

Волинський національний університет імені Лесі Українки  
Lesya Ukrainka Volyn National University

**EAST EUROPEAN JOURNAL  
OF  
PSYCHOLINGUISTICS**

Volume 9  
Number 2  
*Special Issue*  
*Language and War*

Lutsk  
2022

*Approved by the Academic Council of Lesya Ukrainka Volyn National University,  
Record of proceedings No 16 dated December 27, 2022*

*Approved as an “A”-list journal by the Ministry of Education and Science of Ukraine*

**Guest Editor:** Joshua K. Hartshorne, Boston College, USA

## **Editorial Board**

### **Editor-in-Chief**

Serhii Zasiiekin, DSc in Philology, Professor

Lesya Ukrainka Volyn National University, Ukraine,

### **Associate Editor**

Larysa Zasiiekina, DSc in Psychology, Professor

Lesya Ukrainka Volyn National University, Ukraine

### **Editors**

Elitzur Bar-Asher Siegal, Ph.D. in Linguistics, Professor  
Jihad Hamdan, Ph.D. in Linguistics, Professor  
Oleksandr Kapranov, Ph.D. in Linguistics, Assist. Professor  
Shelia Kennison, Ph.D. in Psychology, Professor  
Azizuddin Khan, Ph.D. in Psychology, Professor  
Khrystyna Khvorost, Ph.D. in Psychology, Assist. Professor  
Lada Kolomiyets, DSc in Philology, Professor  
Victor Kuperman, Ph.D. in Linguistics, Assoc. Professor  
Hristo Kyuchukov, Ph.D. in Linguistics, Professor  
Amelia Manuti, Ph.D. in Psychology, Professor  
John Newman, Ph.D. in Linguistics, Professor  
Marcel Pikhart, Ph.D. in Linguistics, Assist. Professor  
Federico Soriano, Ph.D. in Linguistics, Assist. Professor  
Roman Taraban, Ph.D. in Psychology, Professor  
Bilyana Todorova, Ph.D. in Linguistics, Assist. Professor

The Hebrew University of Jerusalem, Israel  
The University of Jordan, Jordan  
NLA University College, Norway  
Oklahoma State University, USA  
Indian Institute of Technology Bombay, India  
Safehaus Children’s Intensive Crisis Residential, USA  
Taras Shevchenko National University of Kyiv, Ukraine  
McMaster University, Canada  
University of Silesia, Poland  
University of Bari, Italy  
University of Alberta, Canada  
University of Hradec Králové, Czech Republic  
Institute of Cognitive and Translational Neuroscience, Argentina  
Texas Tech University, USA  
South-West University “Neofit Rilski”, Bulgaria

## **Advisory Board**

Tetiana Andrienko, DSc in Philology, Professor  
Valery Belyanin, DSc in Psychology, Professor  
Martha Bojko, Ph.D. in Psychology, Professor  
Emrah Dolgunsöz, Ph.D. in Linguistics, Assist. Professor  
Samer Jarbou, Ph.D. in Linguistics, Assist. Professor  
Diana Kalishchuk, Ph.D. in Linguistics, Assist. Professor  
Larysa Kalmykova, DSc in Psychology, Professor  
Oleksandr Kholod, DSc in Philology, Professor  
Nina Kresova, Ph.D. in Linguistics, Assist. Professor  
Andrzej Łyda, Ph.D. in Linguistics, Professor  
Svitlana Martinek, Ph.D. in Linguistics, Assist. Professor  
Rieko Matsuoka, Ph.D. in Psychology, Professor  
Beatriz Peña Acuña, Ph.D. in Education, Assist. Professor  
Susheel Sharma, Ph.D. in English Literature, Professor  
Diana Terekhova, Ph.D. in Linguistics, Professor  
Runhan Zhang, Ph.D. in Linguistics, Assist. Professor

Kyiv International University, Ukraine  
Institute of Applied Psychology, Canada  
Yale School of Medicine, USA  
Bayburt University, Turkey  
University of Sharjah, UAE  
Lesya Ukrainka Volyn National University, Ukraine  
Hryhorii Skovoroda University in Pereiaslav, Ukraine  
Vasyl Stefanyk Precarpathian National University, Ukraine  
University of Tartu, Estonia  
University of Silesia, Poland  
Ivan Franko National University of Lviv, Ukraine  
Teikyo University, Japan  
University of Hueva, Spain  
University of Allahabad, India  
Kyiv National Linguistic University, Ukraine  
Central University of Finance and Economics, China

### **Editorial Assistant**

Tetiana Hordovska, MSc in Psychology

Lesya Ukrainka Volyn National University, Ukraine

*Рекомендовано до друку вченою радою Волинського національного університету імені Лесі Українки, протокол № 16 від 27 грудня 2022 року*

*Затверджено Міністерством освіти і науки України  
як наукове фахове видання категорії «А»*

**Запрошений редактор:** Джошуа К. Гартсгорн, Бостонський коледж, США

## **Редакційна колегія**

### **Головний редактор**

Сергій Засекін, д. філол. н., проф.

Волинський національний університет ім. Лесі Українки, Україна

### **Заст. головного редактора**

Лариса Засекіна, д. психол. н., проф.

Волинський національний університет ім. Лесі Українки, Україна

### **Редактори**

Еліщур Бар-Ешер Сігал, д. філос. з лінгвістики, проф.

Єврейський університет у Єрусалимі, Ізраїль

Джихад Хамдан, д. філос. з лінгвістики, проф.

Йорданський університет, Йорданія

Олександр Капранов, д. філос. з лінгвістики, доц.

Коледж Університету "Норвезька педагогічна академія", Норвегія

Шілія Кеннісон, д. філос. з психології, проф.

Університет штату Оклахома, США

Азізуддин Хан, д. філос. з психології, проф.

Індійський технологічний інститут Бомбей, Індія

Христина Хворост, к. психол. н., доц.

Заклад інтенсивної кризи дитини "Safehaus", США

Лада Коломієць, д. філол. н., проф.

Київський національний університет ім. Тараса Шевченка, Україна

Віктор Куперман, д. філос. з лінгвістики, доц.

Університет Макмастера, Канада

Хрісто Кючуков, д. філос. з лінгвістики, проф.

Сілезький університет у Катовіце, Польща

Амелія Мануті, д. філос. з психології, проф.

Університет м. Барі, Італія

Джон Ньюмен, д. філос. з лінгвістики, проф.

Альбертський університет, Канада

Марсел Пікгарт, д. філос. з лінгвістики, доц.

Університет Градец-Кралове, Чеська республіка

Федеріко Соріано, д. філос. з лінгвістики, доц.

Інститут когнітивної й трансляційної нейронауки, Аргентина

Роман Тарабань, д. філос. з психології, проф.

Техаський технологічний університет, США

Біляна Тодорова, д. філос. з лінгвістики, доц.

Південно-західний університет "Неофіт Рілскі", Болгарія

## **Редакційна рада**

Тетяна Андрієнко, д. філол. н., проф.

Київський міжнародний університет, Україна

Валерій Белянін, д. філол. н., проф.

Інститут прикладної психології, Канада

Емраг Долгунсоз, д. філос. з лінгвістики, доц.

Бейбуртський університет, Туреччина

Самер Джарбоу, д. філос. з лінгвістики, доц.

Університет Шарджі, ОАЕ

Діана Каліщук, к. філол. н., доц.

Волинський національний університет ім. Лесі Українки, Україна

Лариса Калмикова, д. психол. н., проф.

Університет Григорія Сковороди в Переяславі, Україна

Олександр Холод, д. філол. н., проф.

Прикарпатський національний університет ім. В. Стефаника, Україна

Ніна Кресова, д. філос. з лінгвістики, доц.

Тартуський університет, Естонія

Анджей Ліда, д. філос. з лінгвістики, проф.

Сілезький університет у Катовіце, Польща

Світлана Мартінек, к. філол. н., доц.

Львівський національний університет ім. Івана Франка, Україна

Рієко Мацуока, д. філос. з психології, проф.

Тейкійський університет, Японія

Беатріс Пенья Акунья, д. філос. з педагогіки, доц.

Уельвський університет, Іспанія

Сушил Шарма, д. філос. з англ. літератури, проф.

Аллахабадський університет, Індія

Діана Терехова, к. філол. н., проф.

Київський національний лінгвістичний університет, Україна

Рунган Жанг, д. філос. з лінгвістики, доц.

Центральний університет фінансів та економіки, КНР

## **Відповідальний секретар**

Тетяна Гордовська, магістр психології

Волинський національний університет ім. Лесі Українки, Україна

East European Journal of Psycholinguistics is an international double-blind peer-reviewed academic periodical published semiannually. The aim of the journal is to provide a forum for scholars to share, foster, and discuss globally various new topics and advances in different fields of modern psycholinguistics. The journal publishes original manuscripts covering but not limited to the following theoretical and applied fields of psycholinguistics:

- Bilingualism
- Clinical Psycholinguistics
- Cognitive Linguistics
- Cognitive Psychology
- Discourse Analysis
- Forensic Linguistics
- First and Second/Foreign Language Acquisition
- Neurolinguistics
- Pragmatics
- Psychology of Language and Speech
- Sociolinguistics
- Translation Studies

The Editors also take an interest in:

- Brief reports where authors present either preliminary data or ideas with theoretical background of the research; the preliminary research paper should be at least 6–8 page long;
- Book review articles;
- International conference calls
- Announcements

Contributions can be submitted in English (priority), Ukrainian.

**East European Journal of Psycholinguistics.** (2022). Lutsk: Lesya Ukrainka Volyn National University. Vol. 9, No 2. 172 p.

*This special issue is funded by  
The Supporting of Ukrainian Editorial Staff (SUES) collective, France*

**Founder and publisher:** Lesya Ukrainka Volyn National University

[www.vnu.edu.ua](http://www.vnu.edu.ua)

**Address:** 13 Voli Avenue, Lutsk, 43025, Ukraine

[psycholing@vnu.edu.ua](mailto:psycholing@vnu.edu.ua);

Web site of the Journal: <https://eejpl.vnu.edu.ua>



Creative Commons «Attribution» 4.0 WorldWide

Східноєвропейський журнал психолінгвістики – міжнародне рецензоване періодичне видання відкритого доступу, що публікується у друкованій та онлайн формах двічі на рік. Мета журналу – об'єднання зусиль учених світу в поширенні, просуванні та обговоренні розмаїття нових тем та ідей сучасної психолінгвістики. Журнал публікує оригінальні рукописи, присвячені таким теоретичним і прикладним галузям психолінгвістики:

- Двомовність
- Клінічна психолінгвістика
- Когнітивна лінгвістика
- Когнітивна психологія
- Дискурс-аналіз
- Криміналістична лінгвістика
- Оволодіння першою та другою / іноземною мовою
- Нейролінгвістика
- Психологія мови та мовлення
- Перекладознавство

Редакція також зацікавлена в публікації:

- Коротких наукових розвідок, де автори представляють або попередні дані, або локальні дослідження з теоретичними обґрунтуваннями; обсяг таких рукописів має становити щонайменше 6–8 сторінок основного тексту;
- Рецензії на книги;
- Інформаційні листи про наукові конференції;
- Оголошення

Рукописи приймаються англійською (пріоритет) та українською мовами.

Східноєвропейський журнал психолінгвістики. Луцьк: Волинський національний університет імені Лесі Українки. 2022. Т. 9, № 2. 172 с.

*Цей спеціальний випуск опубліковано за фінансової підтримки колективу “The Supporting of Ukrainian Editorial Staff (SUES)”, Франція*

**Засновник та видавець:** Волинський національний університет імені Лесі Українки

[www.vnu.edu.ua](http://www.vnu.edu.ua)

**Адреса:** просп. Волі, 13, м. Луцьк, 43025, Україна

[psycholing@vnu.edu.ua](mailto:psycholing@vnu.edu.ua);

Веб-сторінка журналу: <https://eejpl.vnu.edu.ua>



Creative Commons «Attribution» 4.0 WorldWide

## ETHICS STATEMENT

The author who submits an article to the Journal explicitly confirms that the paper presents a concise, accurate account of the research performed as well as an objective discussion of its significance. A paper should contain sufficient detail and references to public sources of information. Fabrication of data is an egregious departure from the expected norms of scholarly conduct, as is the selective reporting of data with the intent to mislead or deceive, as well as the theft of data or research results from others. Authors must obtain permission for use of any previously published materials from the original publisher. Plagiarism constitutes unethical scholarly behaviour and is unacceptable.

All co-authors share equal degree of responsibility for the paper they co-author. Submitting the same manuscript to more than one journal concurrently is unethical and unacceptable.

By acknowledging these facts the authors bear personal responsibility for the accuracy, credibility, and authenticity of research results described in their papers.

## ЕТИЧНІ ПОЛОЖЕННЯ

Автори, які подають статтю до цього журналу, засвідчують, що стаття представляє стислий, точний звіт про проведене дослідження, а також об'єктивне обговорення його значення. Праця містить достатньо деталей та покликань на публічні джерела інформації. Фальсифікація даних, їхнє неповне висвітлення із метою введення в оману читачів, а також крадіжка даних або результатів досліджень у інших – це грубе порушення очікуваних етичних норм поведінки науковця. До подання статті в журнал автори повинні одержати дозвіл на використання будь-яких раніше опублікованих матеріалів від оригінального видавця. Плагіат представляє неетичну наукову поведінку і є категорично неприйнятним.

Усі співавтори статті мають однаковий ступінь відповідальності за неї. Одночасне подання одного й того самого рукопису до кількох журналів є неетичним і неприйнятним.

Визнаючи викладені вище факти, автори несуть персональну відповідальність за точність, вірогідність та автентичність результатів досліджень, викладених й описаних у своїх статтях.

### **The Journal is indexed and listed in:**

### **Журнал індексовано та каталогізовано у:**

Directory of Open Access Journals DOAJ; Scopus; EBSCO; Linguistic Bibliography; Translation Studies Bibliography; European Reference Index for the Humanities and the Social Sciences ERIH PLUS; Ulrich's Global Serials Directory; OCLC WorldCat; Index Copernicus; Scribd; Zenodo; OpenAIRE; Journals' International Compliance Index; Information Matrix for the Analysis of Journals MIAR; Publons; Open Academic Journals Indexing; Electronic Journals Library; Academic Keys; ResearchBible; The Linguist List; Universitätsbibliothek Leipzig; Portal on Central Eastern and Balkan Europe; Russian State Digital Library; Deutsche Zentralbibliothek für Medizin ZB MED; Linguistik Portal für Sprachwissenschaft

## TABLE OF CONTENTS

### ЗМІСТ

#### EDITORIAL

**Hartshorne, Joshua K.**

Politics is not a Spectator Sport: On the Role of Psycholinguists in a Global Crisis ..... 8

#### ARTICLES

**Chrabaszcz, Anna; Anisimova, Vera; Antropova, Julia; Bikina, Daria; Menukhova, Anna; Mirabo, Sandra; Odnoshivkina, Victoria; Shcherbakova, Anna; Tikhomirova, Anna; Zmiievska, Tetiana**

Creating Communities of Practice for Fostering Second Language Learning in People in Crisis..... 11

**Isacoff, Nora M.**

The Psycholinguistics of Propaganda: Mechanisms of Subjugation and How to Challenge Them ..... 29

**Karpina, Olena; Chen, Justin**

Topic Modelling and Emotion Analysis of the Tweets of British and American Politicians on the Topic of War in Ukraine ..... 41

**Kovalchuk, Liudmyla; Litkovych, Yuliia**

Psycholinguistic Aspects of Representing Aggression in Wartime Media Discourse ..... 67

**Krylova-Grek, Yuliya**

Psycholinguistic Approach to the Analysis of Manipulative and Indirect Hate Speech in Media ..... 82

**Matsuoka, Misato; Matsuoka, Rieko**

Cultivation of Solidarity and Soft Power: Ukrainian President Zelensky's 2022 Speech to Japan ..... 98

**Skrypnyk, Antonina; Labenko, Olha**

The Influence of Stress on Children's Speech in the Context of War ..... 116

**Ushchyna, Valentyna**

From Conflict of Discourses to Military Conflict: Multimodality of Identity Construction in Russo-Ukrainian War Discourse ..... 130

**Yeter, Özlem; Rabagliati, Hugh; Özge, Duygu**

Threat of War on Cognitive Development of Refugee Children ..... 144

**Zasiekin, Serhii; Kuperman, Victor; Hlova, Iryna; Zasiekina, Larysa**

War Stories in Social Media: Personal Experience of Russia-Ukraine War ..... 160

**CALENDAR** ..... 171

# EDITORIAL

## Politics is Not a Spectator Sport: On the Role of Psycholinguists in a Global Crisis

Joshua K. Hartshorne \*, Guest Editor

*Boston College, USA*

As psycholinguists, much of our time is spent steeped in abstraction, considering the nature of the mind. Every once in a while, we might raise our heads from our desks, gaze around, and wonder at the world around us and whether anyone might improve its state. Then it is back to binding principles, implicatures, and phonotactics.

I believe in basic science, that knowledge is a *per se* good, and that more knowledge is more better. But I also believe that these goods will only accrue if there is a functioning society for them to accrue in – the prospect of which, as the threats of climate change, nuclear war, and genocide so frequently remind us, is by no means certain. Finally, I believe that my colleagues are possessed of a striking wealth of knowledge and ability that must, to be blunt, be good for something.

Or perhaps not. Perhaps, in the face of societal threats, our skills are entirely extraneous, and our time is best spent knocking doors, calling representatives (if we are so fortunate as to have representatives), feeding refugees, comforting the afflicted, trading in our cars for bicycles, or heading to the battlefield.

That is, I take it as a given that we should – all of us – be actively participating in constructing the world we wish to live in. Politics is not a mere spectator sport, in which we root and cheer and wear our favorite players' jerseys. Society is what its members make it, and sitting on the sidelines affects the outcome just as much as getting out on the field. The question, then, is whether we should be contributing *as psycholinguists*.

Hence this special issue. The goal was certainly not to win the war through psycholinguistics. We are still (mostly) basic scientists, and even research on application unfolds too slowly to be of immediate use for the present conflict. The question, then, is whether we have anything to contribute to mitigating the consequences of the war, speeding recovery, preparing for or preempting the next one, and generally contributing to building the world we wish to live in. That

---

\* Joshua Hartshorne,  <https://orcid.org/0000-0003-1240-3598>, E-mail: [joshua.hartshorne@bc.edu](mailto:joshua.hartshorne@bc.edu)

© Hartshorne, Joshua K., 2022. This is an Open Access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International Licence (<http://creativecommons.org/licenses/by/4.0>).  
*East European Journal of Psycholinguistics*, 9(2), 8–10. <https://doi.org/10.29038/eejpl.2022.9.2.har>



question is too broad to be answered definitively with a single special issue, particularly one compiled under less-than-ideal conditions. (Many of the authors are refugees. In some cases, final revisions had to be completed on only a couple hours of electricity per day.)

Call it a pilot project.

The contributors illustrate a number of ways psycholinguists might contribute. One set of contributions considers the role of language and communication in both fomenting and responding to conflict. **Isacoff** provides a theoretical overview of linguistic tools for promoting sectarian violence. **Krylova-Grek** provides a theoretically-motivated descriptive analysis of hate speech in Russian media. **Matsuoka & Matsuoka** provide a detailed, line-by-line exegesis of the rhetorical strategies employed by Volodymyr Zelensky in his speech to the Japanese parliament, with a particular focus on mechanisms of building empathy and solidarity. Taking this a step further, both **Ushchyna** and **Kovalchuk & Litkovych** document in real time the emergence of new words and other linguistic devices that are allowing Ukrainians to quickly convey to one another their shared experiences and values. (American audiences may find easy analogies to the emergence of societal buzzwords like “alternative facts” or “deplorables” or “red-pilled” – phrases that quickly expanded beyond their original usage to indirectly denote a cultural affiliation.)

Another set of contributions focuses on the linguistic *consequences* of conflict. **Yeter, Rabagliati, & Özge** draw on a broad literature to consider how the refugee experience interrupts children’s linguistic & cognitive development. **Labenko & Skrypnyk** complement this with a detailed linguistic analysis of sixty child refugees from the Russian invasion of Ukraine. **Chrabaszcz and colleagues** present a more strictly applied study, addressing an even more direct consequence of displacement: many refugees land in countries where they do not know the language. The authors report on two crowd-sourced projects to provide virtual language instruction to refugees.

