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# GRAPES OF WRATH: ANGER TERM SEMANTICS IN UKRAINIAN VS. RUSSIAN[1]

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**Abstract:** This paper reports the results of two psycholinguistic studies on the meaning of anger words in Ukrainian and Russian. In Study 1, meaning profiles of nine Russian anger terms were obtained from L2 Russian speakers from Ukraine (Kyiv) and monolingual Russian speakers from Russia (Volgograd). In Study 2, the meanings of five anger-related emotions were evaluated by two groups of Ukrainian bilinguals (L1 Ukrainian and L1 Russian). The results show that Ukrainians (in both their L1 and L2) consider anger-related emotions to be less likely subjected to regulatory control and societal disapproval, which may highlight cultural differences between Ukraine and Russia.

**Keywords:** emotion, anger, semantics, Ukrainian, Russian.

## 1. Introduction

This study evolves at the intersection of two movements that have shaped the scientific landscape in the humanities and social sciences in the last several decades. The first one is the paradigmatic shift referred to, by analogy to the "cognitive revolution" of the 1960s (Mandler 2002), "the affective revolution" (Handbook of affective sciences 2003), or "the era of affectivism" (Dukes, Foolen et al. 2021). The second trend is the cognitive view on the meaning of lexicalized emotion – that is,

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words labeling emotional experiences (Ogarkova 2013). Endorsed by both Cognitive Linguistics (e.g., Foolen 1997; 2012; 2022; see also reviews in Soriano 2013; 2022), which seeks to account for language as a socio-cognitive phenomenon (Cognitive linguistics… 2006; Janda 2010), and psychological research on emotion categorization (e.g., Jackson et al. 2019; Russel & Fehr 1994; Shaver et al. 2001), the cognitive view on emotional meaning approximates linguistic and conceptual representation (Soriano & Ogarkova 2009) and submits that language plays an important role in establishing emotion categories. On this view, words denoting emotions in various languages not only provide speakers with a default matrix to categorize emotional reality (Harré 1986; Soriano & Ogarkova 2009; Watson 2004), but also signpost culture-embedded cognitive categories, or "folk" emotion concepts, thereby creating a bridge between linguistic and cultural studies.

This cultural aspect of emotional meaning has come to the forefront in much of the previous scholarship on language and emotions (e.g., Dylman et al. 2020; Handbook on language and emotion 2022; The Routledge handbook of language and emotion 2019). However, earlier studies frequently conflated the impacts of language and culture on emotion conceptualization. As Tsai et al. (2004: 1227) put it, "many scholars believe that cultural ideas and language are inseparable because language is the primary vehicle through which cultural ideas are transmitted". Attending to this concern, researchers have started to disentangle this nexus by exploring emotion meaning construction in languages as spoken in different parts of the same country, such as Italian as spoken in northern vs. southern Italy (Mortillaro et al. 2013), Spanish as spoken in southern Spain vs. in the Basque Country (Alonso-Arbiol et al. 2013), or Portuguese as spoken in continental Europe and in Brazil (Soares da Silva 2020). Another typical limitation of both linguistic and psychological research on lexical emotion has been prioritizing pairwise comparisons of emotion conceptualization in (very) dissimilar languages and/or cultural communities (e.g., Goswami & Yadav 2024; Kahumburu & Matsumoto 2024; Zhou et al. 2022). However, in recent years, several studies have explored the much finer variation within typologically close languages where less variation would *a priori* be expected, such as Finno-Ugric languages (Realo et al. 2013) or Slavic languages (Ogarkova et al. 2013).

