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## The impact of inter-ethnic discordance on subjective vitality perceptions

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Subjective ethno-linguistic vitality expresses a group's perception of its own ability to act as a distinctive collective entity in intergroup encounters. Although subjective vitality questionnaires have proved to be reliable instruments of measurement, there has been criticism that they underestimate actual vitality (see Yagmur, this issue). A possible reason for this might be that there are other factors present that can potentially affect vitality. For example, high perceived inter-ethnic discordance may enhance group vitality by reducing the permeability of group boundaries and strengthening emotional attachment to the in-group due to identity threat. In our paper, we hypothesise that the higher the perceived discordance, the higher the subjective vitality perceptions. To measure inter-ethnic discordance, a questionnaire was developed consisting of two interrelated factors: legitimacy of intergroup situation and perceived intergroup attitudes. A large-scale survey ( $N = 460$ ) of representatives of the Russian-speaking community in Estonia was conducted, focusing on both the discordance and subjective vitality phenomena. Contrary to the predictions, there was a negative correlation between the discordance factor and subjective vitality perception. The implications of this finding for the notion of subjective vitality are discussed.

**Keywords:** legitimacy; dehumanisation; inter-ethnic situation; Estonians; Russians

### Introduction

Traditionally, ethno-linguistic vitality is understood as a group's ability to act as a distinctive collective entity in intergroup settings (Giles, Bourhis, and Taylor 1977, 308). This ability is affected by both objective and subjective factors. The objective factors are the group's status, its demographic properties and the level of institutional support it enjoys. The main subjective factor influencing vitality is the group's perception of its objective vitality (Bourhis, Giles, and Rosenthal 1981). For an overview of the main principles of ethno-linguistic vitality theory (EVT), see Yagmur and Ehala (2011).

Although the vitality theory was heavily criticised in the 1980s because of its factors being 'gross and inexact tools of analysis' (Husband and Saifullah Khan 1982), it has remained one of the major theories of language shift (see Clyne 2003), being applied in novel empirical settings (Gogonas 2009; Komondouros and McEntee-Atalianis 2007; Yagmur and Kroon 2006, to name just a few) and inspiring

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new theoretical developments (Allard and Landry 1986; Bourhis et al. 1997; Ehala 2010; Giles and Johnson 1987; Harwood, Giles, and Bourhis 1994).

Traditionally, subjective ethno-linguistic vitality (SEV) is measured quantitatively using a subjective vitality questionnaire (SVQ) although, more recently, a combination of quantitative and qualitative methods has been introduced (Komondouros and McEntee-Atalianis 2007). As subjective vitality is assumed to be based on the perception of objective vitality, SVQs have, with a few exceptions such as those noted in Allard and Landry (1986), included questions on the perceptions of status, demographic and institutional support factors (Abrams, Barker, and Giles 2009; Bourhis, Giles, and Rosenthal 1981; Currie and Hogg 1994; Giles, Rosenthal, and Young 1985; Yagmur 2001).

However, statistical factor analyses of the data obtained by SVQs have mostly failed to confirm the theoretical distinction between status, demographic and institutional support factors (Abrams, Barker, and Giles 2009): data have been attributed to different numbers of factors, and the pattern has not been consistent across studies. Although these findings clearly weaken the theoretical distinction between the status, demographic and institutional support factors, this does not mean that the SVQ as is necessarily ineffective. In fact, Abrams, Barker, and Giles (2009) have found that if SEV is seen as a one-dimensional measure, it has a high internal consistency.

Thus, the SVQ certainly measures the perception of a group's standing in respect to its strength, power and/or status, but it is not very clear that this dimension is subjective vitality. For example, Giles and Johnson (1987) reported that, for Welsh bilingual adolescents, subjective vitality perceptions did not correlate with the strength of identification to Welsh identity, allegiance to the Welsh Nationalist Party, or linguistic differentiation from English. If the SVQ measured the ability to act as a collective entity, such a correlation ought to be present. Furthermore, Yagmur (2011) has provided strong evidence that, in several cases, vitality studies have underestimated the actual sustainability of several minority groups.

A possible reason for this might be that there are other factors present that affect vitality. For example, high perceived inter-ethnic discordance may enhance group vitality by reducing the permeability of group boundaries and strengthening the emotional attachment to the group by inducing identity threat. If this is so, subjective vitality would not only depend on strength, power and status perceptions measured by an SVQ, but could be enhanced by the perception of discordance, too. This would mean that subjective vitality is a more complex social psychological phenomenon than assumed by the SVQ, namely that it includes further important factors that affect collective behaviour. The goal of the current paper is to explore the validity of this hypothesis by specifying a possible correlation between subjective vitality perceptions and perceptions of inter-ethnic discordance. This paper argues that the phenomenon measured by the SVQ is not subjective ethno-linguistic vitality (i.e. the belief in a group's ability to act collectively – SEV), but a perception of the strength of the in-group, and this perception is dependent on the sense of inter-ethnic discordance. Although the phenomenon measured by an SVQ is a component of subjective vitality, it is just one of several components jointly determining the belief in the group's capability of collective action (see Ehala 2010).