A possible application for many of these lines of work is to monitor and track societal mood in real time. **Karpina & Chen** use computational methods to analyze Ukraine-related statements on Twitter by four prominent Western politicians during the early course of the war. **Zasiekin, Kuperman, Hlova, & Zasiekina** apply similar methods to analyzing mental state from Ukrainian war narratives posted on social media. The scope of both projects is limited by time pressure, power outages, and the like, but they join a larger literature in which researchers are increasingly using computational analysis of speech for applications ranging from monitoring hate speech to neuroclinical assessment (Lehr et al., 2012; Liu et al., 2022; Schmidt & Wiegand, 2017).

As of writing, the war in Ukraine continues. Psycholinguistics will not end it. I leave it to the readers of this issue to determine, after having considered the contributions herein, whether psycholinguists *qua* psycholinguists have a role to play in the broader societal context, and what, if any, your own role should be.

## References

- Lehr, M., Prud'hommeaux, E., Shafran, I., & Roark, B. (2012). Fully automated neuropsychological assessment for detecting mild cognitive impairment. Thirteenth Annual Conference of the International Speech Communication Association. Interspeech. <https://doi.org/10.21437/Interspeech.2012-306>
- Liu, D., Liu, Z., Yang, Q., Huang, Y., & Prud'hommeaux, E. (2022). Evaluating the Performance of Transformer-based Language Models for Neuroatypical Language. Proceedings of the 29th International Conference on Computational Linguistics (3412-3419).
- Schmidt, A., & Wiegand, M. (2017). A survey on hate speech detection using natural language processing. Proceedings of the fifth international workshop on natural language processing for social media. Valencia, Spain. Association for Computational Linguistics. (1-10). <http://dx.doi.org/10.18653/v1/W17-1101>

# ARTICLES

## Creating Communities of Practice for Fostering Second Language Learning in People in Crisis

Anna Chrabaszcz <sup>a,\*</sup>, Vera Anisimova <sup>b</sup>, Julia Antropova <sup>c</sup>,  
Daria Bikina <sup>d</sup>, Anna Menukhova <sup>c</sup>, Sandra Mirabo <sup>b</sup>,  
Victoria Odnoshivkina <sup>b</sup>, Anna Shcherbakova <sup>c</sup>,  
Anna Tikhomirova <sup>b</sup>, Tetiana Zmiievska <sup>b</sup>

<sup>a</sup> *University of Pittsburgh, USA,*

<sup>b</sup> *Independent Researcher, the Speak Up For Peace project, Évian-les-Bains, France,*

<sup>c</sup> *Independent Researcher, the COMMON project, Tbilisi, Georgia,*

<sup>d</sup> *Harvard University, USA*

*Received August 17, 2022; Revised December 2, 2022; Accepted December 9, 2022*

**Abstract.** This paper describes two volunteer-based nonprofit initiatives, *COMMON* and *Speak Up For Peace*, which originated as a response to the humanitarian crisis caused by the invasion of the Russian Federation of Ukraine. The initiatives function as communities of practice that provide free online foreign language instruction to people in crisis (predominantly Ukrainian refugees). We conducted an online survey in a subset of language instructors (N = 75) and participating people in crisis (N = 102) with the goals 1) to assess the effectiveness of provided language instruction, 2) to gain a better understanding of the participating learners' and teachers' experiences and attitudes towards their learning and teaching, respectively, 3) to identify the main challenges and issues that learners and teachers face while participating in the projects, and 4) to gauge the viability of these and similar volunteer-based language projects for people in crisis and refugees in the future. The survey revealed a significant improvement in proficiency and motivation of participating people in crisis to learn a new language. Additionally, participating in the projects was associated with overall positive emotional and psychological benefits, for both learners and teachers. Among the most common issues related to learning and teaching in the context of the projects were student absenteeism and attrition, work balance, and teacher training. Overall, the study revealed interesting insights about perceived attitudes toward learning and teaching in students and instructors, respectively. It may be of interest to educators, language instructors and policymakers working with refugee groups and people in crisis.

**Keywords:** *people in crisis, refugees, trauma, second language acquisition, online language instruction, foreign language tutoring, volunteer instruction, community of practice.*

---

\* Corresponding author. Anna Chrabaszcz,  <https://orcid.org/0000-0002-1766-7245>, E-mail: [anc211@pitt.edu](mailto:anc211@pitt.edu)

© Anna Chrabaszcz, Vera Anisimova, Julia Antropova, Daria Bikina, Anna Menukhova, Sandra Mirabo, Victoria Odnoshivkina, Anna Shcherbakova, Anna Tikhomirova, Tetiana Zmiievska, 2022. This is an Open Access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International Licence (<http://creativecommons.org/licenses/by/4.0>).

*East European Journal of Psycholinguistics*, 9(2), 11–28. <https://doi.org/10.29038/eejpl.2022.9.2.chr>

**Крабіс Анна, Анісімова Вера, Антропова Юлія, Бікіна Дар'я, Менухова Анна, Мірабо Сандра, Одношивкіна Вікторія, Щербакова Анна, Тихомирова Анна, Змієвська Тетяна. Створення діяльних спільнот для сприяння у вивченні іноземних мов людьми в кризових ситуаціях.**

**Анотація.** У цій статті описано дві волонтерські некомерційні ініціативи, *COMMON* та *Speak Up for Peace*, які виникли як відповідь на гуманітарну кризу, спричинену вторгненням Російської Федерації в Україну. Ініціативи функціонують як спільноти практиків, які проводять безкоштовне онлайн-навчання іноземним мовам для людей у кризових ситуаціях (переважно українських біженців). Ми провели онлайн опитування серед підгрупи викладачів мови (N = 75) та учасників (N = 102), які перебувають у кризових ситуаціях, з метою 1) оцінити ефективність навчання мови в контексті ініціатив, 2) зрозуміти досвід учнів та викладачів та їхнє ставлення до навчання та викладання, 3) визначити основні складності та проблеми, з якими стикаються учасники проєктів, 4) оцінити життєздатність цих та подібних волонтерських проєктів для людей у кризовій ситуації на майбутнє. Результати опитування показали значне покращення рівня володіння та мотивації учнів до вивчення нової мови. Участь у проєктах також має позитивний ефект на психологічний та емоційний стан викладачів, і учнів. Серед найпоширеніших проблем, виявлених під час опитування, були пропуски та вибуття студентів з навчального процесу, робочий баланс та підготовка вчителів. Загалом, дослідження виявило деякі цікаві відомості про ставлення студентів і викладачів до навчання та викладання відповідно. Дослідження може зацікавити педагогів, викладачів-мовників та політиків, які працюють з групами біженців та людьми в кризовій ситуації.

**Ключові слова:** люди в кризовій ситуації, біженці, травма, оволодіння другої мови, онлайн-навчання мови, репетиторство з іноземної мови, викладання волонтерами, діяльна спільнота.

## Introduction

This paper describes the organizational principles, operational choices, and interim outcomes (as assessed with a survey) of two nonprofit initiatives that originated as a response to the humanitarian crisis caused by the invasion of the Russian Federation of Ukraine on February 24, 2022. The initiatives are exclusively volunteer-run and pursue one objective—to provide free foreign-language instruction to people in crisis that should help them to acclimate and adjust to life in their resettlement country. From the conceptual perspective, the initiatives can be viewed as Communities of Practice (CoPs) (Haneda, 1997; Tavakoli, 2015; Wenger, 2000), as they are run by groups of people who share a common goal and concern, who are actively engaged in knowledge and skill exchange in the context of their practice, and who, by virtue of their participation in the group's activity, develop its culture and agenda.

The CoPs described in this paper serve three different categories of people in crisis: 1) Ukrainian people displaced from their homeland due to an immediate or potential threat to their personal safety (refugees), 2) Ukrainian people preparing to immigrate to a different country, e.g., to reunite with their families (refugees-to-be), and 3) people from Russia and Belarus who fled their home countries for political reasons (political migrants) within the first months of the onset of the invasion. The

first category constitutes the most numerous group, whose needs for foreign language instruction are the most urgent. After resettlement, refugees face an acute need to integrate with a new host society within a very short period of time. Being able to use the language of the resettlement country secures better employment opportunities, provides access to schooling and the country's infrastructure, and, in general, leads to a better quality of life because acculturation and the process of becoming a full-fledged member of society is realized to a large extent through language and communication (e.g., Doucerain et al., 2015; Schieffelin & Ochs, 1986). Conversely, lack of knowledge of the host country's language may take a toll on refugees' adaptation and acculturation to the host culture. Despite the importance of the knowledge of the host country's language, refugees face many barriers on their way to second-language learning, the most prominent of which are educational, institutional, financial, and social (Steele, 2017).

Psychological trauma is another key factor in second-language learning for refugee populations and, more broadly, for people in crisis. The trauma can be associated with migration stress, acculturation stress, or traumatic stress (Adkins, Sample, & Birman, 1999). Immigration is an inherently stressful life event, especially if it is sudden, unplanned, involuntary, or forced. Acculturation stress is brought about by the disruption of familiar role systems and social identities. Traumatic stress refers to experienced traumatic events and intrusive memories about them, including experiencing or witnessing violence and death, destruction of home, separation from and loss of family members, prolonged exposure to danger, poverty, hunger, etc. (Amnesty International, 2002). Psychological sequelae of such traumatic events can have damaging effects on mental health and cognitive functions, including memory, attention, executive skills, motivation, abstract reasoning, and ability to learn and concentrate (Dunn et al., 2021; Finn, 2010; Iversen et al., 2014; Kaplan et al., 2016a, 2016b; Kleinmann, 1982; Marshall et al., 2016; Satinsky et al., 2019, among many). Specifically, the ability to learn a new language is also significantly hindered due to traumatic stress (Saigh, Mroueh, & Bremner, 1997; Söndergaard & Theorell, 2004).

To summarize, people in crisis, who have a history of trauma or who are subjected to ongoing immigration-related stress, may experience hidden obstacles to learning a new language. A significant amount of work has already been devoted to describing language learning and the associated challenges in different refugee groups, e.g., Syrian refugees (Abou-Khalil et al., 2019; Alefsha & Al-Jamal, 2019; Ameen & Cinkara, 2018; Boylu & Gungor, 2020), refugees from various countries of Asia (Gordon, 2011; Kleinmann, 1982) and Africa (Morrice et al., 2021). However, the ongoing (as of the time of writing this paper, August 2022) armed conflict between Russia and Ukraine has brought about a new refugee crisis, leading to the displacement of about 7.1 million Ukrainians within the country and 6.3 million Ukrainians outside of Ukraine (UNHCR, n.d.). This calls for a timely evaluation of the existing initiatives directed to providing foreign-language services to Ukrainian refugees and people in crisis.

This paper describes two such initiatives and summarizes the experience of running them. In traditional refugee classrooms, second language instruction is provided in person to, usually, a mixed group of refugees from different countries, cultures, and backgrounds as part of a formal resettlement program. In contrast, these two projects function as informal CoPs, where language instruction is provided exclusively online by volunteer instructors in the form of one-on-one tutoring or in small groups. The first objective of the study is to gain a better understanding of the participating learners' and teachers' experiences and attitudes towards their learning and teaching, respectively, in the context of the projects (Sections **Summarizing Experience of Participating Language Learners** and **Summarizing Experience of Participating Volunteer Instructors**). The second goal is to assess whether the instructional format provided through the projects is an effective and efficient way of developing the skills needed by people in crisis (Section **Assessment of Project effectiveness**). The third goal is to identify the main challenges and issues that the CoP members (both the learners and the instructors) face during their participation in the projects (Section **Encountered Challenges**) and to provide some recommendations on how these can be prevented or tackled in the future. Finally, we aim to obtain some insights from the participating learners and instructors on the viability of the projects in the future (Section **Future Perspectives**). Our study is descriptive in nature in that it summarizes the results of the survey administered among a subset of learners and instructors. Based on the results, we outline some recommendations on creating sustainable teaching practices tailored to the needs of the participating Ukrainian refugees and people in crisis, as well as refugee populations in general.

## **Description of the Reviewed CoPs**

While many new volunteer initiatives came to life with the beginning of the Russian-Ukrainian armed conflict, this paper focuses on describing the work of two specific projects: *COMMON* (<https://cmoncmon.co/en/>) and *Speak Up For Peace* (<https://www.instagram.com/speak.up.for.peace/>). The initiatives are based on the principles of mutual respect and assistance, as well as political and national neutrality. Both initiatives started in March, 2022 as small communities of individuals, whose main goal was to connect volunteer teachers with the Ukrainian refugees in need of language instruction. Initially, group members shared information about the projects on their personal social media pages to reach out to potential teachers and learners. As the community of instructors and learners grew, project accounts were created on Instagram, Telegram, and Facebook as a means of promotion and a continuous search for participants. The initiatives have cumulatively received more than 1,000 teacher applications and about 3,700 learner applications from people in crisis (as of July, 2022). Out of these learners, approximately 85% have either completed a language course, are currently taking language lessons, or

have been transferred to other projects (e.g., for rarely-taught languages), while 15% are still awaiting instructor or group assignment.

Both teachers and students apply to participate by completing a role-specific questionnaire. Eligibility of potential students is determined based on their indication of whether they are in crisis or not, their detailed description of their situation, and their explanation of why they require foreign-language instruction. Once applications are processed, project coordinators either assemble learner groups and assign them to teachers (as in *COMMON*) or notify teachers through teacher Telegram chats about new students awaiting teacher assignment (as in *Speak Up For Peace*). In the latter case, the instructors contact students individually and can, therefore, decide how many students, and with what proficiency, they can take on. The instructors have complete freedom in deciding on the frequency and duration of lessons, as well as the choice of curriculum. As new instructors join the projects, they receive access to Telegram teacher chats—a vibrant and active teacher community, where teachers can share learning resources and instructional materials, discuss various teaching-related issues, and ask for help.

Besides students and teachers, another key role in the initiatives belongs to administrators and coordinators. Administrators oversee key operations of the projects, such as product-development, volunteer recruitment and coordination, conflict resolution and strategic vision. Project coordinators are responsible for sorting applications, helping teachers organize their work, collecting feedback from students and teachers, managing social media, communicating with mass media and similar projects, and attracting new teachers and students. Communication between teachers and students is not controlled by the administrators or coordinators, but in case of any problems both the teachers and the students are asked to notify the project's administration.

## Method

### Participants

Participating instructors were invited to complete a short online survey through the teachers' Telegram group chats or discussion forums, including about 490 members<sup>1</sup>. Because the experimenters did not have access to the participating learners' contact information, the instructors were asked to distribute the links to the learner survey among their students. Additionally, project administrators were asked to circulate the call for participation among the enrolled students. As a result, 102 learners (mean age = 34.05 years old, range = 13-65) and 75 volunteer foreign-

---

<sup>1</sup> This number does not reflect the overall number of language instructors participating in the projects. It only represents the number of instructors who joined the projects' teacher forums and shared their contact information with the group. Instructors' as well as students' contact information is otherwise not disclosed.

language instructors (mean age = 27.49 years old, range = 12-45) filled out the survey. Out of all the students, 57.3% were studying in the *COMMON* project, 39.8% in the *Speak Up for Peace* project, and 2.9% were in both projects. With regard to the instructors, 63.7% were volunteering in the *COMMON* project, 33.3% in the *Speak Up for Peace* project, and 4% were volunteering in both projects at the time of the survey.

Ninety-seven learner respondents identified as female and 6 identified as male. Most of the learners were bilingual speakers of Ukrainian and Russian (53.4%), 32% identified Ukrainian as their native language, and 12.6% considered Russian as their native language. A small percentage of people were bilingual speakers of Russian and a language other than Ukrainian (2%). Most students were residing in European countries, primarily in France (13.13%), Poland (13.13%), and Germany (12.12%). Many learners returned to, or had not yet left, Ukraine (26.26%). Most participating students had higher education degrees (77.7%), and some were still in school or college (16.5%) or had other post-secondary education. A large subset of learners were not employed at the time of the survey (35.9%), but some continued to work either full- (16.5%) or part-time (16.5%). The remaining minority of student respondents were self-employed, interns, current school or college students, or retired people.

Out of all instructor respondents, 66 people identified as female, eight identified as male, and one did not identify as either male or female. Most of the teachers identified Russian as their native language (86.5%), though some were native speakers of Belarusian (6.8%) or bilingual speakers of Ukrainian and Russian (4.1%). One teacher was a native English speaker. Most of the instructors were residing in the Russian Federation at time of the survey (70.83%), while others were residing in Belarus (5.5%), USA (4.2%), Georgia (2.7%), Germany (2.7%), or other countries (a total of 15.2%). The majority of instructors had higher education degrees (82.67%). Most instructors had majors in language sciences, such as linguistics, philology, foreign-languages instruction, or translation. Out of all teacher respondents, 37.3% were working full-time at the time of survey, 29.3% were self-employed, 10.7% were working part-time, 8% were unemployed, and 13.4% of teachers were school or college students.

## **Materials and Procedure**

Two web-based surveys for online administration were constructed in Google Forms: one for administration in the group of volunteer instructors and another one for administration in the group of language learners. Copies of the original forms in Russian, their Ukrainian and English translations can be accessed in Chrabaszcz (2022). Instructors and learners were informed that their participation in the surveys was anonymous and confidential and that the results of the surveys would be used by the authors to summarize teacher and learner experiences, and to evaluate the



effectiveness of the teaching and learning processes in the context of the volunteer projects. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013). Participation was completely voluntary; participants received no compensation for completing the survey.

Each survey included 40 questions of different types: open-ended questions, multiple choice questions, and Likert scales. Each questionnaire contained three subsections: demographic information, experience of participation in the project, and psychological and emotional factors in learning/teaching. Within these subsections, the questions aimed 1) to quantify the instructional process (e.g., most frequently-taught languages, duration and frequency of lessons, amount of classwork/homework, learning resources, etc.); 2) to assess learner and teacher attitudes towards their learning/teaching in the context of the projects (e.g., the primary goal of participation, importance of different language skills, attitudes to the online format of instruction, etc.); 3) to gauge the effectiveness of learning/instruction (e.g., change in perceived proficiency and motivation in the studied language, change in the emotional and psychological state, satisfaction with the instructional format, readiness to continue to participate in the project in the future); 4) to identify primary challenges that learners and instructors face in learning/teaching in the context of the projects; and, finally, 5) to gain some perspectives on the future of the projects.

## Results

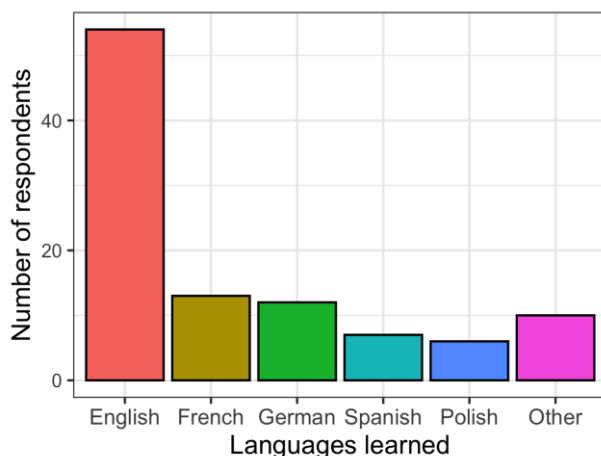
Survey responses yielded qualitative and quantitative data. Quantitative data were analyzed using the R program for statistical computing (R Core Team, 2021) and the following packages: lme4 (Bates, Mäeçhler, Bolker, & Walker, 2015), lmerTest (Kuznetsova, Brockhoff, & Christensen, 2017), ggplot2 (Wickham, 2016), and tidyverse (Wickham, 2019).

### Summarizing Experience of Participating Language Learners

Most of the student respondents said that their main motivation for joining the project is, expectedly, to learn a foreign language, although some respondents mentioned that participation in the projects provides a means for self-growth, a way “to live a normal life”, and do something productive with their time. Among the identified goals for learning a foreign language, the most popular ones were 1) communication purposes (72.8%); 2) employment (65%); and 3) daily needs (63.1%) (multiple choice was possible). While we identified 25 foreign languages that are currently being studied by the respondents, most common ones are English (53.4%), followed by French (12.6%), German (11.7%), Spanish (7%), and Polish (6%) (Fig. 1).