This paper continues this strand of research by focusing on emotion meaning construction in Ukrainian and Russian, two Eastern-Slavic languages spoken in Ukraine and Russia. Our specific focus is on anger-related emotions. As a universally lexicalized confrontational emotion (Hupka et al. 1999) elicited by a demeaning offense against the self or relevant others or by the obstruction of one's pertinent goals or needs (e.g., Lazarus 1991; Ortony & Turner 1990), anger is an interesting emotion to explore because of its cultural variability. Two major dimensions commonly assumed to contribute to cross-cultural variation in anger experience and expression are

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individualism/collectivism and power distance (see Ogarkova & Soriano 2022 for a review).[1] The former dimension sets apart cultures where individuals are viewed upon as more independent, as contrasted to societies favoring interdependence (Hofstede 2001). Accordingly, in individualistic societies, anger is more likely perceived as emphasizing personal assertiveness and healthy pursuit of personal goals; by contrast, in collectivistic groups, it tends to be perceived as a socially threatening or potentially disrupting emotion that requires regulatory control (Markus & Kitayama 1991). The other dimension – power distance – juxtaposes more egalitarian, low-power-distance societies against high-power-distance ones where large power gaps between subordinates and authority figures are expected and tolerated. In the latter cultures, manifesting anger towards higher-status people is socially sanctioned (Hofstede 2001).

The Ukrainian vs. Russian contrast is an interesting case in this respect. While direct cross-cultural comparisons of Ukraine vs. Russia have been scarce (but see Akaliyski & Reeskens 2023; Borysenko 2017; Starodubska 2022), several studies involving a *tertium comparations* – a Western, typically English-speaking society – suggest that Ukrainians may be more individualistic than Russians. For instance, available research shows that, while Russians are clearly more collectivistic than British (Tower et al. 1997) and Americans (Realo & Allik 1999), Ukrainian females showed a more pronounced tendency for individualism than American women (Shafiro et al. 2003). Some evidence is also available showing that Russians scored significantly higher than Ukrainians on power distance (e.g., Temirbekova et al. 2014: 795), suggesting that Ukrainians are less tolerant of inequality in power among institutions, organizations, and people.

In this study, we explore whether the aforementioned divergence on cultural dimensions between Ukrainians and Russians bears an impact on how language speakers understand the meaning of anger-related words. The data were collected in 2008–2010 within the framework of two large-scale psycholinguistic projects: the GRID project,[2] a large-scale international collaboration focused on the meaning of 24 emotion words in over 30 languages (Fontaine et al. 2013) and its extension and refinement the ELIN project,[3] concerned with the meaning of anger, shame/guilt, and pride lexicons in 7 languages as spoken in 13 countries (e.g., English as spoken in the USA and the UK, Russian as spoken in Ukraine and Russia, etc.). In the elicitation-based methodology shared by both projects (see Section 2 for further detail), language speakers were directly inquired about the meaning of emotion terms in their languages using a set of prototypical features deemed relevant for the characterization of the emotion domain (Scherer 2005; Soriano et al. 2013). These ratings, averaged across a language group, were then used to construct semantic profiles of emotions words for further analysis and comparison (Fontaine et al. 2007; 2013).

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## 2. Methodology

### *2.1 Study 1*

In Study 1, we focused on nine anger experiences lexicalized in Russian. Term selection was guided by the emic approach in cross-cultural research (Mostowlansky & Rota 2023), meaning that only culturally relevant and frequently used lexemes were included in the analysis. To this end, we relied on the results of a previous situation-labeling study (Ogarkova et al. 2012) where native speakers of five European languages, including Russian, were presented with a balanced and varied set of anger-eliciting situations and were asked to provide an emotion label (a noun or an adjective) that would best fit to describe the way they would feel in those situations. The most salient anger terms in Russian that emerged in this study were as follows: *razdrazheniye*[4] "irritation", *obida* "resentment/hurt", *zlost'* "anger", *gnev* "justified anger/wrath", *dosada* "frustration/vexation", *vozmuscheniye* "indignation", *negodovaniye* "indignation", *jarost'* "fury", and *serdityj* "cross".

