russian speakers with Estonian citizenship have lower levels of distrust towards state institutions and have been better integrated into society than stateless people and Russian citizens living in Estonia (Lauristin 2008). Furthermore, this study showed that Russian-speaking citizens also have a lower level of intergroup discordance.

In addition, several studies have demonstrated the existence of linguistically segregated communication networks of Estonians and Russian speakers that affect intergroup attitudes (Korts 2009; Vihalemm 2007; Vihalemm & Kalmus 2009). This regularity has also been found in several other intergroup contexts (Hayes & Dowds 2006; Tropp & Bianchi 2006). Our study reveals that discordance is negatively correlated to intergroup contact (or ethnic diversity), which is in concordance with these studies. There is also previous evidence that the youngest generations of Russian speakers have more negative attitudes towards the majority than do older ones (Korts & Vihalemm 2008) – a finding that is confirmed by the results of the cluster analysis presented in Table 10.

As the results that emerged from this study conform strongly to previous findings about the interethnic setting in Estonia, the validity of the model is confirmed for this setting and could be used with some caution in measuring discordance and perceived stability in other interethnic settings. When the comparative evidence strengthens with more applications, additional theoretical contributions could help to refine the instrument. By attempting to operationalize the complex notion of the perceived stability of the interethnic setting, the current study allows for the modeling of social and psychological factors that constitute the basis of intergroup dynamics.

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Notes

1 By the term dominant group we mean one that has more privileges and decision-making power in the society than other groups called subordinate groups. Usually the dominant group is also the majority group, but there are cases where the numeric minority group is dominant in the society (as was the case in South African Republic before 1994). Mostly the dominant groups have high prestige

in society while the subordinate groups have less prestige or are outright stigmatized.

2 The phenomenon of ideological asymmetry was confirmed by the empirical data: among Estonians (the dominant group), there was a positive correlation between the perceptions of legitimacy of the intergroup setting and outgroup distrust ($r = 0.201$, $p < 0.01$), while among Russian-speaking respondents the correlation was negative ($r = -0.368$, $p < 0.01$). Thus, for the dominant group, the more legitimate the situation was perceived to be, the higher was the feeling of aversion towards the outgroup. For the subordinate group, the more illegitimate the situation was perceived to be, the higher was the feeling of aversion.

3 The two-step cluster analysis is a statistical tool for revealing natural groupings (or clusters) within a dataset that would not otherwise be apparent. Unlike the traditional clustering methods, two-step analysis allows analysis of large data files. By comparing the values of a model-choice criterion across different clustering solutions, the procedure can automatically determine the optimal number of clusters. This allows exploring the data for a best solution by not imposing the number of clusters arbitrarily beforehand.

4 The sample sizes in cluster analyses are smaller than the ones reported in Table 2 on p. 219 because of the missing values for some questionnaire items that, in their turn, excluded some respondents from the analysis.

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Appendix 1. Descriptives for individual questionnaire items

TABLE 3 Estonian and Russian-speaking informants' perceived strength of in- and outgroup

No.	Question	Estonian informants		Russian informants	
		Mean	Std. D	Mean	Std. D
1	How much is Estonian culture and tradition appreciated in Estonian society?	2.50	1.222	2.17	1.470
2	How much is Estonia's Russian culture and tradition appreciated in Estonian society?	4.10	1.345	4.49	1.636
3	How much is the Estonian language appreciated in Estonian society?	2.25	1.379	1.82	1.519
4	How much is the Russian language appreciated in Estonian society?	4.50	1.531	4.92	1.646
5	How many famous cultural persons (writers, actors, artists, singers, scientists and journalists) are there among the Estonian-speaking people?	2.13	1.184	2.79	1.529
6	How many famous cultural persons (writers, actors, artists, singers, scientists and journalists) are there among the Russian-speaking people?	4.36	1.417	4.56	1.534
7	How many wealthy employers and businessmen are there among the Estonian-speaking people?	2.63	1.142	2.62	1.377
8	How many wealthy employers and businessmen are there among the Russian-speaking people?	3.58	1.415	3.68	1.424
9	How much is the Estonian language used in Estonia's media (newspapers, radio, TV and the Internet)?	1.75	1.035	2.22	1.423
10	How much is the Russian language used in Estonia's media (newspapers, radio, TV and the Internet)?	3.92	1.554	3.78	1.635
11	How much is the Estonian language used in Estonian education (nurseries, schools and universities)?	1.76	1.023	2.22	1.601
12	How much is the Russian language used in Estonian education (nurseries, schools and universities)?	4.34	1.452	4.36	1.635
13	How would you estimate the population of Estonian-speaking people?	4.07	1.397	3.34	1.344
14	How would you estimate the population of Russian-speaking people?	3.79	1.275	4.19	1.235
15	How active and strong are the Estonian-speaking people in Estonian society?	2.73	1.254	2.51	1.488
16	How active and strong are the Russian-speaking people in Estonian society?	3.64	1.453	4.13	1.584
17	How affluent are the Estonian-speaking people?	3.50	1.161	2.78	1.205
18	How affluent are the Russian-speaking people?	3.91	1.172	4.06	1.256
19	How strong will the Estonian language and culture be in 20 to 30 years in comparison with the present?	3.26	1.541	2.80	1.520
20	How strong will the Russian language and culture be in 20 to 30 years in comparison with the present?	4.22	1.445	4.30	1.652