Figure 1

*Most Commonly Studied Languages in the Respondent Group of Language Learners*

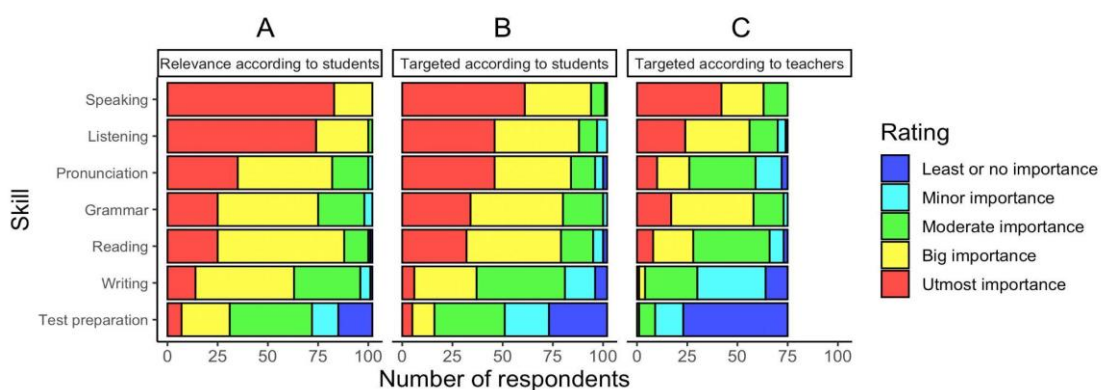


At the time of survey administration, most of the respondents had attended more than 10 lessons. An average lesson lasts between 60 and 90 minutes, and the results show that many students (61.2%) were satisfied with the frequency and length of lessons. Most of the respondents also indicated that they allocated a significant amount of time to self-studying, with the maximum amount of time amounting to 15 hours per week. However, 7.8% of the respondents admitted that they did not dedicate any extra time to language learning besides classwork and homework that they do as part of their participation in the project(s).

In response to the question about most relevant language skills in their current situation, most of the students rated speaking and listening skills as skills of greatest importance. Pronunciation, grammar, and reading skills were also rated as important, but writing and test preparation skills received lower importance ratings (Fig. 2A). This trend is reflected in the ratings of the skills in terms of how much their development is targeted by the instructor during the lesson. Thus, students perceive that the teacher attributes most importance to developing speaking, listening, and pronunciation skills. Slightly less importance is attributed to grammar and reading. Writing and test preparation are among the least targeted skills (Fig. 2B).

Figure 2

*Rating of Importance of Different Language Skills: A) Relevance of Skills, As Perceived by Learners, B) Focus on Developing a Particular Skill During the Lesson, As Perceived by Learners, C) Targeted Skills, As Rated by Instructors*



To gauge students' attitudes towards the instructors, we asked them what they value the most in their instructors. The majority of student respondents pointed out instructors' professionalism, flexibility, responsiveness, and friendliness, as well as the instructors' choice of methodology. Some students emphasized that they value education, sharing new interesting facts, empathy and understanding the needs of the group, and good knowledge of the language. Additionally, because the majority of the language instructors are from Russia, and Russia is currently invading Ukraine, we asked about student attitudes toward teachers of Russian nationality. Out of all respondents whose instructors are Russian citizens, 60% said that they have a neutral attitude towards their teacher's nationality, 25% think of this positively (i.e., they respect the instructors' willingness to help), and about 12% have negative feelings about this (i.e., they do not like the fact that their instructor is from the enemy state). This finding, however, may reflect a sample bias. The learner application form states explicitly that many teachers have Russian nationality, so somebody who does not feel comfortable with this fact, would not enroll in the project to begin with.

### **Summarizing Experience of Participating Volunteer Instructors**

For most of the language instructors (57 out of 75 teachers) the main motivation to join the volunteer project was to provide timely linguistic help and support for the Ukrainian people in crisis. Eighteen participants joined the project for political reasons, i.e., to gain agency in a situation over which they had no control or as a manifestation of their political and civic position. Among secondary motivations, 18 instructors consider their participation in the project as an emotional outlet (e.g., "to feel better", "to feel human", "not to go insane", "to feel useful or needed", etc.), four people wanted to find like-minded people, and six people volunteered for professional growth (e.g., to obtain teaching experience, get better at the language they are teaching, try something new, or broaden their horizons).

Out of all respondents, 88% of people had taught foreign languages before, however 11% of them had never taught online. At the time of survey administration, 13% of instructors had been volunteering since March, 33% of the participants joined in April, 33% in May, and 20% in June, suggesting continued interest and recruitment of volunteer language instructors. For 89% of the volunteers, it was their first time working with people in crisis.

Most volunteer instructors were teaching either two times per week (48%) or once per week (28%), although there was a small portion of instructors who were teaching more than 3 times per week. Most frequent were groups of three (28%) or two students (22.7%) as well as individual lessons (28%). More rarely, instructors were teaching in groups consisting of four (8%), five (8%), or six or more (5.3%) students. Online lessons usually lasted about 60 (79%) or 90 minutes (16%); two instructors were teaching 40-minute lessons, and the remaining two - for more than 90 minutes. The majority of the instructors (69%) spent approximately one hour preparing for the lessons, about 13% spent less than one hour on preparation, 9%

spent about two hours, and around 9% spent more than 3 hours getting ready for the lessons.

The lessons were primarily administered through Zoom (63%) or Google Meet (23%) platforms, but some teachers also used Skype, Telegram, Jitsi Meet, Discord, or VooV meeting rooms (from 5% to 1%). About 46% of teachers used available textbooks during almost each lesson, 32% of instructors used them very often, and 22% of instructors stated that they rarely or never referred to textbooks. The textbook-eschewing teachers were relatively young: on average they were 24 years old, while those who used textbooks were on average four years older. The younger instructors also seemed to be more eager to use online resources and create their own exercises and activities. More than 70% of teachers did not use or almost never used pre-made lessons available on the internet; only 5% of people used them often. At the same time, up to 33% of instructors almost always created their own materials and activities for the lessons. When asked what language skills they target during the lessons, most of the instructors replied that speaking skills received the utmost attention, followed by listening skills and grammar. Reading skills and pronunciation received moderate attention, while writing skills and test preparation received the least or no importance during lessons (Fig. 2C).

Instructors listed a wide range of activities as “most effective,” including vocabulary exercises using Quizlet.com, speaking practice and role plays in pairs, discussions of everyday topics, peer correction, viewing and discussion of authentic videos and TV series, oral translation from L1 to L2, fill-in-the-gap tasks, games, and quizzes, among many others. Although 81% of instructors assigned homework on a regular basis, only in about 39% of cases was it completed by all students. In 13% of cases half of the group got the assignments done, and in 21% of cases it was completed by even fewer students. The remaining 7% of instructors did not assign any homework, 12% assigned homework from time to time.

Finally, when asked whether their expectations about volunteering in a language project had been met, 77% of instructors replied positively. The remaining instructors did not know how to answer this question, mostly because they had not had any specific expectations to begin with. One person did not expect to enjoy teaching people in crisis as much as they did.

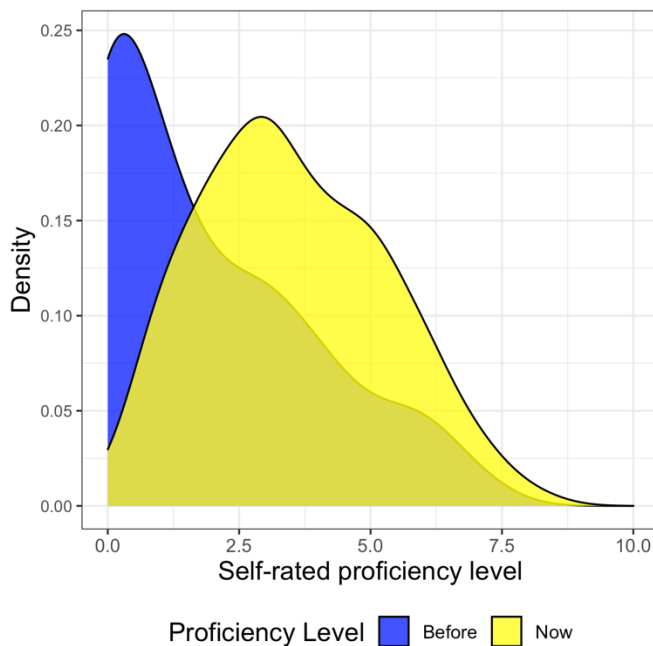
## **Assessment of Project Effectiveness**

When conducting the survey, it was important for us to assess the effectiveness of foreign language instruction provided in the format of free online tutoring. We asked student respondents to rate their language proficiency (on a scale from 0 to 10) at the time of joining the project and at the time of survey completion. The results exceeded our expectations. While most people started with almost no knowledge of a foreign language, their language proficiency had increased significantly at the time of survey administration (Fig. 3). A linear mixed-effects model estimating the change in proficiency between the two time points and holding unique participants as random intercepts revealed a statistically significant outcome,  $\beta = 1.61$ ,  $SE = .1$ ,  $t = 15.83$ ,

$p < .001$ . This is an excellent indicator, given that the projects were launched in March and, therefore, had been running for only about four months by the time of survey administration.

Figure 3

*The Change in Students' Language Proficiency Between the Time of Joining the Project (Before) and the Time of Survey Completion (Now). Proficiency is Self-rated on a Scale from 0 ("Zero Knowledge") to 10 ("Native Speaker Proficiency").*



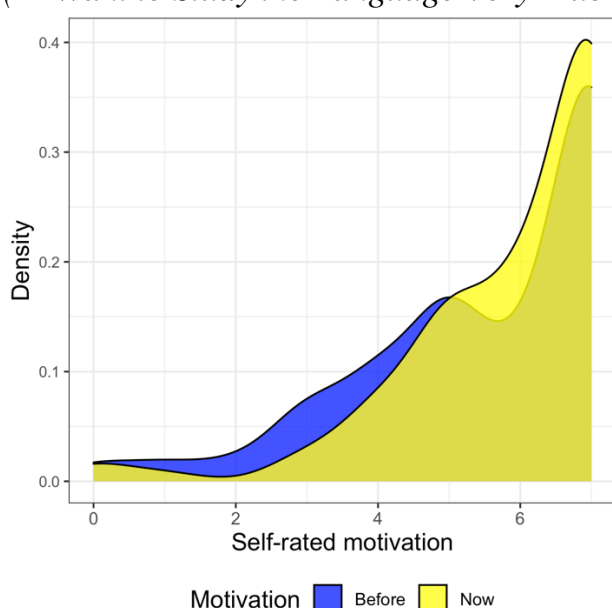
When student respondents were asked to choose the statement (out of five given options) that best describes their learning outcomes, about two-thirds of them (68%) said that their knowledge and skills in the target language had improved significantly and that they noticed the results of learning. However, about 15% of students indicated that they had improved their knowledge of the target language only slightly and that they believed that the methodology could be better. Some students (13%) said that they had not had enough time to evaluate the effectiveness of instruction on their learning. Another 4% indicated that their knowledge and skills in the target language had not yet improved and that they were not sure if it was worth continuing studying. Importantly, nobody chose the option that they were disappointed in the lessons and quit them for this reason.

Next, we compared how learners' motivation to learn a new language has changed during their participation in the project. A linear mixed effects model estimating the change in the self-rated motivation level (on a scale from 0 to 7) between the time when the participants joined the project and the time of survey completion revealed a significant change in the students' motivation in the course of their participation in the project (Figure 4):  $\beta = .38$ ,  $SE = .15$ ,  $t = 2.54$ ,  $p = .013$ . We also asked the participants how strongly and in which way their motivation to learn a new language had been affected by the changes in their emotional and psychological

state due to the armed conflict between Ukraine and Russia. About 55% of respondents answered that the changes in their mental state had increased, rather than decreased motivation. About 23% of the participants responded that the change in their mental state affected their motivation negatively, making it more difficult to stay focused and concentrate on their studies. About 13% of people said that they cannot answer the question, and the remaining respondents stated that they did not notice any significant changes in their motivation.

Figure 4

*The Change in Students' Motivation to Learn a New Foreign Language Between the Time of Joining the Project (Before) and the Time of Survey Completion (Now). Motivation is Self-rated on a Scale from 0 ("I Do Not Want to Study the Language, but I Have to") to 7 ("I Want to Study the Language Very Much and I Am Enjoying the Process")*



Regarding the psychological-emotional state of the participating learners, 83% of respondents acknowledged a positive effect of language lessons on their mental well-being. Another 10.5% of respondents observed no effect and about 6% of respondents found it difficult to answer. Only one student answered that taking language lessons had a negative effect on them, adding more stress. When asked to elaborate, many people wrote that participating in the project provides distraction from negative news, connects them with interesting like-minded people, serves as a support group, instills them with hope that they are capable of learning a new skill, and brings great pleasure and purpose.

Finally, because all language lessons offered through the projects are taught online, we wanted to know what the students thought about this format of language learning. When asked whether the online format of lessons presents any additional challenges for learning, 53.4% of the students replied that they prefer the online format to the offline one, and 38.8% of the respondents said that they do not anticipate any differences in the effectiveness between online and offline lessons.

## Encountered Challenges

There are several issues that the reviewed volunteer projects face on an ongoing basis. This is evidenced by the fact that out of all surveyed respondents only 28 students and 7 volunteer instructors did not have any immediate issues to report. The remaining respondents identified various problems of different natures, which we will summarize below.

The main problem is the attrition and the transience of students. More people in crisis express initial interest in learning a foreign language when they fill out the application compared to the actual number of people who ultimately attend the lessons. For example, out of all students who responded to the survey, 88.3% have continued taking language lessons through the volunteer projects while 11.7% have already stopped participating, either because they already finished the course, because they lack time, because they started work, or because they have moved to another place. Eleven volunteer instructors reported that they have persistent problems with attendance rate and that they have not been able to resolve this issue. Another two volunteers reported that their students were generally uncooperative: they did not answer emails or otherwise communicate with them.

Next, time-constraints and scheduling seem a common issue for both students and instructors. For volunteering instructors, it is often quite challenging to balance everyday life and often a full-time job with teaching and preparing for lessons. For participating students, the issue is even more aggravated, as many of them find themselves in a new country, jumping through hoops of bureaucracy, looking for jobs, housing, and, generally, adjusting to a new life. For example, 32.1% of surveyed students were concerned with their time availability. Nine students had to participate in lessons while commuting, usually late at night; another two students had to miss many lessons because they were not always available at the time when their group was meeting, etc. In some cases, it has been possible to figure out a solution to this problem, e.g., agreeing on a flexible schedule with the instructor, recording the lessons so that those who miss them can watch them later, transferring students to a different group, etc.

One more issue seems to have a psychological origin. Many volunteering instructors reported feeling uneasy about teaching people who may have experienced traumatic stress, often not knowing how to extract themselves emotionally and how to avoid unnecessary trigger topics and victimization. For example, many instructors avoid discussing many common language classroom topics like “my family”, “my home”, “vacations”, etc. Some of the instructors were also apprehensive that the stigmas and the perception of them as subjects of the enemy state would prevent them from establishing a rapport with their students.

Finally, technological challenges have also been noted by both students and instructors. These include issues with bad internet connection (26.2% of students mentioned this problem), functional limitations of some freely available video conference applications, and having to use VPN.

## Future Perspectives

To gain a better understanding of how well the volunteer projects serve linguistic needs of people in crisis, we asked if the students were likely to continue their language studies in the context of the current projects after military actions in their home country end and when most of them will presumably be able to return home. Not a single respondent replied “no”. Encouragingly, 84.5% of people said “yes” and 15.5% were unsure. The decision to continue language studies will depend on many different factors. Thus, many people said that their own achievements and successes in the new language will motivate them to continue with the studies. Other people are willing to continue learning the target language if they can overcome their personal obstacles (finding more time to study, achieving balance between work and life, setting clear goals, etc.).

We also asked the students how they felt about the gratuitous basis of language lessons and whether their commitment to learning would change if they had to pay for the lessons. About 27% of people said that they were not sure how to answer this question. Many students (60%) said that their willingness, motivation, and commitment to learning would not change if the lessons were not free. Only a small fraction of people (4%) said that having to pay for the lessons would make them treat the lessons more seriously. The remaining 9% of respondents noted that it would not be possible for them to pay for the lessons at the moment due to the unstable financial situation.

With regard to the instructors and their attitudes towards continuing volunteering in the future, many of them did not have a clear understanding of how long they would be participating in the project(s), mostly because the timeline and the outcomes of the Russian-Ukrainian armed conflict remain uncertain. For example, 89% of instructors had not even thought yet about the end date of their tutoring. They were continuing to volunteer as long as their help would be useful and needed. A smaller portion of instructors had stipulated the duration of provided language instruction in each group to last for six (3.9%), five (1.3%), three (3.9%), or two months (1.3%). When asked whether they would continue to teach the language in the context of the volunteer projects in the existing format even after all military actions end, 57.3% were undecided, 40% said “yes” and only 2.6% answered “no”.

## Discussion

The present study aimed to assess the effectiveness of two volunteer-based civic initiatives, *COMMON* and *Speak Up For Peace*, that provide online language tutoring to Ukrainian refugees and people who are in a crisis situation as a result of the Russian-Ukrainian armed conflict. We surveyed both the participating learners and the instructors regarding their experience with the projects and their perceived attitudes to their learning and teaching, respectively. Valuable feedback was obtained revealing the main challenges that learners and teachers face in the context of



participating in the projects. Important insights were also elicited regarding the future of such projects.

Analysis of the survey data revealed an overall positive result. Both the learners and the instructors had overwhelmingly positive attitudes to their participation in the projects. Thus, most instructors reported that their expectations about volunteering in the projects had been met. With regard to the students, they reported satisfaction with the duration, frequency of classes, pedagogical approach, as well as their instructors (despite the fact that many of them are citizens of the enemy state). The development of the students' language skills also seems to have been adequately achieved, as evidenced by the correspondences between the desired and the targeted skills, especially speaking and listening skills (Fig. 2). The effectiveness of language instruction is also indicated by a significant increase in students' motivation to study the language of the host country and improvement in their language proficiency (Fig. 3 and 4). About 68% of students also reported that they had noticed improvement in knowledge and skills in the target language.

Because the projects only offer online language instruction, we wanted to find out how satisfied the students were with this instructional format. We found that most of the student respondents either preferred online language instruction or did not think that the in-person instruction would make any difference. Thus, in situations when enrolling in language classes through resettlement agencies in host countries is not feasible (due to bureaucratic constraints, long wait time, price, scheduling problems, etc.), harnessing digital technologies for online language learning through volunteer-based communities seems like a viable option.

While the ultimate goal of language instruction provided through the two projects is for the students to achieve a desired competency level in the host country's language, additional benefits—mostly psychological and social—of participating in the projects have been reported by both students and teachers. For students, language lessons provide a useful and pleasant distraction from the negative aspects of their current situations. Some students also mentioned that their language classes act as support groups, positively affecting their psychological and emotional states. Learning a new language provides new opportunities for socializing and creates a sense of belonging to a community of learners. Because the learners in the projects had had many common experiences (e.g., being mostly from Ukraine and fleeing their home country), they shared a lot of cultural context and could establish rapport more quickly (as opposed to more heterogeneous refugee classes). For teachers, the psychological benefits came from being able to manifest their civic position through teaching and applying their skills to the common good. Some teachers said that being part of the community of like-minded people made them feel less hopeless and even gained back some belief in humanity.

While many positive things were reported by the participants, there are inherent challenges that both students and teachers had to deal with on a regular basis. The biggest one is student attendance and attrition. It takes a lot of motivation and self-organization to engage in learning when there are no financial or institutionalized obligations, as is the case with free instruction. This problem is exacerbated when

students are people in crisis, whose availability may fluctuate as their life situations change (e.g., starting a job, moving to a new place, etc.). Some students also reported fragility of emotional state due to experienced trauma, which can also influence motivation to attend lessons and commitment to learning. As a result, instability in attendance and drop-outs can impact the learning dynamic (especially in a group) in a negative way.

Additionally, while very few instructors set an end date for completion of the language course, about 90% of instructors had not discussed the length of language instruction with their students. Such practice may create an environment when students do not know for how long they are committing and may lead to losing a sense of the end goal. A better approach would be perhaps setting clear expectations in terms of attendance from the beginning of instruction and agreeing on a concrete end date by which certain language goals should be achieved. Provided that many teachers reported struggling with the balance between volunteering and their main (often full-time) jobs, such an approach could also help prevent teacher attrition and burnout. Thus, instead of teaching the same student(s) for an indefinite amount of time, teachers should perhaps teach in shorter cycles (e.g., 3-4 months), which would allow them to take breaks in between new students or groups.

Finally, while most of the volunteer instructors have prior language teaching experience, only 10% of them previously worked with people in crisis. This creates different kinds of insecurities in teachers who do not have that experience, both psychological and methodological, e.g., not knowing what content may trigger undesirable reactions or how to handle highly emotional topics during class. Therefore, community-based initiatives like the ones we describe in this paper should implement a professional development component and mechanisms for sharing best practices. These may include periodic workshops organized by peer teachers who have experience with teaching refugees, teacher observations by newly recruited instructors, mentoring partnerships within the CoPs, development of low-cost instructional materials on how to work with people in crisis, etc. We acknowledge that addressing the above issues is not an easy task under the best of circumstances. It is even more challenging when work falls on the shoulders of untrained volunteers.