This paper first outlines some important results of previous studies on the correlation between subjective vitality perceptions and other social-psychological factors. It is suggested that the feeling of out-group aversion and the legitimacy of intergroup power relations combine to form the factor of inter-ethnic discordance (D), which interacts with the SEV (the outcome of the SVQ). In the second section, the notion of intergroup discordance is defined and operationalised in the form of a survey questionnaire. The third section presents the results of an empirical study of SEV and D in the Russian-speaking community of Estonia. The implications of the findings for the ethno-linguistic vitality theory are discussed.

### **Interaction of vitality perceptions with other beliefs on intergroup matters**

During the 30-year existence of the SVQ, researchers have sometimes combined this instrument with other tools measuring various factors related to intergroup behaviour and language use. For example, Giles and Johnson (1987), addressing the Welsh–English intergroup setting, combined an SVQ with four other sets of questions measuring identification with the ethnic group, cognitive alternatives to the current inter-ethnic power setting, salience of the ethnic group membership and linguistic differentiation from the dominant group's language. Focusing on the Italian–Australian English setting, Hogg and Rigoli (1996) compiled a four-section questionnaire from existing questionnaires. It contained sections on subjective vitality, ethnic identification, competency and use of the subordinate group language, the interpersonal network of linguistic contacts, and the perception of educational and media support for the subordinate language. Liebkind, Jasinskaja-Lahti, and Teräsaho (2007) combined six measures to assess the relationship between subjective vitality and intergroup attitudes in the Swedish–Finnish intergroup setting in Finland. Their questionnaire included a Beliefs in Ethnolinguistic Vitality Questionnaire (BEVQ; Allard and Landry 1994), and sections for perceived future in-group vitality, perceived legitimacy of present in-group vitality, perceived discrimination, in-group identification and intergroup attitudes.

The first two studies explicitly hypothesised the influence of SEV on other factors, such as linguistic differentiation from the dominant language (Giles and Johnson 1987) and minority language competence and use, along with in-group identification (Hogg and Rigoli 1996). Liebkind, Jasinskaja-Lahti, and Teräsaho (2007) hypothesised that the perceived illegitimacy of present low vitality and perceptions of future high vitality are related to more negative intergroup attitudes, and that perceived discrimination is related to negative intergroup attitudes among those who perceive low SEV. Next, we will provide an overview of the main findings of these studies, concentrating on the relationships of SEV to other factors measuring intergroup attitudes and behaviour.

A correlation analysis of the factors in the Giles and Johnson (1987) study revealed that Welsh SEV did not correlate with other measures, such as strength of ethnic identification, linguistic differentiation from the English language or perception of hard intergroup boundaries. Giles and Johnson (1987) hypothesised post hoc that SEV and ethnic identification might be orthogonal, and they ran a further analysis to find out how these two measures related to the Welsh subjects' linguistic differentiation from the English language. Thus, they divided the subjects

Table 1. Interaction between SEV and linguistic differentiation.

Ethnic identification and subjective vitality		Linguistic differentiation
Strong identifiers	Low SEV	70.38
	High SEV	64.75
Weak identifiers	High SEV	54.75
	Low SEV	40.50

into four groups based on their scores on the strength of ethnic identification and on their scores on an SVQ. The median value was taken as the dividing point. A  $2 \times 2$  ANOVA test indicated a statistically significant difference in the scores of linguistic differentiation (Giles and Johnson 1987, 76), summarised in Table 1.

The scale for linguistic differentiation ranged from 9 to 90, and higher scores indicated higher levels of differentiation. The index was a summary of nine items. The items included such questions as *When served by shop assistants who speak to you in English, how often do you reply in Welsh? How often do you change from Welsh to English with someone who does not speak Welsh well? I feel completely at ease speaking Welsh in public places or whenever I want to.* The high scores of the index indicate a lack of willingness to accommodate to the out-group member language (English), even in cases where the latter might not be able to communicate in Welsh. As this behaviour is likely to be interpreted as 'low tolerance for what we shall call *societal norms* imposed by the dominant group, such as the use of English in their presence' (Giles and Johnson 1987, 83), one could say that the index actually expresses, indirectly, the respondents' aversion to the out-group.