To obtain the semantic profiles of these anger words, the ELIN questionnaire was used. Created in 2009 as a refinement of the GRID tool (Soriano et al. 2013; see Section 2.2 for further detail on GRID), this instrument was constructed to measure the meaning of four broad families of emotion terms (anger, shame, guilt, and pride). The instrument comprises a total of 95 features (46 from GRID and 49 new) across 6 emotion components: event appraisals (26 features), bodily experiences (11 features), expression (vocal, gestural, and facial; 14 features), action tendencies (14 features), subjective feelings (10 features), and regulation (3 features). In addition, 17 more features address more general issues about emotion conceptualization, such as social acceptability of the emotion, frequency of experience, the social status of the emoter with respect to the offender, and so on. The questionnaire concludes with several questions on demographic characteristics (age, gender, education level, country of residence, and family migration history).[5]

In Study 1, the ELIN questionnaire was completed in a controlled Web-study (Reips 2002) with two groups of university students: Ukrainians (National University of "Kyiv-Mohyla Academy", Kyiv, Ukraine; $N = 41$; 29 females; mean age 26.1; L1 Ukrainian, L2 Russian) and Russians (University of Volgograd, Russia; $N = 40$; 19 females; mean age 21.2). Each participant was presented with 4 to 5 emotion terms and asked to rate how likely it was that a number of features were part of the meaning of those words. The features were presented one at a time. The ratings were done on 9-point Likert scale (1 = "extremely unlikely"; 9 = "extremely likely"). To control for possible cross-cultural differences in the use of the scale (Chen et al. 1995), all data were centered before executing the analyses. Concretely, this meant that, for each term, the average score was computed across all 95 features and then this mean score was subtracted from each of the observed scores (Park 2008).

*2.2 Study 2*

Study 2 focused on five anger-related terms in Ukrainian and Russian. The data were initially collected within the framework of the GRID project that focused on a larger set 24 emotion words representative of the overall scope of the emotion domain (Scherer et al. 2004). Among them, the original GRID list contained 4 confrontational emotion terms related to anger: *anger, irritation, resentment,* and *hate*. All four terms in English and their glosses in other languages consistently emerged in prototype research on anger categorization in different world languages (Alonso-Arbiol et al. 2006; Grant 2023; Russel & Fehr 1994; Shaver et al. 1987; 1992; 2001). In Ukrainian and Russian, the following translation equivalents of English *anger, irritation, resentment,* and *hate* were used: Ukr *zlist'* / Ru *zlost',* Ukr *rozdratuvannya* / Ru *razdrazheniye* "irritation", Ukr *obraza* / Ru *obida*, Ukr *nenavyst'*/ Ru *nenavist'*, respectively. In addition, taking into consideration many linguists' controversy over a noun in Russian that would match the meaning of English *anger* (Pavlenko 2008; Wiezrbicka 1998), additional data were collected for Ukr *gniv* / Ru *gnev* "justified anger/wrath". All five pairs of anger terms included in the analyses were mutual cognates.

The semantic profiles of Ukrainian and Russian anger words were obtained using the GRID tool (Fontaine et al. 2007; 2013). This instrument is a 144-item inventory with the features, derived from a broad range of emotion theories, proven relevant to discriminate between a large and varied set of emotion categories. In the questionnaire, 31 features referred to emotion event appraisals, 18 to bodily experiences, 9 to facial expression, 12 to vocal expression, 5 to gestural expression, 40 to action tendencies, 22 to subjective feelings, and 4 to regulation. An additional 3 features represented other qualities, such as frequency of experience.[6]

The rating was performed by two groups of Ukrainian students: L1 Ukrainian (National University of "Kyiv-Mohyla Academy"; $N$ = 147; 89 females; mean age 22.3) and L1 Russian (Russian Philology; Taras Shevchenko National University of Kyiv; $N$ = 166; 102 females; mean age 23.7) using the procedure identical to the one used in Study 1.