## **Conclusions**

The results of our study have uncovered several important insights about volunteer-based foreign language instruction for people in crisis. However, we acknowledge that they may not necessarily be representative of the general refugee population due to 1) the small sample size and 2) the selection biases at the stage of enrollment in the projects. For example, people who do not support the idea of online language learning or who do not feel comfortable with online technologies may be less likely to enroll in the projects to begin with. Similarly, if they are opposed to the idea of working with instructors of the enemy state (most of the instructors hold or have held Russian citizenship), they are unlikely to join the projects. Given the

political circumstances, many people (both people in crisis and instructors) may feel uncomfortable, threatened, or scared to participate in the projects or fill out any surveys out of fear that their identity might be revealed.

Despite the above limitations, we believe that the results of this study have important implications for organizing foreign language aid for Ukrainian people in crisis, and other refugee groups as well. Describing our pitfalls and the common mistakes as well as successes can help educators to develop more effective methodologies and approaches to teaching foreign languages to refugee groups and provide policy makers with valuable insights for organizing and running volunteer-based initiatives in the future.

## References

- Abou-Khalil, V., Helou, S., Flanagan, B., Pinkwart, N., & Ogata, H. (2019). Language learning tool for refugees: Identifying the language learning needs of Syrian refugees through participatory design. *Languages*, 4(3), 71. <https://doi.org/10.3390/languages4030071>
- Adkins, M. A., Sample, B., & Birman, D. (1999). Mental health and the adult refugee: The role of the ESL teacher. ERIC Digest.
- Alefesha, H. M. N., & Al-Jamal, D. A. H. (2019). Syrian refugees' challenges and problems of learning and teaching English as a foreign language (EFL): Jordan as an example. *Journal of Ethnic and Cultural Studies*, 6(1), 117-129. <https://doi.org/10.29333/ejecs/235>
- Ameen, R. F., & Cinkara, E. (2018). The impact of language learning on internally displaced and refugee resilience. *European Journal of Educational Research*, 7(3), 529-538. <https://doi.org/10.12973/eu-jer.7.3.529>
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67(1), 1-48. <https://doi.org/10.18637/jss.v067.i01>
- Boylu, E., & Gungor, H. (2020). The level of use of the language learning strategies of Syrian refugee students learning Turkish as a foreign language. *International Online Journal of Educational Sciences*, 12(5), 59-78. <https://doi.org/10.15345/iojes.2020.05.006>
- Chrabaszcz, A. (2022). Creating communities of practice for fostering second language learning in people in crisis: Questionnaire Forms. Retrieved from <https://osf.io/bdv67>
- Doucerein, M. M., Varnaamkhaasti, R. S., Segalowitz, N., & Ryder, A. G. (2015). Second language social networks and communication-related acculturative stress: The role of interconnectedness. *Frontiers in Psychology*, 6, 1111. <https://doi.org/10.3389/fpsyg.2015.01111>
- Finn, H. B. (2010). Overcoming barriers: Adult refugee trauma survivors in a learning community. *TESOL Quarterly*, 44(3), 586-596. <https://doi.org/10.5054/tq.2010.232338>
- Gordon, D. (2011). Trauma and second language learning among Laotian refugees. *Journal of Southeast Asian American Education and Advancement*, 6(1), Article 13. <https://doi.org/10.7771/2153-8999.1029>
- Haneda, M. (1997). Second language learning in a "community of practice": A case study of adult Japanese learners. *Canadian Modern Language Review*, 54(1), 11-27. <https://doi.org/10.3138/cmlr.54.1.11>
- Kleinmann, H. H. (1982). External influences and their neutralization in second language acquisition: A look at adult Indochinese refugees. *TESOL Quarterly*, 16(2), 239-244.
- Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest package: Tests in linear mixed effects models. *Journal of Statistical Software*, 82(13), 1-26. <https://doi.org/10.18637/jss.v082.i13>

- Morrice, L., Tip, L. K., Collyer, M., & Brown, R. (2021). 'You can't have a good integration when you don't have a good communication': English-language learning among resettled refugees in England. *Journal of Refugee Studies*, 34(1), 681-699. <https://dx.doi.org/10.1093/jrs/fez023>
- Saigh, P. A., Mroueh, M., & Bremner, J. D. (1997). Scholastic impairments among traumatized adolescents. *Behaviour, Research, and Therapy*, 35(5), 429-436. [https://doi.org/10.1016/s0005-7967\(96\)00111-8](https://doi.org/10.1016/s0005-7967(96)00111-8)
- Schieffelin, B. B., & Ochs, E. (1986). Language socialization. *Annual Review of Anthropology*, 15, 163-191.
- Söndergaard, H. P., & Theorell, T. (2004). Language acquisition in relation to cumulative posttraumatic stress disorder symptom load over time in a sample of resettled refugees. *Psychotherapy and Psychosomatics*, 73(5), 320-323. <https://doi.org/10.1159/000078849>
- Steele, T. J. (2017). English language teaching to Syrian refugees in transit. *Online Journal of English Language Teaching (TOJELT)*, 2(1), 40-52.
- Tavakoli, P. (2015). Connecting research and practice in TESOL: A community of practice perspective. *RELC Journal*, 46(1), 37-52. <https://doi.org/10.1177/0033688215572005>
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225-246. <https://doi.org/10.1177/135050840072002>
- Wickham, H. (2016). *ggplot2: Elegant graphics for data analysis*. New York, NY: Springer.
- Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L. D. A., François, R., ... & Yutani, H. (2019). Welcome to the Tidyverse. *Journal of Open Source Software*, 4(43), 1686. <https://doi.org/10.21105/joss.01686>
- World Medical Association (2013). Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA*, 310(20), 2191-2194. <https://doi.org/10.1001/jama.2013.281053>

## Sources

- Amnesty International (May 27, 2002). Amnesty International Annual Report 2002. Retrieved August 11, 2022, from <https://www.amnesty.org/en/documents/pol10/0001/2002/en/>
- R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Retrieved from <https://www.R-project.org/>
- United Nations High Commissioner for Refugees (UNHCR). (n.d.). Ukraine situation Flash Update #24 (Publish date: August 5, 2022). Retrieved August 11, 2022, from <https://data.unhcr.org/en/documents/details/94640>

# The Psycholinguistics of Propaganda: Mechanisms of Subjugation and How to Challenge Them

Nora M. Isacoff \*

Columbia University, USA


Received September 6, 2022; Revised December 13, 2022; Accepted December 18, 2022

**Abstract.** This paper reviews current research on the oppressive and dehumanizing use of language by those in political power to promote essentialist thought about oppositional groups, including during the war in Ukraine. Essentialism is the implicit belief that categories of people—those of certain ethnicities or nationalities, for example—have intrinsic, immutable properties, driven by some deep, unobservable, and often deterministic causal essence. There is robust evidence that cross-culturally, both young children and adults sometimes employ an essentialist heuristic when reasoning about cultural traits, and that they see others' traits as being less mutable than their own. Strikingly, though, cultures vary drastically in the particulars and extent of this cultural essentialism. Thus, it seems clear that cultural input can to some degree either exploit or overwrite a tendency toward cultural essentialism, with language being an especially powerful mechanism. In this paper, I demonstrate ways that language is intentionally used by those with political power to promote essentialist thought and to justify violence. In particular, I highlight use of generic language, ascriptive definitions, and the language of opposites within propaganda. I end with consideration of ways to be responsive to instances of propaganda within our own communities and as global citizens, such as through pro-social repurposing of the linguistic tools that have been used destructively, promoting nuance through the use of differentiated language, and by capitalizing on an intuitive human belief in essential goodness and desire for truth.

**Keywords:** *ascriptive definitions, disinformation, essentialism, generics, propaganda.*

**Ісакофф Нора. Психолінгвістика пропаганди: механізми підпорядкування і як їм протистояти.**

У цій статті розглядаються сучасні дослідження гнобного та дегуманізуючого використання мови тими, хто має політичну владу, для просування есенціалістичного погляду щодо опозиційних груп, зокрема під час війни в Україні. Есенціалізм - це неоголошене переконання, що категорії людей, наприклад, певної етнічної чи національної приналежності, мають невід'ємні, незмінні властивості, зумовлені якоюсь глибокою, неспостережуваною та часто детермінованою причинно-наслідковою сутністю. Існують вагомі докази того, що в багатьох культурах і маленькі діти, і дорослі іноді використовують есенціалістську евристику, обґрунтовуючи своє розуміння культурних рис, і вважають риси інших менш мінливими, ніж їхні власні. Але різні культури значно різняться в деталях і масштабах цього культурного есенціалізму. Тому зрозуміло, що культурний внесок може певною мірою або використовувати, або послаблювати вплив культурного есенціалізму, при цьому мова є особливо потужним механізмом. У цій роботі я демонструю засоби, якими мова свідомо використовується для просування есенціалістського світогляду та виправдання насильства тими, хто має політичну

\* Nora M. Isacoff,  <https://orcid.org/0000-0001-5595-7975>, E-mail: [ni2237@columbia.edu](mailto:ni2237@columbia.edu)

© Isacoff, Nora M., 2022. This is an Open Access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International Licence (<http://creativecommons.org/licenses/by/4.0>).

East European Journal of Psycholinguistics, 9(2), 29–40. <https://doi.org/10.29038/eejpl.2022.9.2.isa>

владу. Зокрема, я підкреслюю застосування у пропаганді загальної мови, приписуваних визначень, та мови протилежностей. Я завершую обговоренням шляхів бути чутливим до випадків пропаганди і в межах наших власних спільнот, і громадян світу, наприклад, перепризначення використовуваних руйнівних мовних інструментів до просоціального вживання, застосування диференційованої мови з метою звернути увагу до відтінків, та використання інтуїтивного людського переконання в існуванні суттєвої доброти та бажання істини.

*Ключові слова:* аскрипційні визначення, дезінформація, есенціалізм, дженерики, пропаганда.

## Introduction

This paper reviews current research on the oppressive and dehumanizing use of language by those in political power to promote essentialist thought about oppositional groups, including during the war in Ukraine. Though theories of essentialism differ in their particulars, essentialism is an implicit belief that categories have intrinsic, immutable properties, driven by some deep, unobservable, and often deterministic causal essence that gives rise to observable features (Gelman, 2003). An essentialist view of rabbits, for example, would include the beliefs that there is something inside a rabbit that makes it a rabbit, and that it will always be a rabbit. Without expertise in rabbit genetics, it is not possible to explicate the causal mechanism underlying rabbitness, but this does not eliminate having a belief in an essential cause underlying the observable properties of rabbitness. Though some properties of a rabbit are mutable—it can get older or move to a new location—its essential rabbitness persists. People reason essentially about natural kinds (e.g., the rabbit species), but also about a wide range of other kinds including those that are folksociological in nature such as races, ethnicities, or nationalities (Hirschfeld, 1998).

There is robust evidence that cross-culturally, both young children and adults are inclined to employ an essentialist heuristic when reasoning about cultural traits. For example, five-year-old American children predict that an adopted child will speak the language of their birth parents (Hirshfeld & Gelman, 1997), and Mongolian adults from the semi-nomadic Torguud tribe reason that a child adopted as a baby by a member of a racially similar but culturally distinct tribe would culturally resemble the birth family (Gil-White, 2001). Similar examples abound from every age group and from distinct cultures around the globe. Additionally, essentialist beliefs about outgroups seem to emerge earlier than those about ingroups (Pauker, Ambady, & Apfelbaum, 2010) and throughout the lifetime, people generally see others' traits as being less mutable than their own (Rosenberg, 1981).

Strikingly, though, cultures vary drastically in the particulars and extent of this cultural essentialism, with more pervasive essentialist beliefs found in people from higher social classes (Mahalingam, 2007) as well as those with more conservative (Rhodes & Gelman, 2009) or religious (Diesendruck & Haber, 2009) beliefs. Thus, it seems clear that cultural input can to some degree either exploit or overwrite a tendency toward cultural essentialism, with language being an especially powerful mechanism.

## Method

This paper argues that language is often intentionally used by those with political power to promote essentialist thought and to justify violence. In particular, I highlight use of generic language, ascriptive definitions, and the language of opposites within propaganda. I end with consideration of ways to be responsive to instances of propaganda within our own communities and as global citizens, such as through pro-social repurposing of the linguistic tools that have been used destructively, promoting nuance through the use of differentiated language, and by capitalizing on an intuitive human belief in essential goodness and desire for truth.

## Results and Discussion

### Linguistic Features of Generics

One way that essentialism is often induced within propaganda is through the use of generic noun phrases, those that refer to kinds rather than individuals but are not quantified (e.g., they do not include *some*, *most*, or *all*). A generic noun phrase can take the form of a bare plural noun phrase (e.g., *dogs* are adorable). It can also take the form of an indefinite noun phrase with generic scope (e.g., *a dog* is a big responsibility) or of a definite singular noun phrase with generic scope (e.g., *the dog* is a wonderful animal). Despite the syntactic differences in these examples, each makes a claim about a kind. In contrast, non-generic noun phrases can include demonstrative determiners (e.g., *this dog* is chasing its tail), indefinite noun phrases with specific scope (e.g., *a dog* is licking my face), definite singular noun phrases with specific scope (e.g., *the dog* is napping on the blanket), or definite plural noun phrases (e.g., *the dogs* are in their beds.) Here, despite their syntactic differences, each of these claims makes an example about an individual or individuals.

In English, speakers can use joint morphosyntactic clues such as determiners, number, tense, and aspect, to evaluate genericity (Gelman & Tardif, 1998). For example, plural definite noun phrases (e.g., *the dogs* are sweet); past tense (e.g., the dog *was* friendly); and present progressive aspect (e.g., a dog *is barking*) all indicate non-genericity. Noun phrases that are not both plural and definite, present tense, and present simple aspect (e.g., *dogs bark*; *a dog barks*) either imply or permit genericity. In many cases morphosyntactic cues do not suffice for specifying the semantics (e.g., *the dog is intelligent* can have generic or specific scope). Here, English speakers can use pragmatic cues to infer the semantics probabilistically. In morphosyntactically poorer languages such as Mandarin, speakers rely more heavily on pragmatics (Gelman & Tardif, 1998). Additionally, speakers can use prior beliefs about the relationship between a category and its properties (i.e., the prevalence of property given a category and the cue validity of a category given a property) to evaluate the truth value of generic claims (Tessler & Goodman, 2019).

Experimental data demonstrate that when making inferences about a novel category, hearing generic statements (e.g., Zarpies eat flowers) but not non-generic

statements (e.g., this Zarpie eats flowers), tends to lead to essentialist beliefs (Rhodes, Leslie & Tworek, 2012). More specifically, generic statements seem to cause both adults and preschoolers to reason that the properties of a category are innate and inevitable, and further, that they are caused by membership in the category. That is, Zarpies are born flower-eaters, there is nothing that can make them not be flower-eaters, and it is their Zarpiness that makes them be flower-eaters. Additionally, in both preschoolers and adults, hearing generic statements about a property of one category causes the inference that that property does *not* hold for a different category (Moty & Rhodes, 2021). For example, “Zarpies eats flowers” implies “Gorps do not eat flowers,” or, as a real-life example, “boys play sports,” implies “girls do not play sports”.

### Generics in Propaganda

Outside the lab, generics are frequently employed within propaganda. Some examples include the Nazi proclamation that “The Jew is fundamentally and basically criminal” (Keller & Anderson, 1937/2002, p. 7); former President Trump’s assertion that “A well-educated black has a tremendous advantage over a well-educated white in terms of the job market” (Utley, 1989), and most recently, President Putin’s claims that “the Banderite” elite must be liquidated. Its reeducation is impossible.” Each of these examples exploits innateness, inevitability, and causality. In the final example, Banderite (“*бандеровец*” in Russian; “*бандерівець*” in Ukrainian) is a term that has been used in Soviet and Russian propaganda since the 1940s to align all Ukrainians, and especially those who support Ukrainian sovereignty, with the Organization of Ukrainian Nationalists-Bandera, a faction of the rightwing organization responsible for the murder of Polish, Jewish, and Romani people during the Holocaust, according to Wylegela & Glowacka-Grajper (2020). The implication of President Putin’s claim is that Ukrainians are fundamentally, immutably murderous.

Generic claims are also used to deny the existence of social justice issues (Saul, 2017). For example, according to a test-retest study conducted before and during former President Obama’s time in office, one quarter of Americans believed the election indicated that Black people no longer faced the same level of discrimination (Valentino & Brader, 2011). The study asked people to rate on a 4-point scale their answers to questions that included generics such as, “In the past, we have heard a lot about discrimination against Black people in this country. How much discrimination against Blacks do you think there is in this country?” or to indicate their agreement with sentences such as, “Over the past few years, Blacks have gotten less than they deserved” (Valentino & Brader, 2011). As Saul (2017) has argued, “It is very common for people to reassure themselves that they are not racist against black people by noting that racists dislike black people, and then remarking that they have a black friend. . . It is too easy rhetorically to deny a true generalisation made with a generic by citing a single counter-instance.” (p. 13)

Although quantified expressions (e.g., all women, most dogs) also reference a group rather than an individual, generic expressions are unique in ways that make their logical deficiencies less salient and therefore, make them ideal vessels for propaganda. Use of the quantifier *all* opens the speaker up to consideration of counterexamples that



are easily brought to mind. A claim that all Mexican immigrants are rapists or that all Ukrainians are scum and traitors would impinge on the listener's ability to explain away their own personal exceptions, such as a trusted neighbor within this category, and would therefore be less compelling. Use of the quantifier *most* prompts the listener to evaluate the facts, asking if this is really true of most members of this category. It is also weaker, precipitating explicit compassion for the minority members of the category. Use of the quantifier *some* implies *not all*. Because generic statements obfuscate these issues, they feature so prominently in propaganda.

### Generics Imply Disposition

Generic statements capture a speaker's implication that a category has the *disposition* to have a particular property. In metaphysics, disposition is "a persisting state or condition that makes possible the manifestation" (Mumford, 1998). Crucially, generic statements do not imply that a category is a good *predictor* of having a property, just that it is in a persistent state of possibly manifesting a property (Leslie, 2017). As Tessler and Goodman (2019) noted, the generic statement "The Speaker of the House succeeds the Vice President" is true pursuant to the United States Constitution not because it generally happens—in fact, it has never happened—but because it is disposed to happen. It is fundamental to the role of being Speaker of the House to be in a persistent state of second in line.

Generics are especially apt to imply dispositions in cases where danger is perceived. As Leslie (2017) noted, only a small percentage of ticks carry Lyme disease, and only a small percentage of sharks attack bathers. Being a tick is a poor predictor of carrying Lyme disease, and being a shark is a poor predictor of attacking bathers. However, people reason that ticks and sharks are disposed to have these properties, that they contain a persistent quality of the potential to behave dangerously. Thus, people generally agree that "ticks carry Lyme disease" and "sharks attack bathers" are true statements. In contrast, as Leslie notes, although a comparably small percentage of gas canisters in office chairs have exploded, people generally reason that the statement "office chairs explode" is false. This is because, even though exploding office chairs are dangerous, people do not believe that exploding is within office chairs' disposition. In this way, dispositions are more informative about a person's beliefs about a category than about that category itself.

Similarly, problematic generic statements about racial or ethnic groups are only meaningful insofar as they reflect the speaker's dispositional beliefs, and they are most likely to do so when fear is involved. Anti-Muslim propaganda in the United States, for example, isn't an argument that Muslims are more likely to be terrorists than non-Muslims, but rather, that Muslims are disposed to be terrorists. The nature of this argument makes it impossible to argue against because there is no statistic that can undermine an ineffable causal placeholder.

Dispositional statements are especially powerful because they make use of essentialist placeholders, a psychological phenomenon in which a mental representation of a category consists of an assumption that category members are causally related to the category although the details of this causal relationship are null within the mental

representation. I don't know what rabbit DNA looks like, but I assume that it exists and that it causes rabbits to be members of the rabbit category. My mental representation of rabbit DNA is null other than its causal power. As Tessler & Goodman noted, "Categories are inherently unobservable. You cannot see the category *dog*, only some number of instances of it. Yet, we easily talk about these abstractions, conveying hard-won generalizations to each other and down through generations" (Tessler & Goodman, 2019, p. 31). Essentialist thinking, which is often incited through use of generic language, is especially powerful because it references an invisible monster. That is, there is no causal explanation about why any of these groups carry their abhorrent qualities. The causal mechanism makes use of two placeholders, one for an unknown source that results in the essence, and another for the essence that results in negative qualities. In this model, there is no explication of the underlying cause of the essence or of the essence itself. There is merely a proclamation that this essence exists and exerts uncontainable power (Rose & Nichols, 2019).