Interpreting the results, it seems natural that those who identify more strongly with the in-group are less accommodating towards the out-group: for them, the choice of language is a part of intergroup competition. The relationship of the SEV to linguistic differentiation is paradoxical: it might be expected that the higher the SEV score, the more likely subjects are to differentiate from the out-group, but this is true only for low identifiers. For high identifiers, the low SEV subgroup actually had higher linguistic differentiation scores than SEV scores. Giles and Johnson (1987, 82) interpret this as strong identifiers being 'very committed to the group when they perceive... their group's vitality to be low'. Giles and Johnson (1987, 93) further suggest that the perceptions of ethnic threat and the legitimacy of the intergroup status hierarchy may interfere with identification and perceptions of vitality.

The results of Hogg and Rigoli (1996) confirmed the finding of Giles and Johnson (1987) that there is no significant correlation between SEV and ethnic identification. Their study of Australian Italians also showed that SEV did not predict either the competency or usage of Italian. Instead, the use of, and competency in, Italian was predicted by educational and media support for Italian. These results are clearly inconsistent with the main assumption of the EVT that subjective vitality perceptions may be an important factor predicting intergroup behaviour, for example language maintenance. Hogg and Rigoli (1996, 87) hypothesised that the relationship between SEV and ethnic identification is positive for weak identifiers, but there is a discontinuity and, for strong identifiers, the relationship flips around 'such that the increasing identification is associated with increasingly pessimistic (realistic) SEV'. The findings of Giles and Johnson (1987), presented in Table 1, are consistent with this hypothesis. Therefore, it may be

suggested that SEV is a predictor of language and identity maintenance under some conditions, but it is a dependent factor in other conditions. The results of the Liebkind, Jasinskaja-Lahti, and Teräsaho (2007) study of the Swedish-speaking minority in Finland suggest that affective factors, such as the perception of legitimacy and discrimination, may condition SEV.

Liebkind, Jasinskaja-Lahti, and Teräsaho (2007, 413) addressed the question regarding the extent to which the SEV affects the relationship between perceived discrimination and intergroup attitudes. They found that the higher the SEV perceptions, the more legitimate the perception of in-group vitality ( $r = .5, p < .001$ ); the higher the vitality expectations for the future ( $r = .22, p < .001$ ), the lower the perception of discrimination ( $r = -.21, p < .001$ ), and the better the intergroup attitudes ( $r = -.19, p < .001$ ). In other words, those subjects who had high SEV saw the situation as legitimate and their in-group future as positive; they did not feel much discrimination and had positive intergroup attitudes.

Still, the regression analysis of the variables reveals interesting relations. The most important finding was that the effect of SEV on intergroup attitudes and perceived discrimination disappeared when perceptions of legitimacy and future vitality were introduced into the model. The model revealed significant inter-correlations between the perception of illegitimacy and discrimination, a sad future for the in-group, and negative intergroup attitudes (Liebkind, Jasinskaja-Lahti, and Teräsaho 2007).

In conclusion, the results of these three studies are in some contradiction with the EVT basic assumption according to which SEV is an independent variable that can be used to predict the effects of other phenomena related to language and identity maintenance. However, the findings of Giles and Johnson (1987, 82) and Liebkind, Jasinskaja-Lahti, and Teräsaho (2007) indicate that SEV perceptions are related to other variables such as linguistic differentiation, discrimination and legitimacy, although the direction of their relationship may 'flip around' for weak and strong identifiers. The goal of the current study is to explore the nature of this relationship further.

### **Design of the study and the sample**

The previously reviewed studies (Giles and Johnson 1987; Hogg and Rigoli 1996; Liebkind, Jasinskaja-Lahti, and Teräsaho 2007) indicate that SEV perceptions are related to a number of variables which are also mutually interrelated, i.e. perceptions of legitimacy, future vitality, discrimination, intergroup attitudes and linguistic differentiation. Although all these studies make assumptions about which of these variables are explanatory and which are dependent, the correlation analysis itself does not show causal relationships. For example, perceived discrimination may lead to worse intergroup attitudes, but it could also be that bad intergroup attitudes lead to an increased level of (perceived) discrimination. The anticipation of a pessimistic in-group future may reinforce perceptions of illegitimacy or vice versa. It is also possible that these factors are mutually reinforcing without any single unambiguous causal force. This last assumption was taken as a basis for designing a measure we call inter-ethnic discordance (D). The goal of the study is to look at the correlation of this measure with SEV. For this purpose, a 30-item questionnaire with Likert-scale statements was developed and tested for internal consistency in a pilot study. The D and SEV components of the questionnaire, their operationalisation and

Table 2. Design of the sample selection.