**3. Results**

*3.1 Study 1*

The differences between how Ukrainian and Russian speakers evaluated the meaning of nine anger-related words in Russian were explored using Principal Component Analysis (PCA) with Varimax rotation, a technique used to identify the dimensions of greatest variance in a dataset and represent each observation by its coordinates along these dimensions. The 18 anger terms (9 per each group) were treated as observations, while the mean scores of the 95 emotion features as variables. A two-


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dimensional solution accounting for 55.4% of the total variance was selected on the basis of the scree plots and the interpretability of the emerging dimensions.

Dimension 1 (Fig. 1, vertical axis), which accounted for 38.7% of the total variance, juxtaposed the least aroused and potent anger subtypes, such as *dosada* "vexation" and *obida* "resentment", to the anger varieties implying a higher degree of arousal and virulence, such as *jarost*' "fury" and *gnev* "justified anger/wrath". On this arousal/power dimension, which was previously documented to structure anger experiences across various languages (Ogarkova et al. 2016; Ogarkova & Soriano 2022; Soriano et al. 2013), no significant differences between the two groups were observed (ANOVA, $p = .931$). By contrast, significant languages differences (ANOVA, $p = .023$) were found on Dimension 2 (Fig. 1, horizontal axis), which accounted for 17.2% of total variance. Specifically, as can be seen in Fig. 1, anger terms as rated by Ukrainians are visibly shifted towards the positive pole of this dimension.

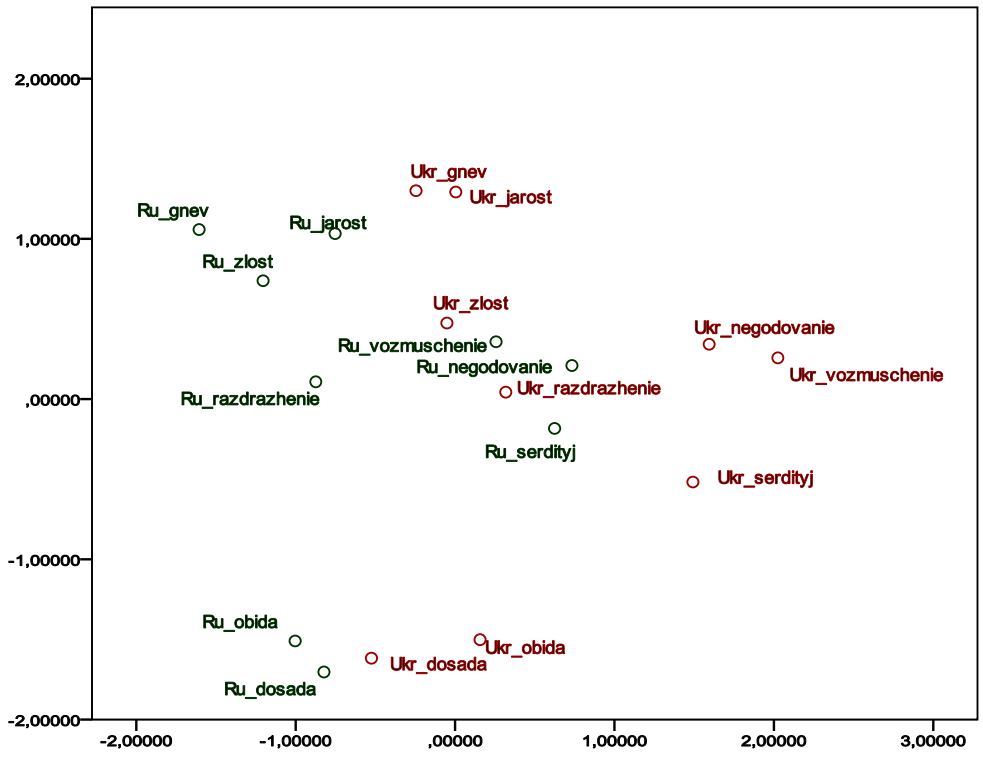


Figure 1. Two-dimensional solution (PCA) based on the feature-based profiles of anger terms in as rated by Ukrainian and Russian speakers. Source: Own processing