As philosopher of dehumanization David Livingstone Smith has argued, dehumanization can easily arise from the fact that "folk-theories are imaginative constructions that seek to explain the observed by citing the unobservable." Consider this quote from a Nazi propaganda book: "Just as the spirochetes which are the bearers of syphilis, so the Jews are the carriers of criminality in its political and non-political form" (Keller & Anderson, 1937/2002, p. 7). There is no explication about why Jews are the carriers of criminality; this is an insidious, invisible essence.

As another example, referring to black people as *thugs* as has been common parlance in the United States (Smiley & Fakunle, 2016), is shorthand for saying that black people have the disposition to be thugs. Calling Black Lives Matter (BLM) protesters "thugs," "terrorists," and "anarchists," as Trump has frequently done (Beer, 2021), is shorthand for saying that BLM protesters have the disposition to be thugs, terrorists, and anarchists. These are dispositional arguments in that they equate Blackness (or Black allyship) with a disposition toward violent criminality.

Those who use this language to describe Blackness generally do not also use it to describe individuals or movements that are not specifically Black, even those that are equally or more likely to engage in violence. For example, although 98% of mass shooters in the United States are men (Peterson, 2021), men as a group are not routinely referred to as thugs. It is Blackness, not maleness, that is seen as causing a disposition toward thuggishness. Again, because the claim is about disposition, a response about prediction will not suffice. That is, revealing that in fact there is not a significant relationship between race and likelihood of committing a mass shooting (McArdle, 2021), is not particularly relevant to an argument about disposition.

## **Ascriptive Definitions**

In lexical semantics, ascriptive definitions are rigid, dichotomous criteria for meriting a demographic label (Casarez, 2020). In the United States, those holding an ascriptive definition of Americanness might believe that having American ancestry and having been born in the United States are necessary for being authentically American (Simonsen, 2016). Some Americans might also include Whiteness within their ascriptive

definition (Devos & Mohamed, 2014). Those in a privileged position, such as non-immigrant, non-Hispanic White individuals, are most likely to adopt ascriptive definitions of Americanness (Berg, 2015). Not surprisingly, use of ascriptive definitions is strongly associated with hostile beliefs about immigrants, for example, that immigrants are likely to be criminals and to steal American jobs (Casarez, 2020).

Contrastingly, Putin has espoused an ascriptive definition of Russianness by abjectly denying Ukrainian statehood and identity. For example, in a speech in February, 2022, Putin claimed that “Ukraine has never had its own authentic statehood,” (Dixon, 2022) and that Ukraine merely constitutes part of Russia’s “own history, culture, spiritual space” (Perrigo, 2022). In this way, rather than delimiting Russianness, he has used erasure of Ukrainianness to justify the war.

A particularly interesting example lies at the intersection of ascriptive definitions and generic language. In an anthropological study of adults who live in a Ukrainian village and are ethnically Ukrainian, Slovakian, or Hungarian, participants were asked a series of questions about identity (Kanovsky, 2007). In response to the question, “Could somebody be both a Ukrainian and Slovak citizen at the same time,” 90% answered ‘yes’. That is, citizenship is not thought of ascriptively. In contrast, in response to the question, “Could somebody be both Ukrainian and Slavic at the same time,” 82% answered ‘no’. Here, ethnic identity is thought of ascriptively.

Kanovsky argues, “It is clear that people distinguish sharply between pragmatic, political and self-descriptive identities and deeper, inherent ones. Only the latter are essentialist, while the former are not” (pp. 279). Though there are many possible reasons for the essentialist/non-essentialist contrast here, it is noteworthy that only the ethnicity question includes a generic noun phrases. It is possible that this syntactic contrast accounts for some of the difference in results. It would be interesting to ask participants two questions that do not differ in their syntactic structure, such as, “Could somebody have both Ukrainian and Slavic citizenship at the same time?” and “Could somebody have both Ukrainian and Slavic ethnicity at the same time?”

## **The Language of Opposites**

Finally, those in power often use the language of opposites to manufacture confusion and promote essentialist paradoxes. For example, according to Nazi rhetoric, “Jews were either portrayed as seedy, degenerate, ugly, masses associated with vermin, or they were portrayed as greedy, fat, and unpleasant elements who sided with the enemy” (Narayanaswami, 2011). In the United States, immigrants may be seen as lazy, unskilled parasites expecting benefits in return for nothing or as fierce competitors in the job market.

In Putin’s language, Ukrainians are at times “hard working and talented” capable of “success and outstanding results,” and displaying “perseverance, determination. . . openness, innate optimism, and hospitality” (Putin, 2021). At other times, Ukrainians are “insects to be spit on the curb,” and the war is an initiative aimed at “a natural and necessary self-detoxification of society.” In each case, contradictory language serves to

conjure notions of a bewildering enemy, both dangerous and subhuman, to be deterred by any means necessary.

One reason the language of opposites is such an effective disinformation tool is that people may make sense of mixed messaging by reasoning that it is indicative of nuance and consideration (Rucker, Petty, & Briño, 2008). That is, a clear, consistent message can be seen as biased, whereas internal inconsistency can be seen as trustworthy. More broadly, listeners generally give speakers the benefit of the doubt in interpreting their arguments and seek reasonable explanation for the language opposites. In identifying a good reason for contradictory claims, a listener may be more likely to see these claims as credible (Reich & Tormala, 2013).

## Repurposing Linguistic Tools

This paper has explicated ways that language is used to create or reinforce subjugation. To be clear, language misuse is not necessarily an argument for elimination of any linguistic structures. Instead, language can be repurposed pro-socially. For example, as Rhodes et al. (2012) have argued, generic language seems to transmit essentialist thought among people, but it doesn't create essentialist thought.

Essentialist beliefs. . . go far beyond any content that is explicitly communicated by generic language, and essentialism can emerge in the absence of generic language. . . Rather, social essentialism appears to result from the interplay of cognitive biases and cultural input; children's cognitive biases lead them to assume that some or other social categories reflect essential kinds, and generic language signals to them to which categories they should apply these beliefs (Rhodes, Leslie, & Tworek, 2012, p. 13529).

Along similar lines, Saul (2017) argues that generic assertions that *women* are expected to behave a certain way by society, that *Muslims* face discrimination, or that *White Americans* have privilege can bring awareness to issues of social justice. In this way, although it is important to consider how the language of generics might be used to transmit or reinforce negative stereotypes, generics can be repurposed to override negative stereotypes.

The language of opposites can be repurposed by juxtaposing claims about a group side-by-side. For example, in grappling with the idea that poor white people have white privilege, feminist thinker Gina Crosley-Corcoran writes,

The concept of Intersectionality recognizes that people can be privileged in some ways and definitely not privileged in others. There are many different types of privilege, not just skin color privilege, that impact the way people can move through the world or are discriminated against. These are all things you are born into, not things you earned, that afford you opportunities others may not have (Corcoran, 2019, Ch. 17).

In this way, acknowledging that a person can be safer because they are white but also less safe because they are poor can enable open communication and empathy and serve as a catalyst for nuanced, ground-up policy change.

## **Differentiated Language**

One way to combat the harmful effects of propaganda is through use of language that promotes nuance. Differentiated language can be particularly effective. A differentiated statement calls attention to the distinction between a group and their associated negative stereotype. Several recent papers have analyzed media sources to determine predictors of when Muslims are described in differentiated language (e.g., “terrorists abuse religion,” which explicitly distinguishes between Muslims and terrorists) versus undifferentiated language (e.g., “terror, of course, has to do with Islam (von Sikorski, Schmuck, Matthes, Klobasa, Knupfer, & Saumer, 2021)). Von Sikorski et al. found much greater prominence of undifferentiated than differentiated statements across publications and found that this ratio became more extreme soon after a terrorist event. A similar study found that Muslim journalists are much more likely than non-Muslim journalists to make differentiated statements about journalists, especially when reporting on an act of terror; additionally, higher quality newspapers are more likely than tabloid newspapers to make differentiated statements (Matthes, Kaskelvicute, Schmuck, Sikorski, Klobas, Knupfer, & Saumer, 2020).

## **Remembering the Human Belief in Essential Goodness and Truth**

There is robust evidence that people are more inclined to view positive changes in a person as reflecting their essential goodness and negative changes in a person as reflecting external circumstances. In one study, participants read vignettes describing a change within an individual (Newman, Bloom, & Knobe, 2014). In some examples, the change was positive (e.g., “Amir lives in a culture that supports terrorism. In the past, Amir supported the idea of terrorism to achieve political goals. Now, however, Amir believes that terrorism is wrong”). In other examples, the change was negative (e.g., “Amir lives in a culture that does not support terrorism. In the past, Amir did not support the idea of terrorism. However, now, Amir believes that terrorism is an acceptable way to achieve political goals”), (p. 214).

Participants generally reasoned changes in a positive direction to be the result of essential goodness (i.e., Amir’s previous endorsement of terrorism reflected his culture, and his current rejection of terrorism reflects his essential goodness). In contrast, participants generally reasoned changes in a negative direction not to be essentially explainable (i.e., Amir’s previous rejection of terrorism reflects his essential goodness, and his current endorsement of terrorism reflects his culture). This propensity to see people as essentially good is promising in that propaganda conflicts with this natural inclination.

## **Conclusion**

Social cognition involves proclivities that can bring out the best and worst in people. For example, people are inclined toward essentialist beliefs, which can easily spiral into tribalism and clash. On the other hand, people are inclined toward believing in

human goodness. With the social world always teetering between dissonance and harmony, language is a particularly powerful tool for pushing it in either direction. Misused generic language, implication of disposition, ascriptive definitions, and the language of opposites can all be used to incite subjugation. However, repurposing linguistic tools and using differentiated language can promote understanding and empathy.

Finally, given the power of propaganda, preemptive defense against propaganda is crucial (Ecker, Lewandowsky, Fenton, & Martin, 2014). Paul & Matthews (2016) offer important insights for how to combat propaganda. These include focusing efforts on countering the effects of propaganda (staying focused on the mission) rather than attacking the propaganda itself (becoming distracted with political discourse). These also include committing to policies that block the onslaught of propaganda, such as by dismantling harmful social media channels and through other cyberspace operations.

## Acknowledgements

Deepest gratitude to Alexander Barhavin for translating the abstract from English into Ukrainian.

## References

- Berg, J.A. (2015). Explaining attitudes toward immigrants and immigration policy: A review of the theoretical literature. *Sociology Compass*, 9(1), 23–34. <https://doi.org/10.1111/soc4.12235>
- Casarez, R.S. 2020. This land is (not) your land: Racial boundaries and ascripted Americanness in the formation of attitudes about immigrants. *The Sociological Quarterly*, 63(1), 114-133. <https://doi.org/10.1080/00380253.2020.1804813>
- Devos, T. & Mohamed, H. (2014). Shades of American identity: Implicit relations between ethnic and national identities. *Social and Personality Psychology Compass*, 8(12), 739–54. <https://doi.org/10.1111/spc3.12149>
- Diesendruck, G. & Haber, L. (2009). God's categories: The effect of religiosity on children's teleological and essentialist beliefs about categories. *Cognition*, 110(1), 100–114.
- Ecker, U. K. H., Lewandowsky, S., Fenton, O., & Martin, K. (2014). Do people keep believing because they want to? Preexisting attitudes and continued influence of misinformation. *Memory and Cognition*, 42(2), 292-304. <https://doi.org/10.1016/j.cognition.2008.11.001>
- Gelman, S. A. (2003). *The essential child: Origins of essentialism in everyday thought*. New York: Oxford University Press.
- Gelman, S.A. & Tardif, T. (1998). A cross-linguistic comparison of generic noun phrases in English and Mandarin. *Cognition*, 66(3), 215-248. [https://doi.org/10.1016/s0010-0277\(98\)00021-3](https://doi.org/10.1016/s0010-0277(98)00021-3)
- Gil-White, F. J. (2001). Are ethnic groups biological "species" to the human brain? Essentialism in our cognition of some social categories. *Current Anthropology*, 42(4), 515–554. <https://doi.org/10.1086/321802>
- Hirschfeld, L. A. & Gelman, S. A. (1997). What young children think about the relationship between language variation and social difference. *Cognitive Development*, 12, 213-238. [https://doi.org/10.1016/S0885-2014\(97\)90014-9](https://doi.org/10.1016/S0885-2014(97)90014-9)
- Hirschfeld, L.A. (1998). Natural assumption: Race, essence, and taxonomies of human kinds. *Social Research*, 65, 331-349.

- Keller, J. & Andersen, H. (2002). *The Jew as Criminal* (R. Belser, Trans.). JRBooksOnline. Original work published in 1937. Retrieved from [https://www.jrbooksonline.com/PDF\\_Books/TheJewAsCriminal.pdf](https://www.jrbooksonline.com/PDF_Books/TheJewAsCriminal.pdf).
- Leslie, S.J. (2017). The original sin of cognition: Fear, prejudice and generalization. *The Journal of Philosophy*, 114(8), 1-29. Retrieved from <https://www.princeton.edu/~sjleslie/The%20original%20sin%20of%20cognition%20upd010518.pdf>
- Mahalingam, R. (2007). Essentialism, power, and the representation of social categories: A folk sociology perspective. *Human Development*, 50, 300–319. <https://doi.org/10.1159/000109832>
- Matthes, J., Kaskelvičute, R., Schmuck, D., von Sikorski, C., Klobasa, C., Knupfer H., & Saumer, M. (2020) Who differentiates between Muslims and Islamist terrorists in terrorism news coverage? An actor-based approach. *Journalism Studies*, 21(15), 2135-2153. <https://doi.org/10.1080/1461670X.2020.1812422>
- Moty, K., & Rhodes, M. (2021). The unintended consequences of the things we say: What generic statements communicate to children about unmentioned categories. *Psychological Science*, 32(2), 189–203. <https://doi.org/10.1177/0956797620953132>
- Mumford, S. (1998). Dispositions. In *The Routledge Encyclopedia of Philosophy*. Taylor and Francis. Retrieved from <https://www.rep.routledge.com/articles/thematic/dispositions/v-1>. <https://doi.org/10.4324/9780415249126-N116-1>
- Pauker, K., Ambady, N., & Apfelbaum, E. P. (2010). Race salience and essentialist thinking in racial stereotype development: Racial stereotype development. *Child Development*, 81(6), 1799–1813. <https://doi.org/10.1111/j.1467-8624.2010.01511.x>
- Reich, T. & Tormala, Z. L. (2013). When contradictions foster persuasion: An attributional perspective. *Journal of Experimental Social Psychology*, 49(3), 426-439. <https://doi.org/10.1016/j.jesp.2013.01.004>
- Reiter, N. & Frank, A. (2010). Identifying generic noun phrases. Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics, (40-49). Retrieved from <https://aclanthology.org/P10-1005.pdf>
- Rhodes, M. & Gelman, S. A. (2009). A developmental examination of the conceptual structure of animal, artifact, and human social categories across two cultural contexts. *Cognitive Psychology*, 59, 244-274. <https://doi.org/10.1016/j.cogpsych.2009.05.001>
- Rhodes, M., Leslie, S.-J., & Tworek, C. M. (2012). Cultural transmission of social essentialism. *Proceedings of the National Academy of Sciences*, 109(34), 13526–13531. <https://doi.org/10.1073/pnas.1208951109>
- Rose, D. & Nichols, S. (2019). Teleological essentialism. *Cognitive Science*, 43(4), e12725. <https://doi.org/10.1111/cogs.12725>
- Rosenberg, M. (1981). The self-concept: Social product and social force. In M. Rosenberg & R. H. Turner (Eds.), *Social Psychology in Sociological Perspectives* (pp. 593-624). New York: Basic Books.
- Rucker, D. D., Petty, R. E., & Briñol, P. (2008). What's in a frame anyway? A meta-cognitive analysis of the impact of one versus two sided message framing on attitude certainty. *Journal of Consumer Psychology*, 18(2), 137-149. <https://doi.org/10.1016/j.jcps.2008.01.008>
- Saul, J. M. (2017). Are generics especially pernicious? *Inquiry. An Interdisciplinary Journal of Philosophy*. <https://doi.org/10.1080/0020174X.2017.1285995>
- Simonsen, K. B. (2016). How the host nation's boundary drawing affects immigrants' belonging. *Journal of Ethnic and Migration Studies*, 42(7), 1153–1176. <https://doi.org/10.1080/1369183X.2016.1138854>
- Smiley, C. & Fakunle, D. (2016). From "brute" to "thug:" The demonization and criminalization of unarmed Black male victims in America. *Journal of Human Behavior in the Social Environment*, 26(3-4), 350-366. <https://doi.org/10.1080/10911359.2015.1129256>

- Tessler, M. H. & Goodman, N. D. (2019). The language of generalization. *Psychological Review*, 126(3), 395–436. <https://doi.org/10.1037/rev0000142>
- Valentino, N.A. & Brader, T. (2011). The sword's other edge: Perceptions of discrimination and racial policy opinion after Obama. *Public Opinion Quarterly*, 75(2), 201–226. <https://doi.org/10.1093/poq/nfr010>
- von Sikorski, C., Schmuck, D., Matthes, J., Klobasa, C., Knupfer, H., & Saumer, M. (2022). Do journalists differentiate between Muslims and Islamist terrorists? A content analysis of terrorism news coverage. *Journalism*, 23(6), 1171–1193. <https://doi.org/10.1177/1464884921990223>.
- Wylegała, A. & Głowacka-Grajper, M. (2020). *The Burden of the Past: History, Memory, and Identity in Contemporary Ukraine*. United States: Indiana University Press.

## Sources

- Dixon, R. (2022, February 21). In long speech, Putin recognizes two Ukrainian regions as independent, a potential pretext for war. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/world/2022/02/21/putin-speech-ukraine/>
- McArdle, M. (2021, March 27). The numbers undercut myths about mass shootings and White men. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/opinions/2021/03/27/numbers-undercut-myths-about-mass-shootings-white-men/>
- Narayanaswami, K. (2011). Analysis of Nazi propaganda. Retrieved from <https://blogs.harvard.edu/karthik/files/2011/04/HIST-1572-Analysis-of-Nazi-Propaganda-KNarayanaswami.pdf>
- Perrigo, B. (2022, February 22). How Putin's denial of Ukraine's statehood rewrites history. *Time*. Retrieved from <https://time.com/6150046/ukraine-statehood-russia-history-putin/>
- Peterson, J. (2021). A multi-level, multi-method investigation of the psycho-social life histories of mass shooters. Office of Justice Programs' National Criminal Justice Reference Service, Document number 302101. Retrieved from <https://www.ojp.gov/pdffiles1/nij/grants/302101.pdf>
- Smith, D. L. (2021, November 3). The dehumanizing imagination. *The Junkyard: A Scholarly Blog Devoted to the Study of the Imagination*. Retrieved from <https://junkyardofthemind.com/blog/2021/10/29/the-dehumanizing-imagination>.
- Spencer, R. (2014, December 17). Keynote address at the David Horowitz Freedom Center's 20th Anniversary Restoration Weekend, Palm Beach, Florida. Retrieved from <https://archive.ph/ooWIZ>
- Utley, G. (Moderator). (1989). Meet The Press. Retrieved from <https://www.nbc.com/meet-the-press/video/garrick-utley-moderator-of-meet-the-press-1989-1991/NBCN995077759>



# Topic Modelling and Emotion Analysis of the Tweets of British and American Politicians on the Topic of War in Ukraine

Olena Karpina <sup>a,\*</sup>, Justin Chen <sup>b</sup>

<sup>a</sup> Lesya Ukrainka Volyn National University, Ukraine,

<sup>b</sup> Milton Academy, USA

Received August 26, 2022; Revised December 15, 2022; Accepted December 24, 2022

**Abstract.** This paper focuses on the content and emotive features of four politicians' posts that were published on their official Twitter accounts during the three-month period of the Russian invasion of Ukraine. We selected two British politicians – Boris Johnson, the Prime Minister of the UK, and Yvette Cooper, the Labour MP and Shadow Home Secretary of the State for the Home Department – as well as two American politicians, President of the USA Joe Biden and Republican senator Marco Rubio. In the first phase, we constructed a dataset containing the tweets of the four politicians, which were selected with regard to the topic of war in Ukraine. To be considered approved, the tweets were supposed to contain such words as *Ukraine, russia, war, putin, invasion*, spotted in one context. In the second phase, we identified the most frequent lexical tokens used by the politicians to inform the world community about the war in Ukraine. For this purpose, we used Voyant Tools, a web-based application for text analysis. These tokens were divided into three groups according to the level of their frequency into most frequent, second most frequent and third most frequent lexical tokens. Additionally, we measured the distribution of the most frequent lexical tokens across the three-month time span to explore how their frequency fluctuated over the study period. In the third phase, we analysed the context of the identified lexical tokens, thereby outlining the subject of the tweets. To do this, we extracted collocations using the Natural Language Toolkit (NLTK) library. During the final phase of the research, we performed topic modelling using the Gibbs Sampling algorithm for the Dirichlet Multinomial Mixture model (GSDMM) and emotion analysis using the NRC Lexicon library.