TABLE 6 Perceived legitimacy by Estonian and Russian-speaking informants

No.	Statement	Mean	Median	Std. D	N
1	Russian should be the second official language in Estonia				
	Estonian-speakers	4.94	5.00	1.354	536
	Russian-speakers	1.94	1.00	1.214	457
2a	The aim of the Estonian Republic is to assure the maintenance of Estonian nationality, language and culture for the future				
	Estonian-speakers	1.36	1.00	0.739	534
2b	The Estonian Republic does not have to assure the maintenance of the Russian community's language and culture in Estonia				
	Russian-speakers	4.78	5.00	1.158	454
3	The situation of the Russian community in Estonia corresponds to international norms				
	Estonian-speakers	2.31	2.00	1.165	529
	Russian-speakers	3.72	4.00	1.337	455
4	Concerning the Russian community, the Estonian Republic follows European democratic principles				
	Estonian-speakers	2.28	2.00	1.119	530
	Russian-speakers	3.87	4.00	1.263	456

TABLE 7 Perceived trust

No.	Statement	Mean	Median	Std. D	N
5a	Estonian Russian-speakers are helpful as cultural go-betweens	2.72	3.00	1.069	533
5b	Estonians are helpful as cultural go-betweens	3.35	3.00	1.219	457
6a	Estonian Russian-speakers are reliable	3.23	3.00	1.128	530
6b	Estonians are reliable	3.43	3.00	1.120	449
7a	Estonians are regarded well by Estonian Russian-speakers	3.32	3.00	1.058	531
7b	Estonian Russian-speakers are regarded well by Estonians	3.47	3.00	1.072	457
8a	Estonian Russian-speakers wish to cooperate with Estonians	3.10	3.00	1.028	528
8b	Estonians wish to cooperate with Russian-speaking dwellers in Estonia	3.42	3.00	1.103	456
9a	Estonian Russian-speakers behave according to the influence of their lowest instincts	4.23	4.00	1.255	526
9b	Estonians behave according to the influence of their lowest instincts	4.29	4.00	1.217	448
10a	Estonian Russian-speakers are aggressive	3.77	4.00	1.420	532
10b	Estonians are aggressive	4.54	5.00	1.118	454

Items indexed by ''a'' represent Estonians' responses, items indexed by ''b'' represent Russian speakers' responses.

Appendix 2. Cronbach alphas for summary scales

TABLE 4 The internal consistency reliability of the questions of Russians' and Estonians' perceived ingroup and outgroup strength

Questions on	Cronbach's Alpha	N of items
How Russians perceived ingroup strength	0.758	10
How Russians perceived outgroup (Estonian) strength	0.800	10
How Estonians perceived ingroup strength	0.762	10
How Estonians perceived outgroup (Russian) strength	0.794	10

TABLE 8 The internal consistency and reliability of the scales

No.	Constituent of D-factor	Informants	Cronbach's Alpha	N of items
I	legitimacy of interethnic situation	Estonian-speaking	0.734	4
		Russian-speaking	0.697	4
II	perceived mutual trust	Estonian-speaking	0.857	6
		Russian-speaking	0.788	6