Subsequent analysis of the highest loading features (≥ 0.6, Hair et al. 2009; Table 1) on this dimension revealed that Ukrainians and Russians hold different views on many social aspects of anger. Specifically, compared to speakers of Russian, their Ukrainian counterparts saw anger varieties denoted by *vozmuscheniye, negodovaniye, jarost', gnev, zlost', dosada, obida*, and *razdrazheniye* as

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(1) more socially acceptable in terms of both showing them to others (# 89) and actual experiencing (#88, #94);
(2) egalitarian emotions experienced towards offenders of any social standing, including superiors (# 83, #84, #85);
(3) more frequently experienced in society (# 86);
(4) more explicitly manifested in society (#87);
(5) more likely social (i.e., shared and collective) feelings occurring in other people's presence (#92), co-felt with others (#91), and attributed to others (# 95).

Table 1. Rating features with highest loadings on Dimension 2. Source: Own processing

| # | Features | Score |
|---|---|---|
| 92 | Emotion happens when other people are present | ,908 |
| 85 | Emotion experienced towards a superior/someone with a higher social status | ,886 |
| 83 | Emotion experienced towards someone who is equal in social status | ,860 |
| 87 | Emotion frequently openly manifested in your society | ,848 |
| 91 | Emotion experienced together with other people | ,837 |
| 94 | Emotion attributed by people in your society to themselves | ,819 |
| 84 | Emotion experienced towards someone who is inferior in social status | ,808 |
| 89 | Emotion highly acceptable in your society as to showing it to others (regardless of whether or not it is sincerely felt) | ,800 |
| 86 | Emotion frequently experienced in your society (regardless of whether or not it is shown to others) | ,740 |
| 88 | Emotion highly acceptable in your society as to actually experiencing it (regardless of whether or not it is shown to others) | ,731 |
| 95 | Emotion attributed by people in your society to others | ,638 |

Interestingly, the terms that differed the most on Dimension 2 were the lexemes denoting "righteous" anger types such as *gnev* "righteous anger/wrath", *vozmuscheniye* "indignation", and *negodovaniye* "indignation" (Table 2).

Table 2. Differences in loadings on Dimension 2 between anger words as rated by Ukrainian and Russian speakers. Source: Own processing

| Words | *Dif* | Scores | |
|---|---|---|---|
| | | Ru | Ukr |
| *gnev* "justified anger" | 1.36 | -1.60 | -0.24 |
| *vozmuschenie* "indignation" | 1.29 | 0.73 | 2.02 |
| *negodovanie* "indignation" | 1.21 | 0.25 | 1.47 |


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| | | | |
|---|---|---|---|
| *razdrazhenie* "irritation" | 1.19 | -0.87 | 0.31 |
| *obida* "hurt/resentment" | 1.16 | -1.00 | 0.15 |
| *zlost* "anger" | 1.15 | -1.20 | -0.05 |
| *serdityj* "cross" | 0.86 | 0.62 | 1.49 |
| *jarost* "fury" | 0.76 | -0.75 | 0.01 |
| *dosada* "vexation/frustration" | 0.29 | -0.82 | -0.52 |

*Note:* Dif = difference in the scores on Dimension 2; Ukr = Ukrainian; Ru = Russian.