**Keywords:** *lexical token, raw frequency, relative frequency, virtual discourse, topic modelling, emotion analysis, Twitter.*

**Карпіна Олена, Чен Джастін. Тематичне моделювання й аналіз емоцій у твіт-повідомленнях британських та американських політиків на тему війни в Україні.**

**Анотація.** Статтю присвячено дослідженню змістових та емотивних особливостей дописів чотирьох політиків, опублікованих в їхніх офіційних Твіттер акаунтах протягом трьох місяців російського вторгнення в Україну. Ми обрали двох британських політиків – прем'єр-міністра Великої Британії Бориса Джонсона та Іветт Купер, членкиню Палати громад від Лейбористської партії, тінбову міністерку внутрішніх справ Великої Британії – і двох американських політиків, – президента Джо Байдена та сенатора-республіканця Марко Рубіо. На першому етапі ми створили текстовий масив, що містить твіт-повідомлення

\* Corresponding author. Olena Karpina,  <https://orcid.org/0000-0001-9520-074X>, E-mail: [karpina@vnu.edu.ua](mailto:karpina@vnu.edu.ua)

чотирьох політиків, які було відібрано за тематикою війни в Україні. Для того, щоб вважатися схваленими, твіт-повідомлення повинні були містити такі слова, як Україна, росія, війна, путін, вторгнення, виявлені в одному контексті. На другому етапі ми визначили найчастотніші лексичні одиниці, що їх уживають політики для інформування світової спільноти про війну в Україні. Для цього ми скористалися програмою Voyant Tools, веб-додатком для текстового аналізу. Ці лексичні одиниці було розподілено на три групи за рівнем їхньої частотності: найчастотніші, другі за частотністю та треті за частотністю лексичні одиниці. Окрім того, ми виміряли розподіл найчастотніших лексичних одиниць у тримісячному часовому проміжку, щоб дослідити, як змінювалася їхня частотність протягом досліджуваного періоду. На третьому етапі ми проаналізували контекст ідентифікованих лексичних одиниць, які окреслюють тематику твіт-повідомлень у наборі даних. Для цього ми виявили колокації за допомогою бібліотеки NLTK. Під час останнього етапу дослідження ми виконали тематичне моделювання з використанням алгоритму вибірки Гіббса до багатоваріантного розподілу ймовірностей Діріхле та класифікацію емоцій за допомогою бібліотеки NRC Lexicon.

**Ключові слова:** лексична одиниця, неопрацьована частотність, відносна частотність, віртуальний дискурс, тематичне моделювання, аналіз емоцій, Твіттер.

## Introduction

The discourse of social networks has repeatedly become an object of the research of scientists worldwide. Nerian (2018) investigated posts in social networks from the standpoint of linguistic pragmatics, interpreting them as a speech genre of Internet discourse that reveals the author's position in the public virtual space. Virtual communication in the social network Twitter (tweeting) was the subject of investigations by Goroshko (2011), who defines it as a genre of Internet communication and singles out its features: restricted length of messages, hashtags, and integration with other web services. Considering communicative strategies of social network users, Shvelidze (2021) outlines tweeting as a manifestation of solely English network discourse with strict genre characteristics. Poliakova (2021) focuses on the lexical aspect of political internet communication, assigning lexical means of tweeting to three vocabulary groups: neutral, politically marked, and emotionally expressive. The chapter in the work by the English researcher Crystal (2011), *Internet Linguistics: A Student Guide*, examines the Internet platform Twitter, where the author highlights the methodological, grammatical, structural-semantic, and pragmatic features of the study of tweets. Ukrainian linguist Nikolaieva (2019) studied vocabulary stratification in social media messages, characterizing social networks language as dynamic in terms of semantics and word formation.

The goal of our research was to perform lexical, semantic and emotional analysis of the tweets of English and American politicians in order to shape the general attitude of political elite of the USA and UK to the war in Ukraine, to disclose the topics of their major concern regarding the war, and to show the range of different emotions from one topic to another. The achievement of this goal

became possible by securing the following objectives: to single out the most frequent lexical tokens in the datasets of every politician considered in the study; to define the collocations where these frequent lexical tokens occur; to perform the topic modelling based on the previously extracted collocations; to carry out the emotion analysis in terms of every topic. We chose two British politicians and two American politicians because both the U.S. and U.K. have had an impact on the Ukraine war without directly fighting in it. As a result of their involvement, we had a particular interest as to how these politicians described the war and their actions regarding it. We chose Boris Johnson, Prime Minister of the UK, and Yvette Cooper, the Labour MP and Shadow Home Secretary of the State for the Home Department, because of their important roles in the government and their membership in opposing political parties (Conservative Party and Labour Party, respectively). By examining two politicians from different political parties, we believed we would get two different opinions on the war and gain a more accurate understanding of the opinion of the country as a whole. We chose the U.S. President Joe Biden, a Democrat, and Senator Marco Rubio, a Republican, for the same reasons.

## Method

### Phase 1. Construction of the Dataset

At this phase, the construction of the dataset for further analysis is carried out. To achieve this objective, we skimmed the Twitter accounts of the four politicians and manually selected tweets about the war in Ukraine. We considered the posts relevant to the objectives of our study if they consisted of such linguistic tokens as *Ukraine*, *war*, *invasion*, *putin*<sup>1</sup>, *russia* etc., occurring in one context. Initially, we created four separate word documents, each consisting of the validated tweets of one of the four politicians. As a result, we obtained a dataset with 20,084 total words.

### Phase 2. Term Frequency and Distribution

To define the frequency of words, we made use of the online tool for text-mining *Voyant Tools*. For this purpose, we examined the dataset of each politician separately, singling out the 25 most frequent linguistic tokens of the tweets of each

---

<sup>1</sup> According to The Commission of Journalistic Ethics (CJE) the use of the stylistically coloured vocabulary, i.e proper names *putin*, *russia* etc. in lowercase, a tendency which appeared in journalistic texts after the full-scale invasion of Ukraine in February, 24, 2022, does not discriminate the ethnic group on the basis of national identity, being used with the reference to those people who identify themselves with the aggressor state supporting the policy of their leader and acting in accordance with it [www.imi.org.ua]. We share this tendency to lowercase all mentions of the country *russia* and its leader *vladimir putin*, considering it an act of consolidation of world antiwar forces.

politician. Then, the frequent words were divided into three groups. The first group contains the top five most frequent lexical tokens, used by every politician in the dataset. These tokens were compared to the five distinctive words in the dataset – high frequency words that were unique to a set of tweets of a particular politician compared to the sets of the other politicians in the whole dataset. We performed this process by uploading four datasets of tweets and automatically matching them against each other. The second and third group of lexical tokens, consisting of ten words each, come successively regarding the level of their frequency. We had to manually modify these lists, grouping the words with the same stem into one lexical token. Lexical tokens that represent such groupings are denoted with an asterisk (\*) – for example, “military,” “militaristic,” and “militaries” would all be grouped under the lexical token “militar\*.” We maintained this method of denoting words with the same stem throughout the paper.

Additionally, we differentiated between raw frequency – the actual number of occurrences of a term in a document – and relative frequency – the ratio of the frequency of a specific term to the frequency of all words in the given corpus. Raw frequency was calculated to classify the most frequent terms into three groups. In our opinion, the frequency of terms measured in the number of occurrences provides a more comprehensive view of the lexical use of the politicians. Relative frequency was necessary to outline the distribution of frequent terms in time, taking into consideration the fact that the number of tweets about the war posted every month was different within the period considered: for example, the tweets collected in May were considerably smaller in number than those collected in February-March. Consequently, showing the number of occurrences would be insufficient to measure the importance of a term in datasets different in size. To measure the peculiarities of the distribution of frequent terms, we divided each document containing the tweets of one particular politician into three parts, each of them referring to different months of the war (we combined February and March into one month, as the war had started at the end of February). Therefore, the first part consists of the tweets posted in February-March, the second part represents the posts from April, and the last one refers to May. As a result, the values of raw frequency differed from the values of relative frequency (see the tables in Results section).

In our Python-based collocation analysis, we first preprocessed the raw tweets to gain more significant collocations (eliminated meaningless collocations with numbers, emojis, or tokens like “the” or “a”). Using Python’s regular expression library and “demoji” library, we removed emojis, URLs, non-letter characters, and extra whitespace. We also used the Word Net Lemmatizer and stopwords from Natural Language Toolkit (NLTK) to lemmatize the text and remove stopwords. Additionally, we manually stemmed all the word variations of Ukraine, Britain, and russia into *Ukrain*, *russia*, and *brit*, respectively. This way,

we could take into account all the word-forming variants of the countries (for example, Britain, Britains, British) and get a more accurate count of the collocations that include those tokens. Furthermore, to account for spelling variations of *Zelenskyy* and any references to his Twitter account (@ZelenskyyUa), we converted all the variations of the name (*Zelenskiy*, *Zelensky*, etc.) into *Zelensky*. We then used the NLTK collocations library to collect the most frequent bigrams, trigrams, and quadgrams that appeared in the tweets of each politician (Bird, 2006).

### **Phase 3. Topic Modelling**

To conduct topic modelling with unsupervised learning, we used the Gibbs Sampling algorithm for the Dirichlet Multinomial Mixture model (GSDMM) as proposed by Yin & Wang (2014). We first preprocessed each tweet as outlined in phase 2. The GSDMM algorithm – which Weisser et al. (2022) found performs better on short texts like tweets than its more popular counterpart, LDA (Latent Dirichlet Allocation) – groups the tweets of each politician into unnamed “clusters,” or topics, based on text similarity. Using the results of the unsupervised clustering, we examined the five most common tokens of each cluster to manually assign each cluster a topic.

### **Phase 4. Emotion Analysis**

Within each topic, we converted the tweets into lists of tokens and then evaluated the emotions of the tweets using the NRC Lexicon, created by Mohammad & Turney (2013); it contains approximately 27,000 words and recognizes the following ten emotions: fear, anger, anticipation, trust, surprise, positive, negative, sadness, disgust, and joy. Each word in the lexicon has certain emotional scores assigned to it, and so the scores for each word add up to a final emotion score for each emotion in that tweet. We used the total emotion scores of all the tweets in a topic to determine the emotions the politician felt towards that topic.

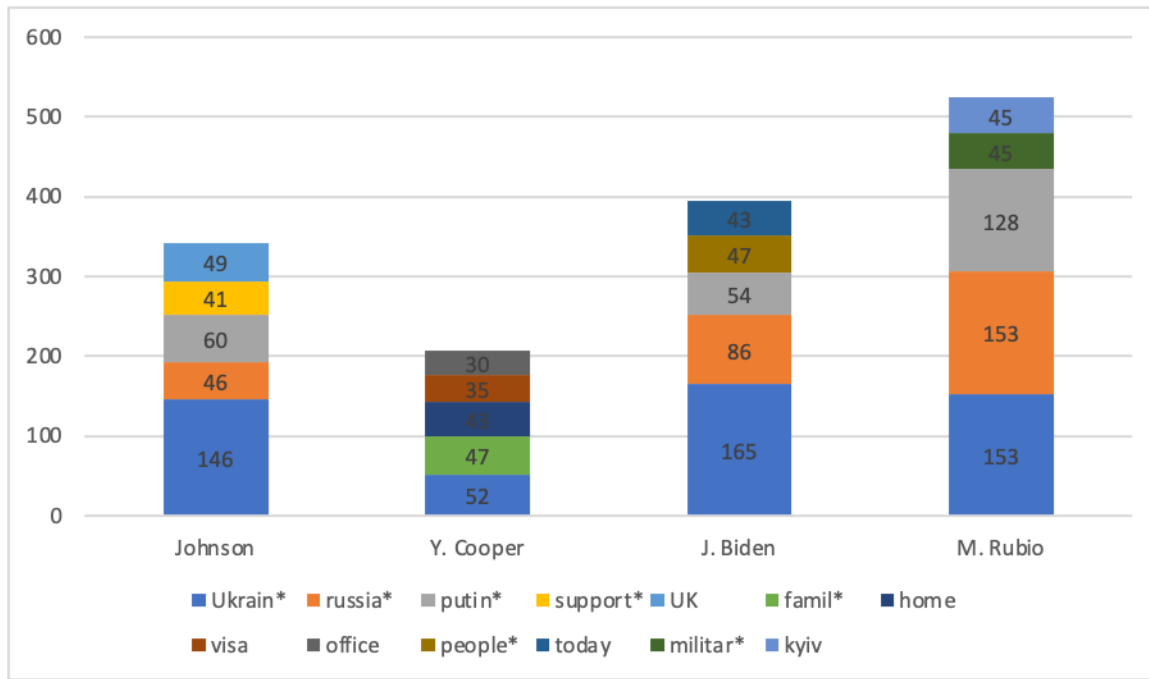
## **Results**

### **Frequency and Term Distribution**

Considering the frequency of linguistic tokens used by each politician, we obtained different results. The only token found in the top five most frequent terms in the datasets of the four politicians is *Ukrain\**. Some other terms were shared by two or three politicians. For example, the tokens *putin\** and *russia\** appeared among the top five frequent terms in the tweets of three out of the four politicians. We also

observed the terms that were restricted to the frequent lexical use of only one politician (see UK\*, home\*, kyiv\*, militar\*). Having combined the top five most frequent lexical tokens of each politician, we obtained thirteen terms total, taking into consideration that some terms overlapped in the datasets. The overall view that summarises these frequencies can be seen in Fig. 1.

Figure 1  
*Top Frequent Terms*



The detailed results on the frequency and term distribution are specified with the reference to each politician.

### Boris Johnson

The dataset with the tweets of Boris Johnson contains 4,308 total words and 1,112 unique word forms, the frequent words being as follows:

**Group 1. Most Frequent Terms:** ukrain\* (146); UK (49); putin\* (60); russia\* (46) support\* (41);

**Group 2. Second Most Frequent Terms:** president (28); zelenskyyua (26); people\* (25); speak\* (spoke\*) (23); invasion (invading) (22); militar\* (21); countr\* (20); help (20) stand\* (21); economic (20);

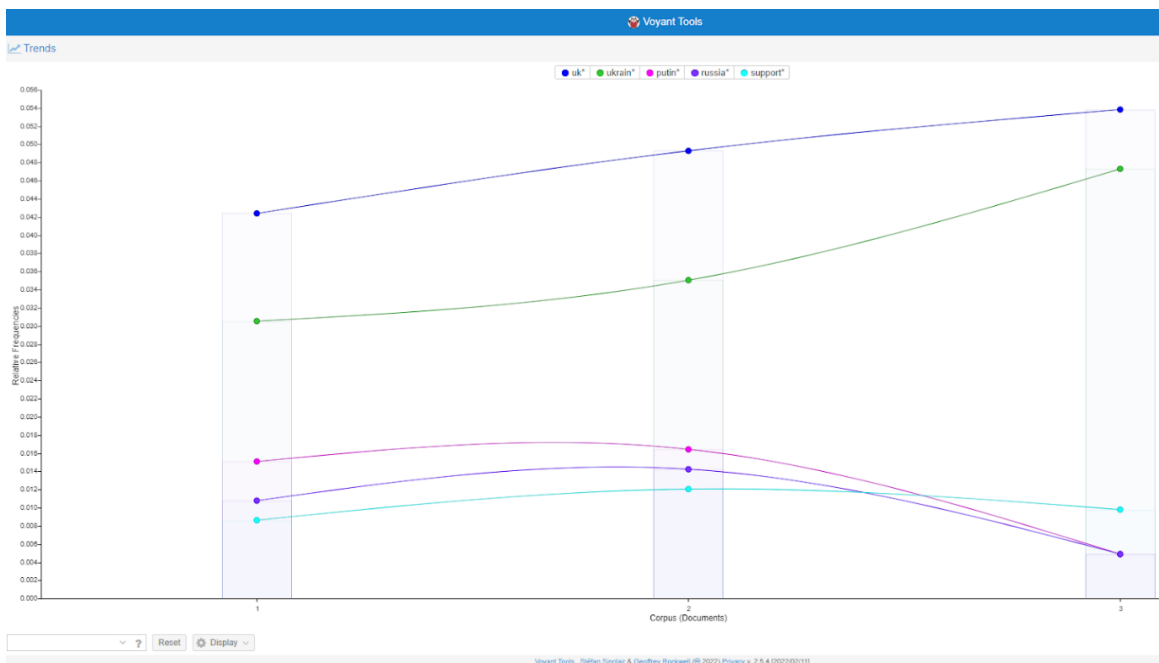
**Group 3. Third Most Frequent Terms:** today (19); continue\* (18); free\* (18) sanction\* (17); NATO (14); aid (13); ensure (13); step\* (13); barbaric (12); partners (12).

**Distinctive words:** UK (49), zelenskyyua (26), regime (9), defensive (9), putin's (8).

Table 1  
*Boris Johnson Top Five Term Distribution*

Term	February-March		April		May	
	raw fr.	rel. fr.	raw fr.	rel. fr.	raw fr.	rel. fr.
<b>Ukrain*</b>	85	.0305	32	.0350	29	.0473
<b>putin*</b>	42	.0150	15	.0140	3	.0065
<b>UK</b>	32	.0114	13	.0142	4	.0065
<b>russia*</b>	30	.0107	13	.0142	3	.0065
<b>support*</b>	24	.0086	11	.0120	6	.0097

Figure 2  
*Boris Johnson Relative Term Frequency Distributed in Time*



The chart represents the change in frequencies of the top five most frequent terms. The terms *UK* and *Ukrain\** display a fairly constant increase in their usage. Conversely, such terms as *putin\** and *russia\**, which were used with nearly equal frequency during the periods of February-March and April, started to lose their popularity and showed a significant decline in May. Interestingly, the fact that the frequency of the term *support\** remained stable during the whole time span suggests that the ideas of assistance and guidance delivered in the time of need to those who suffer from russian aggression were among top priorities for the British Prime Minister.

### Yvette Cooper

The dataset made up with the tweets of Yvette Cooper is twice as small as the dataset of Boris Johnson, comprising 2,608 total words and 745 unique word forms.

Frequent lexical tokens:

**Group 1. Most Frequent Terms** ukrain\* (52); famil\* (47); home (43)\*; visa (35); office (33).

**Group 2. Second Most Frequent Terms** people (25); help\* (21); UK (19); govt (government) (18); delay\* (17); need\* (17); week\* (17); shame\* (16); wait\* (16); sanctuary (12).

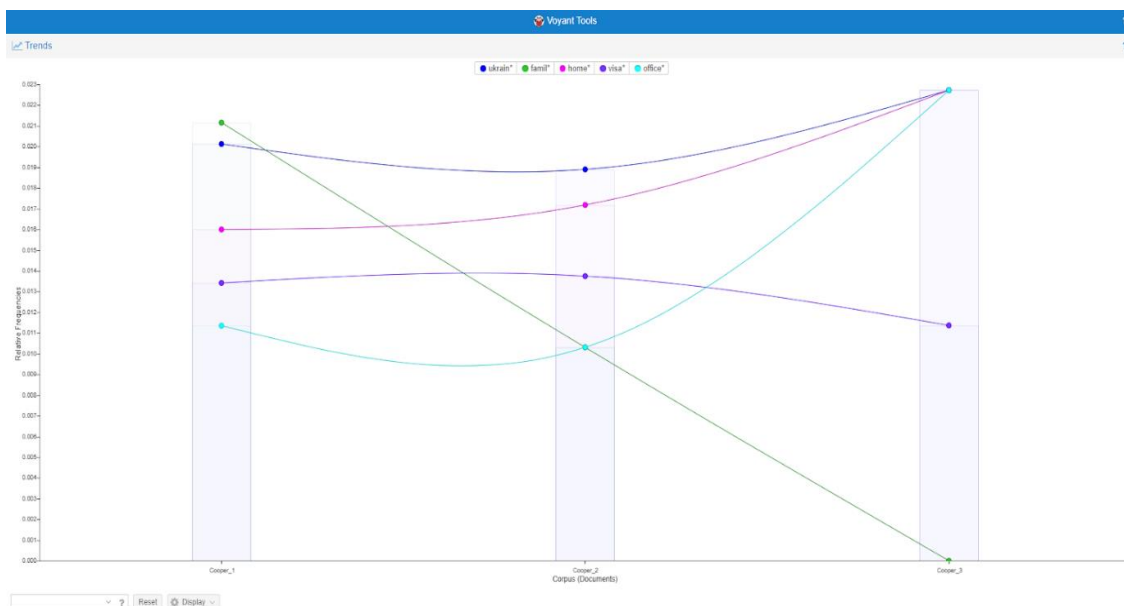
**Group 3. Third Most Frequent Terms** scheme (12); war (12); minister\* (11); desperate (10); thousands (10); Brit\* (10); let\* (10); long (9); Priti (Patel) (11); refugee\* (9).