Regional concentration of sociolinguistic communities	Proportion of Russian speakers in the area (%)	<i>N</i>
Rural settlements	1–10	50
Towns and settlements	10–20	70
Western Tallinn	30–50	70
Eastern Tallinn	50–80	120
Towns in eastern Estonia	80–100	150

descriptives for the items forming the scales for measuring these concepts are presented in the next two sections.

The study is based on a sample of 460 Russian-speaking respondents in Estonia. The sample was drawn by a professional survey company from five different sociolinguistic regions in Estonia (see Table 2).

Quite naturally, these different sociolinguistic regions vary considerably in terms of how much support a particular setting provides for the usage of the Russian language. For example, in rural settlements, there are no Russian-language schools, the number of Russian speakers is too low to develop cultural activities, and there are no ethnic enterprises or ethnic entertainment, except for television with Russian channels, local Russian Radio and the Internet. The setting is slightly more supportive in Estonian-dominated towns, which usually have a Russian-language school or schools and some ethnic Russian societies. Tallinn is a balanced bilingual city, with Russian schools, Russian theatre, Russian films in cinemas and frequent social events featuring artists and singers from Russia. The density of Russian speakers is large enough to build purely monolingual social networks. The cities in eastern Estonia provide a virtually monolingual Russian social, cultural and economic environment, except that Estonian-language street signs, bilingual (and sometimes predominantly monolingual Estonian) advertisements and bilingual municipal government documentation are mandated by the Estonian Language Act (1995).<sup>1</sup>

Such high diversity provides a promising basis for studying the possible influence of the regional concentration of sociolinguistic communities on the perception of SEV and D. A written survey questionnaire was used for data collection in May 2008. The data were analysed using the Statistical Package for the Social Sciences (SPSS), Version 14.0.

### **Inter-ethnic discordance**

Based on Giles and Johnson (1987) and Liebkind, Jasinskaja-Lahti, and Teräsaho (2007), it was hypothesised that perceptions of legitimacy and intergroup attitudes were mutually reinforcing and that this cluster of beliefs had an effect on perceptions of future vitality, as well as on linguistic differentiation. Thus, D is conceptualised as consisting of four components: (1) the extent of the illegitimacy of the inter-ethnic situation, (2) the extent of the lack of confidence in the out-group, (3) the perceptions of the out-group's openness to intergroup cooperation, and (4) the extent of out-group dehumanisation. As Haslam (2006, 252) points out, the concept of dehumanisation has rarely received a systematic theoretical treatment: in social psychology, it has attracted only scattered attention. Struch and Schwartz (1989,

365) postulate that the stronger the conflict and, hence, the motivation to harm, the more the groups tend to dehumanise each other. Here, dehumanisation includes such phenomena as whether the out-group is considered to behave under the influence of the lowest instincts of its members and how its aggressiveness is perceived by the in-group. A 17-item questionnaire was designed to measure these four subcomponents (eight items measuring legitimacy and nine items measuring the other three components, three items each). All items used Likert-type scales, allowing for the following choices: 1 – totally agree, 2 – agree, 3 – rather agree, 4 – rather disagree, 5 – disagree, and 6 – totally 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 (Zabrodskaia 2009b). It was found that only four statements out of eight adequately measured the factors that play a role in legitimacy perception, and these were included in the revised questionnaire. An analysis of the other nine items showed that the proposed three components, in fact, constitute one, which can be characterised as the perceived level of intergroup distrust (see Zabrodskaia 2009b, 156–8). These six statements expressing the extent of mutual distrust were incorporated into the final questionnaire.

As legitimacy is a highly abstract notion, the items that were used to measure this variable were designed so that they would be maximally context sensitive, i.e. having direct relevance for this particular intergroup setting. The items for legitimacy and the descriptives of the main study are presented in Table 3.

The main findings can be interpreted as follows. Russian-speaking informants agreed that Russian should be the second official language in Estonia, disagreed that the Estonian Republic did not have to assure the maintenance of the Russian community’s language and culture in Estonia, and somewhat disagreed that the situation of the Russian community in Estonia corresponded to international norms and that, concerning the Russian community, the Estonian Republic followed European democratic principles.

Six items representing intergroup aversion and their descriptives are presented in Table 4. Four statements expressed positive characteristics of the out-group members, in which case disagreement indicates aversion to the out-group; two statements expressed negative statements, and agreement was taken as indication of aversion.

As the data indicate, the subjects, on average, showed quite a low level of aversion: in four items the averages were close to the neutral point of the scale (3.5).