Appendix 3. Calculation of the D-factor

For discordance, the index D is a composite variable that summarizes the perceptions of legitimacy of the intergroup relations and outgroup distrust. Research on legitimacy perceptions (Levin *et al*. 1998; Mitchell & Sidanius 1993; Sidanius *et al*. 1994) has revealed that there is an ideological asymmetry between legitimacy perceptions and ingroup identification. More specifically, among the members of high status groups, there is a positive correlation between legitimacy perceptions and ingroup identification, whereas, among the members of low status groups, the correlation is negative. In this study, we found a similar asymmetry between legitimacy perceptions and outgroup distrust. Among Estonians (the high status group), there was a positive correlation between the perceptions of legitimacy of the intergroup setting and outgroup distrust ($r = 0.201$, $p < 0.01$), and, among Russian-speaking respondents, the correlation was negative ($r = -0.368$, $p < 0.01$). Thus, for the dominant group, the more legitimate the situation was perceived to be, the higher was the feeling of aversion towards the outgroup. For the subordinate group, the more illegitimate the situation was perceived to be, the higher was the feeling of aversion.

This means that, for the calculation of D, the scales of legitimacy and distrust need to be combined differently for high and low status groups, in order to account for ideological asymmetry. For the D of a subordinate group (D_s), the perception of high levels of illegitimacy in the interethnic situation motivates distrust, meaning that the scale for legitimacy needs to be reversed (labeled illegitimacy below) to obtain D.

For the dominant group (D_d), nothing needs to be done. After this operation, the D values for both groups were calculated as the arithmetic mean of its components.

While the D-factor measures the level of discordance towards an outgroup, there is evidence that, in some cases, some groups also show outgroup favoritism (Batalha *et al*. 2007; Jost *et al*. 2004; Sachdev & Bourhis 1991). As the Likert scale format enabled answers to range from strong outgroup favoritism to strong outgroup aversion, the questionnaire used in the study was able to measure this phenomenon. Therefore, one could claim that D values from 0 to 0.5 would indicate outgroup favoritism and the values from 0.5 to 1 outgroup aversion.

The problem with this scale is that it is symmetrical, as if the feelings of outgroup favoritism could, in principle, have a similar magnitude to the feelings of outgroup aversion. This assumption is not empirically valid. According to Brewer (2001), a degree of outgroup derogation is fairly common in many intergroup settings. Usually it amounts to slight discrimination against the outgroup but not direct hostility. Therefore, in various settings, neighboring groups may live in mutual aversion for long periods without destabilization of the situation. However, in certain conditions, particularly that of identity threat, the contemplation may lead to outright hatred and violence where the ingroup is willing to take great losses to inflict harm to the outgroup. Nothing similar has been recorded for outgroup favoritism – it is just a bias that has no tendency to escalate into uncontrolled intergroup love with ingroup members sacrificing themselves to bring happiness to the outgroup.

Therefore, the scale expressing feelings from strongest possible outgroup favoritism to strongest possible aversion should reflect this asymmetry. This could be modeled by squaring the scale for D. While the range of the whole scale remains the same (from 0 to 1), the point of neutrality (0.5 on the initial scale) is shifted to 0.25 by the squaring operation. This means that the initial values indicating outgroup favoritism (0 to 0.5) are squeezed into the interval of 0 to 0.25, and the values indicating outgroup aversion range from 0.25 to 1.

One of the basic methodological assumptions of this model is that, for all variables, the value for the most neutral and indifferent sentiment should equal zero. This would guarantee that, in the complex calculation, those variables which have a neutral value have no impact on the final result. As the most neutral point in the D scale is 0.25 (after squaring), this point should transformed to the zero point. By this operation, the whole scale would range from -0.25 to $+0.75$, the negative values indicating outgroup favoritism and the positive values outgroup aversion. The effect of this transformation would be that the negative values of D (i.e. outgroup favoritism) would increase perceived stability for low status groups and reduce it for high status groups. This is consistent with the effect of outgroup favoritism on the interethnic relations reported in research (Batalha *et al*. 2007; Jost *et al*. 2004; Sachdev & Bourhis 1991).