**Distinctive words:** office (30), delays (16), shameful (13), waiting (12), sanctuary (12).

Table 2  
Yvette Cooper Top Five Term Distribution

Term	February-March		April		May	
	raw fr.	rel. fr.	raw fr.	rel. fr.	raw fr.	rel. fr.
Ukrain*	39	.0201	11	.0289	2	.0227
famil*	41	.0211	6	.0103	-	-
home*	31	.0159	10	.0171	2	.0227
visa*	26	.0134	8	.0137	1	.0113
office*	22	.0113	6	.0103	2	.0227

Figure 3  
Yvette Cooper Relative Term Frequency Distributed in Time



The terms *Ukrain\**, *home\** and *office* tend to increase in number, showing a steady rise. The term *visa* was fairly stable over the whole period of research. It is noteworthy that the term *famil\**, which was the most frequent term during the February-May period, demonstrated a dramatic decline in April and completely disappeared from the lexicon of Yvette Cooper in May.



## Joe Biden

The dataset of the current U.S. President is just slightly larger than the dataset of the head of the British Parliament, consisting of 5,362 total words and 1,210 unique word forms.

Frequent lexical tokens:

**Group 1. Most Frequent Terms** ukrain\* (165); russia\* (86); putin\* (54); people\* (47); today (43);

**Group 2. Second Most Frequent Terms** support\* (37); united (35); war (34); assistance (33); states (26); allies (23); aggression (21); humanitarian (21); continue (20); world (19);

**Group 3. Third Most Frequent Terms** defend (17); partners (17); president (17); fight (16); security (16); economic (14); minister (13); weapons (13); met (12); additional (11); country (11).

**Distinctive words:** united (35), states (26), aggression (21), costs (10), unjustified (8)

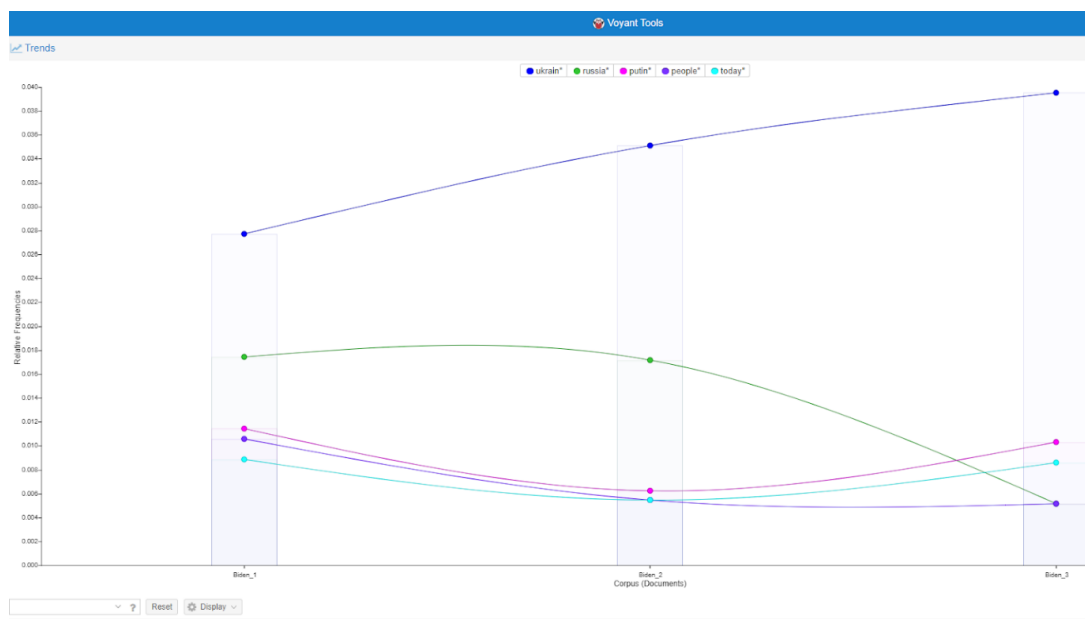
Table 3

*Joe Biden Top Five Term Distribution*

Term	February-March		April		May	
	raw fr.	rel. fr.	raw fr.	rel. fr.	raw fr.	rel. fr.
Ukrain*	97	.0277	45	.0351	2	.0395
russia*	61	.0174	22	.0171	3	.0051
putin*	40	.0114	8	.0062	6	.0103
people*	37	.0105	7	.0054	3	.0051
today*	31	.0088	7	.0054	5	.0085

Figure 4

*Joe Biden Relative Term Frequency Distributed in Time*



We may observe that the term *Ukrain\**, starting from the highest value among all the other frequent terms, has shown a more significant increase in May. Conversely, the term *russia\**, which was used with the same relative frequency in the February-March and April periods, showed a sharp decline in May. The terms *putin\** and *today\** have shown a similar tendency to slightly decrease in April and then gradually rise to the same value in May. The term *people*, which was only fourth place among the terms of particular importance in February-March, was lowered to fifth place, showing a steady decline in May.

### Marco Rubio

The U.S. Senator for Florida tends to be the most eloquent expressing his attitude to the war in Ukraine – his dataset is the largest, consisting of 7,757 total words and 1,899 unique word forms. However, we did not manage to define any tweets referring to the topic of the war in May. Consequently, the term distribution was measured in terms of two periods: February-March and April.

**Frequent lexical tokens:**

**Group 1. Most Frequent Terms** *ukrain\** (153); *russia\** (153); *putin\** (128); *militar\** (45); *kyiv* (45);

**Group 2. Second Most Frequent Terms** *invad\*(invasion)* (37); *force\** (31); *nato* (20); *oil* (18); *cit\*(25)*; *day\** (24); *new* (17); *plan\** (20); *govt (government)* (24); *suppl\** (20);

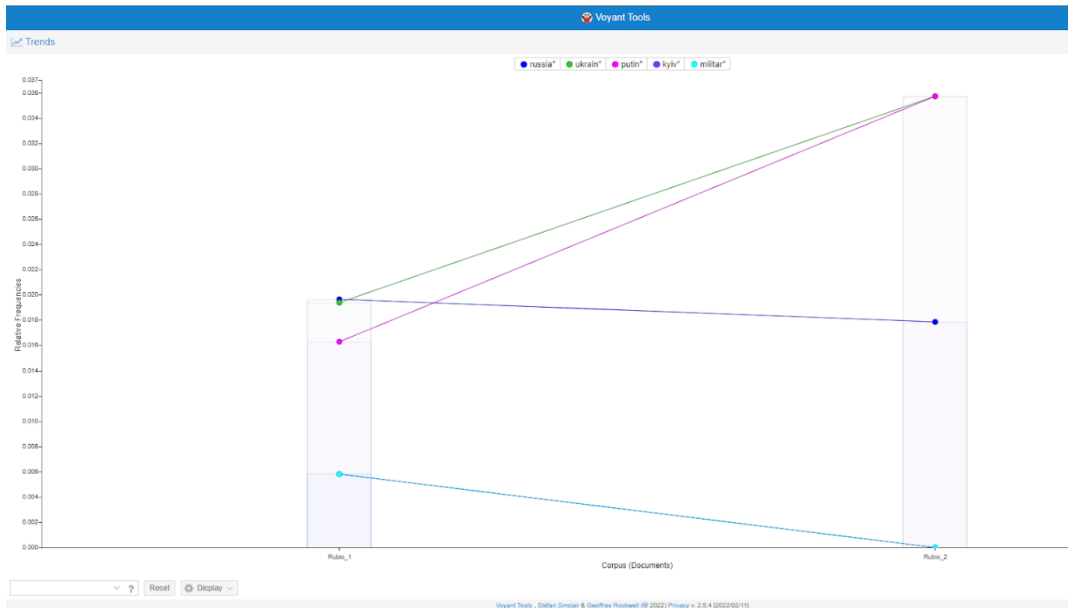
**Group 3. Third Most Frequent Terms** *power* (17); *control\*(16)*; *weapon\** (16); *never* (18); *nuclear* (15); *hours* (14); *long\** (19); *people* (14); *biden* (13); *cut* (13).

**Distinctive words:** *putin* (126), *russia* (117), *strikes* (12), *costly* (12), *puppet* (10).

Table 4  
*Marco Rubio Top Five Term Distribution*

Term	February-March		April	
	raw fr.	rel. fr.	raw fr.	rel. fr.
<b>Ukrain*</b>	150	.0193	2	.0357
<b>russia*</b>	152	.0196	1	.0178
<b>putin*</b>	126	.0162	2	.0357
<b>militar*</b>	45	.0058	-	-
<b>Kyiv</b>	45	.0058	-	-

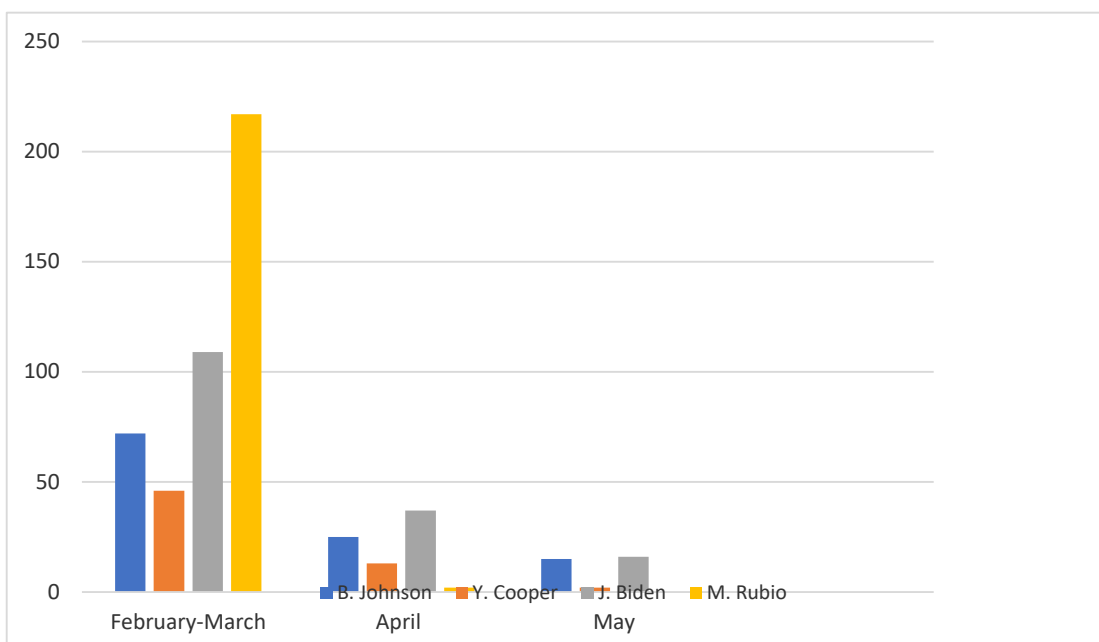
Figure 5  
*Marco Rubio Relative Term Frequency Distributed in Time*



The terms *ukrain\** and *putin\** showed a tendency to increase in their frequency values, while the term *russia\** was evenly distributed between the two periods. The terms *militar\** and *Kyiv* did not display much changes at all, as their usage was restricted to the first period only.

The difference between the values of raw and relative frequency indicated in the tables can be explained by the density of tweets posted during the period of research (see Fig. 6).

Figure 6  
*The Density of Tweets in the Period of February-May*



If, at the beginning of the war, the number of tweets posted by the politicians varied from 46 to 217, in May we may observe a considerable decline in the frequency of the posts, which lowered to 2-16 posts.

### Collocation analysis

Table 5

*Most Frequent Boris Johnson Collocations*

Bigram Count	Trigram Count	Quadgram Count
('president', 'zelensky'): 21	('spoke', 'president', 'zelensky'): 9	('continue', 'step', 'militar', 'economic'): 2
('support', 'ukrain'): 20	('putin', 'must', 'fail'): 6	('evening', 'spoke', 'president', 'zelensky'): 2
('ukrain', 'people'): 13	('ensure', 'putin', 'fails'): 4	('militar', 'economic', 'diplomatic', 'support'): 2
('invasion', 'ukrain'): 9	('economic', 'support', 'ukrain'): 3	('people', 'ukrain', 'slava', 'ukrain'): 2
('putin', 'regime'): 9	('putin', 'barbaric', 'invasion'): 3	('ukrain', 'putin', 'must', 'fail'): 2

Boris Johnson tends to use the token *ukrain\** and its word-forming variants (*Ukrainian, Ukrainians*) in bigrams with *support* (20), *people* (13), and *invasion* (9).

### Yvette Cooper

Table 6

*Most Frequent Yvette Cooper Collocations*

Bigram Count	Trigram Count	Quadgram Count
('home', 'office'): 30	('people', 'fleeing', 'war'): 4	('people', 'fleeing', 'war', 'europe'): 3
('ukrain', 'famil'): 10	('elderly', 'parents', 'ukrain'): 3	('admit', 'security', 'checks', 'done'): 2
('priti', 'patel'): 8	('fleeing', 'war', 'europe'): 3	('famil', 'arrive', 'uk', 'without'): 2

Bigram Count	Trigram Count	Quadgram Count
('turned', 'away'): 8	('home', 'office', 'still'): 3	('existing', 'community', 'sponsorship', 'scheme'): 2
('home', 'secretary'): 7	('admit', 'security', 'checks'): 2	('ministers', 'officials', 'admit', 'security'): 2

In Yvette Cooper's tweets, the token *ukrain\** appeared most frequently with *famil\** (10) in bigrams and the tokens *elderly* and *parents* (3) in trigrams. Neither of the tokens *putin* nor *russia* appeared in the most frequent collocations.

### Joe Biden

Table 7  
Most Frequent Joe Biden Collocations

Bigram Count	Trigram Count	Quadgram Count
('support', 'ukrain'): 27	('putin', 'price', 'hike'): 5	('unprovoked', 'unjustified', 'attack', 'ukrain'): 3
('united', 'states'), 26	('hold', 'russia', 'accountable'): 4	('putin', 'war', 'choice', 'ukrain'): 3
('ukrain', 'people'): 23	('putin', 'war', 'choice'): 4	('support', 'ukrain', 'face', 'russia'): 3
('allies', 'partners'), 16	('ukrain', 'people', 'defend'): 4	('ukrain', 'people', 'defend', 'countr'): 3
('assistance', 'ukrain'): 11	('support', 'ukrain', 'people'): 4	('united', 'states', 'allies', 'partners'): 3

Joe Biden tended to use the token *ukrain\** in bigrams with *support* (27), *people* (23), and *assistance* (11). Additionally, the tokens *ukrain\** and *people* appeared in trigrams with *defend* (4) and *support* (4).

### Marco Rubio

Table 8  
Most Frequent Marco Rubio Collocations

Bigram Count	Trigram Count	Quadgram Count
('war', 'crimes'): 9	('costly', 'militar', 'victory'): 6	('either', 'costly', 'militar', 'victory'): 4

Bigram Count	Trigram Count	Quadgram Count
('costly', 'militar'): 7	('matter', 'many', 'cities'): 4	('costly', 'militar', 'victory', 'occupation'): 3
('ukrain', 'militar'): 7	('nuclear', 'power', 'plant'): 4	('largest', 'nuclear', 'power', 'plant'): 2
('cease', 'fire'): 6	('install', 'puppet', 'govt'): 3	('quality', 'life', 'rapidly', 'deteriorating'): 2
('russia', 'invaders'): 6	('people', 'never', 'accept'): 3	('nuclear', 'power', 'plant', 'ukrain'): 2

In Marco Rubio’s top 5 most frequent bigrams, trigrams, and quadgrams, the token *ukrain*\* collocates with only one token, *militar*\* (7). Similarly, in the most frequent collocations, the token *russia*\* appears only once – as a bigram with *invaders* (6).

### Topic Modelling and Emotion Analysis

After using the GSDMM algorithm for unsupervised clustering, we assigned each cluster of tweets a topic based on the 5 most frequent tokens in the cluster. We then used the NRC Lexicon to calculate the emotion scores for each topic.

### Boris Johnson

Table 9  
*Topics of Boris Johnson’s Tweets*

Topic	Putin	Ukraine Support	All Tweets
Most Frequent Tokens	('ukrain', 109) (putin', 51) (russia', 43) (uk', 40) (zelensky', 27)	('ukrain', 37) (uk', 10) (freedom', 9) (putin', 8) (support', 7)	ukrain* (146) putin* (60) uk (49) russia* (46) support* (41)
NLTK Emotion Score	positive: 234 negative: 188 trust: 152 fear: 149 anger: 111 anticipation: 68 sadness: 59 disgust: 53 joy: 49 surprise: 29	positive: 79 anticipation: 60 trust: 51 negative: 42 surprise: 37 joy: 31 fear: 30 anger: 30 disgust: 16 sadness: 15	positive: 319 negative: 228 trust: 216 fear: 182 anger: 143 anticipation: 97 joy: 78 sadness: 74 disgust: 65 surprise: 40
Number of Tweets	86	29	116

The vast majority of Boris Johnson’s 116 tweets about the war in Ukraine were either about putin or about support for Ukraine. When talking about putin, Johnson kept his tweets positive, with high scores for positive emotion (234) and trust (152). However, he also expressed high amounts of negative emotion (188) and fear (149) in his tweets about putin. In his tweets that showed support for Ukraine, Johnson had the highest emotion score for positive emotion (79), followed by anticipation (60) and trust (51). For all of his tweets on the war in Ukraine, Boris Johnson expressed positivity (319) the most.

**Yvette Cooper**

Table 10  
*Topics of Yvette Cooper’s Tweets*

<b>Topic</b>	<b>Home Office</b>	<b>UK Help</b>	<b>All Tweets</b>
Most Frequent Tokens	('home', 27) ( 'ukrain', 24) ( 'still', 22) ( 'office', 20) ( 'families', 19)	('ukrain', 26) ( 'uk', 16) ( 'family', 14) ( 'people', 13) ( 'home', 13)	ukrain* (52) famil* (47) home (43)* visa (35) office (30)
NLTK Emotion Score	negative: 80 anticipation: 44 positive: 42 fear: 38 sadness: 34 trust: 21 anger: 20 joy: 17 surprise: 15 disgust: 14	positive: 56 negative: 54 trust: 35 fear: 35 anticipation: 29 sadness: 24 joy: 22 anger: 15 disgust: 11 surprise: 8	negative: 143 positive: 106 anticipation: 82 fear: 77 trust: 61 sadness: 60 joy: 42 anger: 36 disgust: 26 surprise: 26
Number of Tweets	34	23	61

Yvette Cooper’s tweets on the war focused entirely on the UK government, specifically about the Home Office of the UK and the help the UK could provide. She rendered her concern about the complicated procedure of entering the UK and the incompetence of the government to take over the responsibilities. When talking about the Home Office and its actions regarding Ukraine, Yvette Cooper expressed high negative emotion (80) and anticipation (44). In her tweets about the UK’s support for Ukraine, Yvette Cooper showed nearly equal positive (56) and negative (54) emotion

scores, as well as the same emotion scores for trust (35) and fear (35). For all of her tweets on the war in Ukraine, Yvette Cooper showed the highest score for negative emotion (143).

## Joe Biden

Table 11

*Topics of Joe Biden's Tweets*

	<b>Topic</b>	<b>Ukraine Support</b>	<b>Putin</b>	<b>Russian Sanctions</b>	<b>All Tweets</b>
Most Frequent Tokens		('ukrain', 142) ( 'russia', 53) ( 'people', 41) ( 'support', 32) ( 'assistance', 32)	('putin', 20) ( 'ukrain', 18) ( 'prices', 10) ( 'war', 8) ( 'russia', 8)	('russia', 25) ( 'today', 9) ( 'economy', 7) ( 'sanctions', 5) ( 'ruble', 4)	ukrain* (165) russia* (86) putin* (54) people* (47) today (43)
NLTK Emotion Score		positive: 330 trust: 225 negative: 150 fear: 149 anticipation: 127 anger: 85 joy: 73 surprise: 37 sadness: 20 disgust: 20	negative: 54 positive: 43 fear: 34 trust: 31 anger: 25 joy: 21 anticipation: 16 sadness: 15 disgust: 10 surprise: 10	positive: 37 negative: 33 fear: 29 trust: 26 anger: 16 anticipation: 12 joy: 9 sadness: 7 disgust: 6 surprise: 3	positive: 424 trust: 291 negative: 240 fear: 216 anticipation: 155 anger: 127 joy: 106 surprise: 50 sadness: 42 disgust: 36
Number of Tweets		106	23	18	151

Joe Biden's tweets on America's support for Ukraine mostly expressed positive emotion (330) and trust (225). When talking about putin, Joe Biden had the highest score for negative emotion (54). In his tweets about the economic sanctions on russia, Joe Biden expressed positive emotion (37) the most, followed by negative emotion (33) and fear (29). When tweeting about the war in Ukraine as a whole (all tweets), Joe Biden clearly expressed positive emotion (424) the most; his emotion score for positivity vastly exceeded those for all the other emotions. The next highest emotion scores were for trust (291) and negative emotion (240).