*3.2 Study 2*

Semantic similarity between Ukrainian and Russian anger terms as understood by L1 Ukrainian and L2 Russian students from Ukraine was first assessed using Pearson correlations, all of which were rather high: 0.89 for Ukr *zlist'*/ Ru *zlost'*, 0.85 for Ukr *rozdratuvannya* / Ru *razdrazheniye* "irritation", .84 Ukr *obraza* / Ru *obida*, 0.90 Ukr *nenavyst'*/ Ru *nenavist*', and 0.91 for Ukr *gniv* / Ru *gnev*. However, computing the correlations of the GRID emotion features across 10 anger words revealed that 27 features that correlated below 0.7, and thus were clearly deviant in meaning between the samples. These features pertained to all emotion components (except Feeling), but were unevenly spread across the GRID feature inventory. For instance, while Bodily reaction features were deviant in 16.6% of cases, 26.9% of the emotional Expression features correlated very low across the samples. The main regularity, however, was that all emotion regulation features correlated below 0.7, and the correlations were very small, ranging from 0.13 on "showed a weaker degree of emotion than he/she actually felt" (#140) to maximally 0.53 on "showed a stronger degree of emotion than he/she actually felt" (#139). These findings suggest a consistent, pattern-like deviation in emotion regulation as part of the meaning of Russian and Ukrainian emotion terms as rated by the two bilingual student groups.

To investigate the nature of variation on emotional regulation between the two sets of words, Principal Component Analysis with Varimax rotation was conducted on the four regulation features across the Russian and Ukrainian samples. The results clearly pointed at one bipolar factor: *controlling expression* ("tried to control the intensity of the emotion", "showed a weaker degree of emotion than he/she actually felt", and "hid the emotion by a smile") vs. *enhancing expression* ("showed a stronger degree of emotion than he/she actually felt"), with Russian labels for anger emotions scoring significantly higher on the control side ($p$ = 0.006). Regulation scores of Russian and Ukrainian translation pairs on this emotional control factor are shown in Table 3.

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Table 3. Regulation scores of Russian and Ukrainian emotion terms. Source: Own processing

| Words | Dif | Scores | |
|---|---|---|---|
| | | Ukr | Ru |
| *rozdratuvannya / razdrazheniye* "irritation" | -1.4 | -0.52 | 0.92 |
| *obraza / obida* "hurt/resentment" | -1.1 | -0.63 | 0.51 |
| *nenavyst'/ nenavist'* "hate" | -1.08 | 0.02 | 1.09 |
| *zlist'/ zlost'* "anger" | -0.80 | -1.72 | -0.92 |
| *gniv / gnev* "righteous anger" | -0.65 | -0.92 | -0.27 |

*Note:* Dif = difference in the scores on Dimension 2; Ukr = Ukrainian; Ru = Russian.

The largest divergence was observed between irritation (*rozdratuvannya / razdrazheniye*), resentment (*obraza / obida*) and hate (*nenavyst' / nenavist'*) terms, with smaller differences between cognates denoting anger (*zlist' / zlost'*) and justified anger/wrath (*gniv / gnev*).

## 4. Discussion and conclusion

This study explored emotion meaning construction in Ukrainian and Russian, two Eastern-Slavic languages spoken in Ukraine and Russia – a language contrast where, unlike in much previous research on emotion language on variation between distant languages and cultures (e.g., Goswami & Yadav 2024; Sharma 2018; Zhou et al. 2022), semantic variation in emotional meaning would be expected to be rather small or unsystematic. This assumption makes sense considering that Ukrainian and Russian belong to the same language subfamily (Eastern-Slavic languages) within a broader family of Slavic languages. As demonstrated by Jackson et al. (2019: 1517) on a representative sample of 2474 languages from 20 major language families, similarity of emotion terms could be predicted based on "geographic proximity of the languages they originate from". Yet another factor that would have contributed to similarities between Ukrainian and Russian anger concepts was that, in Study 2, we focused on cognate anger terms in the two languages – that is, emotion words from a common origin that have retained similar spellings, pronunciations, and meanings. Moreover, in Study 1, two student groups from Ukraine and Russia rated the same set of Russian anger words.