Table 3. Perceived legitimacy of the status of the Russian-speaking community in Estonia.

No.	Statement	Mean	Median	SD	N
1	Russian should be the second official language in Estonia.	1.94	1.00	1.214	457
2	The Estonian Republic does not have to assure the maintenance of the Russian community’s language and culture in Estonia.	4.78	5.00	1.158	454
3	The situation of the Russian community in Estonia corresponds to international norms.	3.72	4.00	1.337	455
4	Concerning the Russian community, the Estonian Republic follows European democratic principles.	3.87	4.00	1.263	456



Table 4. Perceived aversion.

No.	Statement	Mean	Median	SD	<i>N</i>
5	Estonians are helpful as cultural go-betweens.	3.35	3.00	1.219	457
6	Estonians are reliable.	3.43	3.00	1.120	449
7	Estonian Russian speakers are regarded well by Estonians.	3.47	3.00	1.072	457
8	Estonians wish to cooperate with Russian-speaking dwellers in Estonia.	3.42	3.00	1.103	456
9	Estonians behave under the influence of their lowest instincts.	4.29	4.00	1.217	448
10	Estonians are aggressive.	4.54	5.00	1.118	454

For statements expressing negative characteristics, the average disagreement level was even higher.

In order to calculate the summary index for D, the items were reversed so that the higher scores for individual items indicated higher levels of illegitimacy (item 1 reversed) and aversion (items 9 and 10 reversed). As the Cronbach alphas of both components were at acceptable levels ( $\alpha = .697$  for illegitimacy and  $\alpha = .788$  for aversion), two summary scales were calculated. As expected, the summary scales for illegitimacy and aversion correlated at a statistically significant level ( $r = .368$ ,  $p < .01$ ). This allowed the summary scale for D to be calculated as the arithmetical average of the scales for illegitimacy and aversion. This method produced the same results as when all 10 items (some of them appropriately reversed) were used to calculate D values directly. Actually, the Cronbach alpha for the whole 10-item set was even higher ( $\alpha = .790$ ) than the alphas for the illegitimacy and aversion scales. The strong interrelatedness of these factors provided strong support for the initial assumption that the perceptions of legitimacy, discrimination and intergroup attitudes form one tightly related and mutually reinforcing set of beliefs that can be summarised in one measure – intergroup discordance.

### Subjective ethno-linguistic vitality

The subjective vitality questionnaire was introduced in the early eighties (Bourhis, Giles, and Rosenthal 1981), and the instrument has been used with slight modifications in diverse intergroup settings, having been proved to be a reliable research instrument (for an overview, see Abrams, Barker, and Giles 2009) for measuring SEV perceptions. For this reason, a modified version of an SVQ, containing 10 questions pertaining to the vitality of the in-group, was adopted for this study. The descriptives for individual items are presented in Table 5, where the responses on Likert scales range from 1 (the highest possible level of the property) to 7 (the total absence of the property).

The questions in Table 5 are sorted by the mean value, from the weakest assessment to the strongest. As seen in Table 5, the weakest were the perceptions on valuing the Russian language and culture in Estonia, as well as the perception of cultural weakness (items 2, 1 and 3). Economic standing (item 4) and media support (item 5) were assessed as the highest. The Cronbach alpha for the 10-item set representing SEV was sufficiently high ( $\alpha = .758$ ). As a result, the summary scale for SEV was calculated as the mean value of individual items.

Table 5. Russian speakers' perceptions of SEV (high scores indicating low SEV).

No.	Item	Mean	SD
2	How much is the Russian language appreciated in Estonian society?	4.92	1.646
3	How many famous cultural persons (writers, actors, artists, singers, scientists and journalists) are there among the Russian-speaking people?	4.56	1.534
1	How much is Estonia's Russian culture and tradition appreciated in Estonian society?	4.49	1.636
6	How much is the Russian language used in Estonian education (nurseries, schools and universities)?	4.36	1.635
10	How strong will the Russian language and culture be in 20 to 30 years in comparison with the present?	4.30	1.652
7	How would you estimate the population of Russian-speaking people?	4.19	1.235
8	How active and strong are the Russian-speaking people in Estonian society?	4.13	1.584
9	How affluent are the Russian-speaking people?	4.06	1.256
4	How many wealthy employers and businessmen are there among the Russian-speaking people?	3.68	1.424
5	How much is the Russian language used in Estonia's media (newspapers, radio, TV and the Internet)?	3.78	1.635

## Results

To enhance interpretability, the summary scales for D and SEV were converted to a percentage scale (from 0 to 1). For SEV, the value 0 corresponds to the lowest possible mean score for SEV (1.0), and 1 corresponds to the highest possible score (7.0). The use of this common scale helps to interpret the scale value. The same transformation was conducted with the scale of D: the value 0 corresponds to the minimal mean value on the Likert scale (1.0), and 1 corresponds to the maximum value (6.0). There was one important methodological difference, which is explained below.