However, instead of overwhelming similarity, and supporting the hypothesis that emotions are culturally constructed, we observed systematic and robust differences between Ukrainians' and Russians' understanding of anger concepts. Compared to monolingual Russians, L2 Russian Ukrainians viewed anger varieties as significantly more socially acceptable, egalitarian, explicitly manifested, and frequent emotional experiences. These observations were further reinforced by the results of Study 2 showing that Ukrainian anger words scored significantly lower on repressive regulation of anger, implying that culture display rules permit such "anger-out" behavior. Taken together, the results of Studies 1-2 highlight that speakers of Ukrainian – in both their L1 Ukrainian

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and L2 Russian – consider angry emotions as less socially threatening and thus less likely subject to societal disapproval and regulatory control. That being said, L1 Russian Ukrainians' conceptualization of anger showed a stronger affinity to that of monolingual Russian speakers from Russia than to that of their L1 Ukrainian fellow citizens.

This variation in how Ukrainians and Russians understand anger concepts largely agrees with cross-cultural divergence on individualism/collectivism and power distance dimensions previously reported between the two cultural groups at stake. As would be expected in an alleged higher-individualism and lower-power-distance society, Ukrainian speakers see anger as a less socially tabooed emotion. Interestingly, owing to the present study's focus on a broader set of anger concepts – nine varieties in Study 1 and five in Study 2 – rather than on a generalized anger prototype, we obtained a rather granular insight into which specific anger experiences differ the most between the two groups. According to our results, it is not *any* kind of anger that markedly diverges in Ukrainian vs. Russian conceptualizations. Rather, remaining rather small in conceptualizing *dosada*, a petty anger defined as "a feeling of irritation, dissatisfaction that arises from a mishap" (Словарь русского языка 1990), the difference between the two conceptualizations gradually increases to become the most pronounced in beliefs about the collectively experienced righteous anger at a justified cause (e.g., a perception of injustice or moral lapse) referred to by *vozmuscheniye, negodovaniye,* and *gnev* – the feelings akin to those experienced by all Ukrainians towards the aggressor when Russia invaded Ukraine in February 2022 (e.g., Ash & Shapovalov 2024).[7]

Along with contributing to cross-cultural research, the present results offer useful insights into research on bilingual emotion concepts. Consistently with several previous studies (Alonso-Arbiol et al., 2013; Davitz 1969; Pavlenko 2008), in Study 1, we observed lexical acculturation and cultural diffusion processes whereby bilingual individuals applied the characteristics of their L1 concepts to their L2. Accordingly, an important implication of these findings is that a realistic account of emotion conceptualization is hardly possible without incorporating lectal variation into the linguistic study of emotions, be it through large-scale corpus analyses of how emotions are conceptualized in different regions speaking the same language (Soares da Silva 2020; 2021) or via accessing speakers' intuitions about emotional meanings (as in the approach used in this study). While this may contradict Anna Wierzbicka's (1995: 32) point that "to think that untrained native speakers can tell us what a word (e.g. [Italian] rabbia) means …. would be as naïve as to think that an untrained patient can make the best diagnosis of his or her own illness", on the cognitive view on lexical meaning endorsed by Cognitive Linguistics, the way we talk or reason about emotions reveals something about the way we mentally represent them. Accordingly, as aptly phrased by Geeraerts (2005: 163), "if Cognitive

Linguistics embraces a social conception of language, it should not restrict itself to an intuitive methodology…, but it should adopt the observational approach".

This being said, several limitations of our investigation should be acknowledged. First, both studies were exploratory and the observations, particularly those in Study 1, should be replicated using the ELIN-based semantic profiles of Ukrainian words that are yet to be collected.

Another limitation is that the data are from 2008–2010, the period well before the annexation of Crimea by Russia in 2014 and the full-scale invasion of Russia in Ukraine in February 2022. In the context of the ongoing de-Russification of Ukraine, on the one hand, and the growing autocracy in Russia, on the other hand, it would be reasonable to expect further dissociation of anger concepts in Ukrainian vs. Russian. Obviously, this also highlights the need for a longitudinal exploration of such evolution in emotion semantics.