While the D-factor measures the level of aversion towards the out-group, there is evidence that, in some cases, some groups show out-group favouritism (Batalha, Akrami, and Ekehammar 2007; Jost, Banaji, and Nosek 2004; Sachdev and Bourhis 1991). As the Likert scale format enabled answers to range from strong out-group favouritism (agreement with positive statements) to strong out-group aversion (disagreement with positive statements), the questionnaire used in the study was able to account for this phenomenon. Therefore, one could claim that the D values from 0 to 0.5 indicate out-group favouritism, and the values from 0.5 to 1 out-group aversion.

The problem with this scale is its symmetrical nature, as if the feelings of out-group favouritism, in principle, had a similar magnitude of affect as the feelings of out-group aversion. This is an unlikely assumption. Without entering into a detailed justification, the evidence from inter-ethnic relations all over the world (for example in Northern Ireland, Rwanda or the Middle East) suggests that the feelings of aversion towards out-groups can have many times higher magnitudes than any feeling of sympathy towards an out-group ever could reach. Therefore, the scale expressing feelings from strongest possible out-group favouritism to strongest possible aversion should reflect this asymmetry. This can be modelled by squaring the components of the D factor. 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 out-group

favouritism (0–0.5) are squeezed into the range of 0–0.25, and the values indicating out-group aversion range from 0.25 to 1. To facilitate interpretation further, the scale was shifted down so that the value indicating neutral feeling (0.25) was equal to 0. By this, the scale ranged from –0.25 to 0.75, with zero indicating the point of neutrality. Accordingly, the negative values from –0.25 to 0 indicate out-group favouritism, and positive values from 0 to 0.75 indicate discordance.

To test the summary scales, the mean values for the SEV and D scales were calculated for each sociolinguistic region. Previous research has indicated that the intergroup attitudes of Russians in the areas of a high percentage of Estonian speakers (rural areas and small towns) are more positive than the attitudes of Russian speakers in the areas of their high concentration (Lauristin 2008). Also, one would expect that SEV perceptions would be higher in areas where there is a high concentration of Russian speakers and, therefore, better institutional support for their language and culture. Thus, it was hypothesised that the higher the concentration of Russian speakers in an area, the higher the values for the SEV and D scales. The results are presented in Table 6.

As Table 6 shows, the differences between SEV values in different sociolinguistic environments do not differ much: they vary within five percentage points. The one-way ANOVA analysis revealed that the differences between means of regions with different concentrations of sociolinguistic communities reported in Table 6 are not statistically significant. Thus, it appears that the immediate sociolinguistic environment does not have any significant impact on SEV perceptions. This is, to some extent, surprising, as the educational and media support for the Russian language is much stronger in predominantly Russian-speaking towns in eastern Estonia. Contrary to expectations, their mean assessment was one of the lowest among the regions.

This may be caused by the fact that citizens of segregated areas have some kind of special regional identity connected to an imagined community; we would describe it as an ‘in-between situation’ (this is especially true in north-eastern Estonia, on the border with Russia). Johnstone (2004, 69) proposes that ‘regions have come to be seen as meaningful places, which individuals construct, as well as select, as reference points. Identification with a region is identification with one kind of “imagined community”’. A qualitative study conducted along with the present quantitative study (see Ehala and Zabrodskaia forthcoming; Zabrodskaia and Ehala 2010) shows that the informants from the town of Narva have a very strong local identity:

Table 6. Mean values for subjective vitality and discordance scales.

	Regional concentration of Russian speakers				
	Towns in eastern Estonia (more than 80%)	Eastern Tallinn (50–80%)	Western Tallinn (30–50%)	Towns and settlements (10–20%)	Rural settlements (less than 10%)
SEV	.45	.47	.46	.48	.43
D	.15	.09	.09	.04	.04

‘Я нарвлянка, у нас особый микроклимат, здесь нельзя сказать, что существуют какие-то острые противоречия между эстонцами и русскими, да, Нарва-это русский город, но как это сказать, очень трудно выразить свою мысль, в том плане что нарвляне – это не русские, но не эстонцы, это особый микромир’.

‘I am a Narva citizen. We have a special micro-climate here. Here I cannot say that something like sharp contradictions between Estonian and Russians exist. Yes, Narva is a Russian town, but how to express that; it is very difficult to express my thought, in this respect, that Narva citizens are not Russians or Estonians. It is a special microcosm.’