Third, our research design does not allow to rule out the possibility that the systematic differences in the emotion regulation component in Study 2 are caused by factors other than cultural divergences between Ukraine and Russia. One potential explanation of the findings could build on the argument about the sub-cultural effect. Specifically, the two student groups that participated in the GRID survey can be said to represent two distinct student subcultures. L1 Ukrainian group were students of the National University "Kyiv-Mohyla academy", the first university in Ukraine to adopt, back in 1992, the Western system and style of education, including the system of earning credits, free choice of the disciplines to be studied, more individual student work, as well as more emphasis on individual initiative and critical thinking. By contrast, the L1 Russian group was recruited among the students of Russian philology at Kyiv National Taras Schevchenko University, a most reputed yet conservative university characterized by a more authoritative style of teaching that promoted emotional control, obedience, and recognition of academic hierarchy among the studentship. This suggests the need to extend the present research to non-student populations.

Finally, the conclusions drawn in this study are limited to the outcomes afforded by only one methodology. Yet, in the affective sciences, there is a broad understanding that any advance in the current understanding of emotion should entail a close collaboration between disciplines and the use of mutually informative methodologies. To date, several attempts have been made to compare the outcomes of psycholinguistic research using the GRID/ELIN approaches with those afforded by other psycholinguistic research designs (Ogarkova et al. 2016), corpus linguistics (Soriano & Ogarkova 2025), and metaphor research (Ogarkova et al. 2018). In the context of recent linguistic research on

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Ukrainian emotion concepts in corpus linguistics (Mizin & Ovsiienko 2020; Mizin et al. 2021a; 2021b), metaphor studies (Pinich & Morozova 2024), and phraseology (Zahnitko & Krasnobayeva-Chorna 2022), it would be meaningful to explore whether our findings can be substantiated using other methodological approaches.

**Notes**

1. Originally developed in international research on business culture (Hofstede 2001), the cultural dimensions of individualism vs. collectivism and power distance are widely used in cross-cultural psychology.
2. More information about the GRID project is available here: https://www.unige.ch/cisa/research/current-specific-research-projects/language-and-culture/grid-project/
3. For further detail on the ELIN project, please see https://snis.ch/projects/the-impact-of-emotion-language-on-international-negotiation-elin/
4. To increase readability of this paper to the audience unfamiliar with the Cyrillic script, Ukrainian and Russian words used in Studies 1-2 are transliterated by the present author throughout the paper. During the data collection, however, the words were presented to the participants in the corresponding source languages in Cyrillic.
5. The complete version of the ELIN questionnaire is available at: https://www.unige.ch/cisa/files/9614/9372/8273/Ch_22_-_Table_SM_1.pdf
6. The complete version of the GRID questionnaire is available at: https://www.unige.ch/cisa/files/7214/9371/2318/Grid_questionnaire_Aug_2013.pdf
7. References to righteous anger that Ukrainians have experienced from the early days of Russia's invasion into Ukraine made it to many English headlines in the media coverage of the war. To provide just a few examples: "Ukraine is traumatised, but it is filled with a deep, burning anger and its people won't surrender" (John Lyons, *ABC News*, 20 April 2023); "One year on, Ukrainians are full of anger and a sense of duty" (Nataliya Gumenyuk, *The Guardian*, 23 Feb 2023); "Anger and shock after Russian attacks pound Ukraine's Kharkiv" (Federica Marsi, *Al-Jazeera*, 1 March 2022).

**Abbreviations**

PCA – Principal Component Analysis

Ru – Russian

Ukr – Ukrainian


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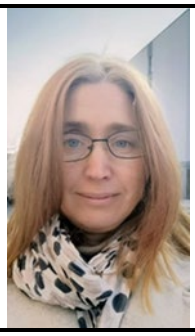

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