Respectfully, we might suggest that representatives from eastern Estonia expect more threats from the transition of Russian-language upper secondary schools (grades 10 to 12) to Estonian-language studies, the new language-testing and assessment system (see Zabrodskaja 2009c) etc., because they see every such Estonianisation effort as a new danger to their ethno-linguistic identity and vitality.

The mean values for the D scale were in the predicted direction: the sense of discordance was the strongest in the segregated eastern Estonian areas and the lowest in those areas where the proportion of the Russian speakers was the lowest. The ANOVA test confirmed that the highest discordance value for eastern Estonia was significantly different from all the other sociolinguistic regions ( $F=8.35$ ;  $p<.05$ ). Therefore, the D scale accurately replicated the previous finding (Lauristin 2008) that the intergroup attitudes of Russian speakers are more positive in areas where Estonians constitute a significant majority. This finding confirms what was mentioned in the previous paragraph. The bigger the concentration of Russian speakers, the higher D is towards Estonians and the lower SEV is, as numerous steps to Estonianise this region are interpreted/perceived by Russian speakers as an encroachment on their linguistic and cultural vitality.

As the summary scales SEV and D were calculated over 10 items, using seven-point or six-point Likert scales, the summary scales have a sufficiently large range of values. This enables one to use parametric statistical tests to study the correlations between these variables. Previous studies (e.g. Liebkind, Jasinskaja-Lahti, and Teräsaho 2007) have indicated that the higher the perception of SEV, the better the intergroup attitudes ( $r = -.19$ ;  $p < .001$ ). Giles and Johnson (1987) have also found that, for those who identified strongly with Welsh, high SEV perception was associated with less linguistic differentiation. A Pearson correlation analysis of this sample revealed a medium-strong negative correlation between the SEV and D means ( $r = -.416$ ;  $p < .001$ ). In other words, the lower the SEV scores, the higher the perceived discordance.

As both SEV and D are summary scales, it would be informative to look at what components within D and SEV contribute the most to this correlation. Such an analysis may lead to a refinement of the SVQ to increase its independence, which would make it easier to assess its genuine impact on ethno-linguistic vitality.

As the D scale consisted of two related scales for legitimacy (L) and aversion (A), the correlations of these scales with SEV were measured, both in their plain untransformed form and after squaring ( $L^2$ ,  $A^2$ ). The results are presented in Table 7.

As Table 7 indicates, the legitimacy component contributes the most to the overall correlation between D and SEV, although the aversion component adds its small unique contribution. For this reason, the composite scale D has the highest correlation with SEV. Although the supremacy of D is marginal, compared to its

Table 7. The correlations of SEV with the components of D.

	SEV	
	r	p
D	-.416	.001
L	-.407	.001
L <sup>2</sup>	-.400	.001
A	-.256	.001
A <sup>2</sup>	-.248	.001

non-squared subcomponent measuring legitimacy, these results fully support the construct validity for D. Therefore, in further analyses D was used and its subcomponents discarded.

To find out what components in SVQ contributed the most to the correlation, we measured the correlations of all 10 items in SVQ with the summary scale D. The analysis revealed that D was most strongly correlated with two items: *How much is the Russian language appreciated in Estonian society?* ( $r = .44$ ;  $p < .001$ ), and *How much is Estonia's Russian culture and tradition appreciated in Estonian society?* ( $r = .421$ ;  $p < .001$ ). This is not surprising, as the D scale had two items that also pertained directly to the status of the Russian language and culture in Estonia (*Russian should be the second official language in Estonia. The Estonian Republic does not have to assure the maintenance of the Russian community's language and culture in Estonia*). The correlations for the rest of the items in the SVQ and D values were relatively weak ( $r < .25$ ), but still statistically significant.

It should be noted that the items in the SVQ addressing the appreciation of minority language and culture do not express the perceptions of the objective vitality of the in-group, but reflect the perceived status of their group in the society. As argued in Ehala (2010), status is not an objective characteristic of a group, but a socially constructed assessment of power differences. A group's status perceptions may therefore differ from their actual objective vitality, i.e. demographic and institutional support characteristics. Consequently, it may be that SVQ would be a more accurate measure of perceived objective vitality if it excluded the items measuring status. To test this hypothesis, we calculated a new summary scale for SEV, containing only eight items from the SVQ.

The removal of two items did not affect the reliability of the scale much: for the new scale (SEV2),  $\alpha = .714$  (for SEV,  $\alpha = .758$ ). Also, the mean values for the regions with different concentrations of sociolinguistic communities did not change much (within three percentage points) and the differences were not statistically significant. The correlation of SEV2 and D was weaker than between SEV and D, but it was still noticeable ( $r = -.31$ ;  $p < .001$ ). In conclusion, the correlation between D and SEV was not only caused by the questions pertaining to the status of the Russian language in Estonia, as it also held between the perception of seemingly objective characteristics of reality and the sense of discordance.

### Discussion and conclusion

The results of the present study confirmed the findings of previous studies (e.g. Lauristin 2008) that intergroup attitudes of Russian speakers (measured here

by D) are less favourable in segregated areas of eastern Estonia. The analysis also provided support for the construct validity of D as a composite scale of legitimacy and aversion, squared to model the asymmetry between different affective strengths of out-group favouritism and out-group aversion.

The study also showed that the nature of the regional concentration of sociolinguistic communities had no effect on the perceptions of SEV: respondents from all sociolinguistic regions assessed SEV fairly similarly. Instead, there was a medium-strong negative correlation between the sense of intergroup discordance and SEV. Thus, the perception of SEV seems to be more influenced by the intergroup attitudes the person has rather than the region he or she lives in. The negative correlation between SEV and linguistic differentiation, perception of discordance and intergroup attitudes has been reported previously as well (Giles and Johnson 1987; Liebkind, Jasinskaja-Lahti, and Teräsaho 2007), but commonly it has been assumed that intergroup attitudes are affected by the perceptions of SEV.

The correlation between D and SEV weakened slightly, but remained statistically significant when the SQV was modified to exclude the items that had the largest conceptual overlap with the items constituting D. The fact that the correlation remained significant indicates that the perception of discordance was related even to the perception of seemingly objectively measurable reality (such as *How much is the Russian language used in Estonian education?*, *How much is the Russian language used in Estonia's media?* and *How active and strong are the Russian-speaking people in Estonian society?*).

Even though the respondents' immediate surroundings, which are quite different in terms of the concentration of sociolinguistic communities, had no statistically significant effect on the perception of these aspects, there is still a medium-strong correlation with the perception of discordance. We conclude that it is not the perception of objective reality that affects the perception of discordance, but the other way around: the feeling of discordance influences the perception of reality, so that the in-group appears weaker on the SEV scale if the person has a high sense of discordance. It is also possible that both SEV and D are affected by a third factor. We hypothesise that this factor may be identity threat (Ehala 2009). According to that, a high D level signals threatened identity; the feeling of threat also affects the SEV perceptions, causing subjects to see the situation as more negative than it really is.

If SEV perceptions are mediated by other factors, such as D, in a significant way, SEV cannot be a direct measure of a group's objective vitality as perceived by the group members. This would also mean that the common assumption in vitality research (Bourhis, Giles, and Rosenthal 1981; Giles and Johnson 1987; Hogg and Rigoli 1996; Liebkind, Jasinskaja-Lahti, and Teräsaho 2007) that SEV is an explanatory variable that affects other factors is not a viable one. For example, a high discordance level is likely to enhance a group's collective vitality, as it motivates the group for mobilisation and collective action against the out-group. As discordance is in a reverse relationship with SEV, it will lower the SEV perceptions. That is why if a researcher uses only an SVQ to assess the vitality of a group the results may be strongly misleading: the SEV scores for a group that has a high discordance level and potential for collective action would, according to SVQ results, have a rather low vitality. For this reason, SVQ results are likely to underestimate the group's actual vitality, as argued by Yagmur (2011).

To summarise, the study showed that the SEV perceptions are significantly influenced by other social psychological factors and, therefore, cannot be taken as a

direct measure of SEV. Rather, it is possible that SEV is a sum of a much larger set of different beliefs and perceptions regarding intergroup relations. It is possible that SEV measured by an SVQ makes a unique contribution to SEV in relation to other factors, such as D. For example, Giles and Johnson (1987) found that, for weak identifiers, SEV perceptions seemed to predict linguistic differentiation. Thus, it may be that, in the case of low affective commitment to the group, the perception of a group's strength, measured by an SVQ, may have an influence on language maintenance. Hogg and Rigoli (1996) hypothesise that the relationship of SEV may change direction for strong identifiers. As the strength of identification was not measured by our study, this question remains unanswered here. Further studies scrutinising the relationship of SVQ results to other factors are needed to determine its contribution to SEV.

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### Note

1. According to the Place Names Act (2004), which regulates the establishment and use of street names, place names are documented in the Estonian-Roman alphabet. See also Zabrodska (2009a) on Estonian Linguistic Landscapes.

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