**Marco Rubio**

Table 12  
*Topics of Marco Rubio’s Tweets*

	<b>Topic</b>	<b>Ukraine</b>	<b>Putin</b>	<b>Ukraine Nuclear Plants</b>	<b>All Tweets</b>
Most Frequent Tokens		(‘ukrain’, 91), (‘russia’, 79), (‘putin’, 62), (‘kyiv’, 43), (‘military’, 31)	(‘putin’, 65) (‘russia’, 60) (‘ukrain’, 45) (‘would’, 19) (‘nato’, 18)	(‘ukrain’, 17) (‘russia’, 14) (‘plant’, 8) (‘nuclear’, 7) (‘fire’, 7)	ukrain* (153) russia* (153) putin* (128) militar* (45) kyiv (45)
NLTK Score	Emotion	negative: 189 positive: 182 fear: 168 anticipation: 108 trust: 94 anger: 84 sadness: 76 joy: 45 disgust: 41 surprise: 28	negative: 207 fear: 155 positive: 129 anger: 95 trust: 72 sadness: 67 anticipation: 66 disgust: 46 surprise: 36 joy: 32	negative: 46 fear: 32 positive: 25 anger: 22 trust: 17 sadness: 16 anticipation: 10 surprise: 9 disgust: 9 joy: 3	negative: 442 fear: 355 positive: 336 anger: 201 anticipation: 184 trust: 183 sadness: 159 disgust: 96 joy: 80 surprise: 73
Number of Tweets		111	89	20	220

Most of Marco Rubio’s tweets were either about Ukraine, putin, or Ukrainian nuclear power plants. On the topic of Ukraine, Marco Rubio had similar scores for negative emotion (189) and positive emotion (182). The third and fourth highest emotion scores were for fear (168) and anticipation (108). Marco Rubio’s tweets on putin had the highest score for negative emotion (207), followed by fear (155) and positive emotion (129). When talking about the Ukrainian nuclear power plants, Marco Rubio had emotion scores that followed the same pattern as his tweets on putin: the three highest scores were for negative emotion (46), fear (32), and positive emotion (25). In fact, the whole dataset of his tweets on the war in Ukraine followed this pattern; negative emotion (442) was followed by fear (355) and positive emotion (336).

## Discussion

The most frequent terms in the Boris Johnson dataset are *Ukrain\**, *russia\**, *putin\**, *UK\**, and *support\**. The gradual decrease of the use of the terms *putin\** and *russia\** is regarded as a shift in the focus of attention from the atrocities committed by russian soldiers to the ways of support for Ukraine, delivered by the UK. The politician notes the active participation of his country in providing assistance to Ukraine and expresses confidence in further support. This is evidenced by tokens such as *support*, *aid*, and *stand*, used in the same context and evenly distributed in the tweets during all the periods under consideration. For example:

*The **UK stands** with **Ukraine** – we will send further defensive **aid** and they have our full backing in the negotiations.*

A similar tendency was observed in the tweets of Joe Biden, where *Ukrain\**, the token with the highest frequency value in the whole dataset, displayed a sharp increase in May, compared to its use in February-March. In the first period (February-March), the US president speaks about the support of Ukrainians, reports on the acts of assistance, and admires the brave resistance of Ukrainian people. During the second period (April), the token *Ukrain\** was found in the tweets highlighting the importance of international unity and cooperation; for example, the tweets mentioned the battle for Kyiv and announced new programs for Ukrainian refugees. The tweets from the third period (May) are concentrated on the continuing efforts to support Ukraine, providing military, economic and financial support. For example:

*Today, the United States is announcing that we intend to provide an additional **\$500 million** in direct economic assistance to the Ukrainian government. This brings our total economic support for Ukraine to **\$1 billion** in the past two months.*

The frequency of terms used by Yvette Cooper shows her preoccupation with the idea of facilitating the process of entering the UK for Ukrainians, elaborating the procedure with less restrictions. She appeals to the Home Office, which is directly responsible for visas and immigration. This focus explains the high values of frequency of terms such as *home\** (43), *office* (30), and *visa* (35), which were evenly distributed during the whole period of research. For example:

***Home Office** is still causing long delays for Ukrainian refugees. Thousands of desperate **families** who have applied are still waiting weeks & hearing nothing. Why is the **Home Secretary** so incapable of getting a grip on this?*

The term *famil\** (47), which was the most frequent in the first period, has reached the lowest value among the top five frequent terms in the second period and completely disappeared in the third one. Having examined a wider context of this term, we discovered that initially it was primarily used with the regard to the so-

called Family Scheme, allowing the relatives from the UK and Ukraine to reunite. The decrease of the term's usage in the following periods may be explained by the fact that due to the efforts of Yvette Copper bringing the problem of issuing visas to fleeing Ukrainians to public notice, the problem was partly solved, and the term *family\** started appearing with the reference to British families ready to welcome Ukrainian refugees according to the Sponsorship Scheme.

The most frequent terms in Marco Rubio dataset, *Ukrain\** and *putin\**, demonstrated the tendency to increase in number, reaching the same values in April. These two tokens were primarily spotted in the same context, where the Senator presents his reflections on war questions, makes predictions about the next steps that are likely to be taken by *putin* in the nearest future, and updates the followers on the current situation in Ukraine. For example:

*#Putin would not hesitate to stage or carry out a biological weapon false flag in #Ukraine and this is the kind of messaging you would see as a prelude to him doing that.*

A considerable number of his predictions mention Kyiv, the capital of Ukraine, as an important strategical object, which explains the equal distribution of this term. The examples of the use of this term are shown in the tweets below.

*As I have been saying now for 10 days the #Putin plan is no longer to take over most of #Ukraine The plan is to annex coastal south, lay siege to #Kyiv & 5 cities in North, degrade Ukraines military & factories & then offer cease fire on terms he will claim are a strategic victory*

*#Putin still wants to capture #Kyiv & install a puppet govt But when he realizes that's not feasible he will: 1. Focus on destroying as much of @DefenceU as possible 2. Then offer cease fire that imposes neutrality on #Ukraine & recognizes #Crimea & #Donbas as part of #Russia*

While examining the connection between the frequency of terms and collocations, we noticed that not all terms with high frequency values were productive in forming collocations. For example, the constituents of the most productive bigram *president Zelensky* in Boris Johnson dataset; *Unites States* in Joe Biden dataset belong only to the second level of frequency, while the constituents of the most frequent bigram *war crimes* in Marco Rubio dataset do not belong to frequent terms at all.

A considerable number of frequent collocations are formed with the help of distinctive words selected from the datasets in view of their uniqueness compared to the rest of the datasets in the whole dataset, which do not necessarily overlap with frequent terms. For example, both terms from the collocation *United States* were defined as distinctive words of Joe Biden, at the same time the terms were referred to the second level of frequency. Conversely, the term *costly*, defined as a distinctive word of Marco Rubio, though not found among the most frequent terms, turned out to demonstrate a high productivity in making collocations (20 collocations), unlike the

term *Kyiv* which belongs to top five frequent terms of Marco Rubio, but was not found among frequent collocations. The term which turned out to be the most productive in making collocations is *Ukrain\**.

We discovered some similarities between the use of lexical tokens in the datasets of the American politicians: the lists of their top five most frequent terms overlap in three tokens: *ukraine\**, *russia\** and *putin\**. Lexical preferences of British politicians displayed contrastive results: the top five lists of Boris Johnson and Yvette Cooper overlap only in one term – *Ukrain\**.

The collocations of Boris Johnson's tweets reveal his extremely disapproving attitude towards putin's actions. The token *putin* appeared 9 times as a bigram with *regime*, a term with a negative connotation that Boris Johnson used to draw attention to putin's distasteful dictatorial powers (Table 5). Furthermore, Boris Johnson's 2nd most and 4th most frequent trigram was *putin must fail* and *ensure putin fails*, clear indicators that Boris Johnson thinks of putin as the main adversary in the war (Table 5). Boris Johnson's description of putin's military choices as *barbaric* in the 5th most frequent trigram, *putin barbaric invasion*, showcases how immoral he thinks putin's actions are (Table 5).

Additionally, Boris Johnson makes sure to point his criticisms mostly at putin, not at russia as a whole country. The token *russia* didn't show up in the top 5 most frequent bigrams, trigrams, or quadgrams, and although it is the 4th most frequent token in Boris Johnson's tweets, this ranking is lower than that of Marco Rubio's or Joe Biden's tweets (1st and 2nd most frequent token, respectively), suggesting that Boris Johnson does not blame russia for the war, but putin (Table 5). Indeed, Boris Johnson's tweet on March 13th, 2022, supports this idea:

*To the people of Ukraine: Slava Ukraini. To the people of Russia: I do not believe this war is in your name. This crisis, this tragedy, can and must come to an end. Because the world needs a free and sovereign Ukraine.*

However, the token *putin* is sometimes used synonymously with the token *russia\** in the context of the far-reaching isolation of this country from the rest of the world. Boris Johnson arouses the topic of elimination of russian banks from SWIFT, reducing dependence on russian oil, etc. An example of this usage is shown by Boris Johnson's tweet on April 9th:

*The UK will send more defensive weapons to Ukraine and will work with G7 partners to target every pillar of the Russian economy to ensure putin fails.*

The emotion analysis of Boris Johnson's tweets demonstrates his consistently positive outlook on the war. In all his tweets and all his topics, positive emotion had the highest emotion score. He likely kept his attitude positive to prove to the public that his actions were helping the Ukrainian cause. In order to gain public approval, Boris Johnson would want to make sure that he described his actions in the best possible light, demonstrating that his way was working and that he was doing everything he could to support Ukraine.

With trigrams such as *putin must fail* and *putin barbaric invasion*, we would expect that the “putin” topic would have negative emotions as the highest emotion scores. And yet, two of the three highest emotion scores are positive (positive emotion and trust), with positive emotion having the highest score (Table 9). One explanation for this ranking is that Boris Johnson wants his tweets to show positive support for Ukraine (as evidenced by his high scores of positive emotion), and so he would offset and exceed any negative mentions of putin with positive remarks about Ukraine in order to make the main topic of his tweet about supporting Ukraine. For example, on March 15th, Boris Johnson tweeted:

*Putin’s barbaric actions murdering Brent Renaud and other innocent civilians are testing not just Ukraine but all of humanity.  
Speaking to President @ZelenskyyUa I assured him that we will continue to do all that we can to bring an end to this disastrous conflict.*

Despite mentioning “Putin’s barbaric actions” at the beginning, Boris Johnson ends the tweet with claims of fervent support, counteracting the negative emotions surrounding putin with positive ones about supporting Ukraine. As a result, this tweet, which was classified under the “putin” topic, had a positive emotion score of 5 but a negative emotion score of only 3.

The ranking of anticipation as the 2nd highest emotion score in the “Ukraine Support” topic could be attributed to Boris Johnson’s promises of success or intended outcomes of the UK’s actions (Table 9). Consider the following tweet on March 14th:

*I am hugely grateful to our NHS staff, partners and Polish friends for their support in bringing Ukrainian children who need lifesaving medical care to the UK.  
We will do all we can to support them whilst they continue their critical cancer treatment.*

While he does not explicitly promise anything, Boris Johnson pledges that the UK will do all they can to support the NHS and Ukraine. Due to this vow, the tweet’s second highest emotion score was for anticipation (2).

Yvette Cooper’s collocations indicate that she frequently mentions the Home Office of the UK and Priti Patel, the current Home Secretary (Table 6). Given Yvette Cooper’s position of Shadow Home Secretary, her narrow focus on her department seems appropriate. Furthermore, Yvette Cooper seems to mention the conflict in Ukraine only in regard to visas, refugees, and other national security or immigration matters; *famil\**, *home*, *visa*, and *office* were four of her five most frequent tokens, and the token *ukrain\** collocated most frequently with *famil\** and *elderly parents* (Table 6). Additionally, unlike the other politicians studied in this paper, Yvette Cooper’s five most frequent tokens do not include *russia* or *putin* (Table 10). These two tokens also do not make up any of the five most frequent bigrams, trigrams, or quadgrams, further showcasing that Yvette Cooper focuses mostly on how the war in Ukraine affects her department, and not on the conflict itself (Table 6).

She tends to be critical towards her country’s overall involvement, as negative emotion had the highest emotion score for all of her tweets (Table 10). Yvette

Cooper's negativity likely stems from her membership in the Labour Party, the opposing party to the majority party in the UK government, the Conservatives. As a Labour Party MP (Member of Parliament), Yvette Cooper likely disagrees with many of the decisions that the Conservative majority made, resulting in tweets with strong negative emotions. Unlike Boris Johnson or Joe Biden, she will not be held responsible for her country's actions in the war, and she is also not the one making all her country's decisions, so she does not feel the need to shed every action in a positive light like a President or Prime Minister would.

Yvette Cooper's overall negativity transfers over to the Home Office, as the highest emotion score by far for that topic is also negative emotion (Table 10). Specifically, Yvette Cooper often targets Priti Patel, the Home Secretary, in a critical manner. Priti's membership in the Conservative Party likely also plays a role in Yvette Cooper's negative tone and disapproval.

However, when talking only about the UK's aid for Ukraine, Yvette Cooper seems to be more conflicted, with nearly equal scores of positive and negative emotions, followed by the exact same emotion scores for trust and fear. Her more positive attitude towards the UK's support for Ukraine emphasizes how much more critical she is towards the Home Office's actions. Her negative attitude towards the Home Office and not towards the rest of the UK indicates that she finds many more issues with the UK's immigration and visa policies regarding Ukraine, but that she is more neutral regarding other areas of the UK's involvement in the war.

Joe Biden's collocations demonstrate his continuous support to the Ukraine cause. Joe Biden uses a variety of words to express this support, the most frequent tokens paired with *ukrain\** being *support*, *allies*, *partners*, *assistance*, and *defend* (Table 7).

Although Joe Biden frequently describes the war in Ukraine as putin's "war of choice" (based on the trigram *putin war choice*), he doesn't make as clear of a distinction between putin and russia as Boris Johnson does, as evidenced by Joe Biden's 2nd most frequent trigram *hold russia accountable* (Table 7). Joe Biden makes clear that he knows the war is putin's choice and not russia's, but he must hold all of russia accountable in order to stop putin. Like Boris Johnson, Joe Biden also emphasizes the illegitimacy and immorality of russia's attack on Ukraine, describing the invasion as "unprovoked" and "unjustified" in his most frequent quadgram *unprovoked unjustified attack ukrain* (Table 7).

The range of topics identified in the dataset includes the topic of how the global economy is affected by aggressive russian policy. Joe Biden regularly mentions the "putin price hike" in his tweets – the term is his most frequent trigram, used to define the increase of gas prices. He frequently refers to the inflation increase in America, which he blames on putin's invasion of Ukraine, as the "putin price hike" likely in order to deflect blame from himself. Therefore, he uses the trigram *putin price hike* even more than the trigram *support ukrain people*, perhaps because the resulting inflation increase is more relevant to the American people than the war itself (Table 7).

For all of Joe Biden's tweets, positive emotion had the highest emotion score, followed by trust; like Boris Johnson, Joe Biden likely keeps his tone positive to gain public approval by assuring Americans that his actions are working and supporting Ukraine well. For similar reasons, the highest emotion scores for the "Ukraine Support" topic are also positive emotion and trust. His tweets likely have high scores for trust because he wants to demonstrate to the public that he trusts and believes in both the Ukraine cause and his methods so that Americans will also share his beliefs. An example of this trust is shown in a March 27th tweet:

*Rather than breaking Ukrainian resolve, Russia's brutal tactics have only strengthened it. Rather than driving NATO apart, the West is now stronger and more united than it has ever been.*

Joe Biden stated to the public his firm belief that Russia's tactics aren't working and that the West is getting stronger and stronger. The tweet showed his trust in the methods and righteousness of their cause, and so trust (2) had the highest emotion score for this tweet.

Topic modelling of Joe Biden's tweets revealed that he has a considerable amount of tweets on Russian sanctions, further showcasing that although he understands that Putin is at fault for the war, he must hurt Russia as well in order to stop Putin. The highest emotion score for the "Russian Sanctions" topic is positive emotion, a surprising fact given that economic sanctions usually have a negative connotation. However, the high positivity may be because the enacting of sanctions are positive for the U.S. and Ukraine, as the intended outcome is to bring an end to the war. An example that supports this idea is the following tweet on March 1st:

*I just spoke with President Zelenskyy to discuss our continued support for Ukraine — including security assistance and humanitarian aid — as it defends itself against Russian aggression. We will hold Russia accountable, and our sanctions are already having a devastating impact.*

In this tweet, although Joe Biden mentions that the sanctions are "having a devastating impact," they are put in place to aid and support Ukraine. Therefore, positive emotion (6) had a higher emotion score for this tweet than negative emotion (3).

The collocations of Marco Rubio's tweets reveal that, like Boris Johnson and Joe Biden, Marco Rubio also emphasizes the immorality of Putin's invasion of Ukraine. Marco Rubio's most frequent bigram was *war crimes* in reference to many of the Russian military's actions. Furthermore, the only token that *Russia* collocated with in his most frequent collocations was *invaders* (Table 8). Marco Rubio also frequently mentions the idea that Russia will at best have a "costly military victory" (his most frequent trigram), as the war will take an immense toll on Russia even if they win (Table 8).

Emotion analysis shows that negative emotion and fear had the highest emotion scores in all of Marco Rubio's tweets. As a Republican, the opposing party to Joe

Biden's Democrats, Marco Rubio would have a more critical view on America's and Joe Biden's actions regarding the war in Ukraine. Although both political parties support Ukraine, Marco Rubio and other Republicans have views different from Joe Biden's on how America should act on the war. This fact is likely also why negative emotion has the highest emotion score for Marco Rubio's "Ukraine" topic: not because he doesn't support Ukraine, but because he doesn't support some of America's actions involving the war. Additionally, like Yvette Cooper, Marco Rubio is not the one directly making the decisions concerning the war, so he would not feel pressured to praise all his country's actions like Joe Biden and Boris Johnson would.

Topic modelling demonstrates that Marco Rubio often discusses Ukraine's nuclear power plants when talking about the war, unlike the other politicians studied in this paper. Marco Rubio worries that if Russian soldiers damage a nuclear power plant, a devastating radiation leak could occur, further damaging Ukraine. He makes sure to address this possibility and to draw attention to the nuclear power plants to emphasize their importance and the danger they possess.

## Conclusions

The frequency of terms, collocations, topic modelling, and emotion analysis performed in this research revealed the attitudes of politicians regarding different aspects of the war in Ukraine. Topic modelling indicated that when the politicians tweeted about the war, their tweets tended to fall under one of two topics: Putin's actions or Ukrainian support. One exception to this trend was Yvette Cooper, who focused mostly on her own department within the UK government, the Home Office. Additionally, Joe Biden and Marco Rubio showed interest in the topics of Russian sanctions and Ukrainian nuclear plants, respectively. Emotion analysis demonstrated that Joe Biden and Boris Johnson, the leaders and figureheads of their respective nations, often expressed positive emotions such as trust and positivity in their tweets, especially the ones supporting Ukraine, in order to shed their actions regarding the war in the best possible light. Even their tweets regarding Vladimir Putin contained high amounts of positive emotion. Meanwhile, Yvette Cooper and Marco Rubio, two politicians of lower rank than Boris Johnson and Joe Biden, tweeted much more critically about their country's actions in the war, expressing negative emotions such as fear and negativity. Furthermore, Yvette Cooper and Marco Rubio are members of the political parties that are opposite to those of Boris Johnson and Joe Biden, and so their different political views likely resulted in more critical opinions of their country's response.

## References

- Горошко Е. И., Полякова Т. Л. (2011) Лингвистические особенности англоязычного твиттера. *Учені записки Таврійського національного університету імені Вернадського. Сер. Філологія. Соціальні комунікації*, Т. 24(63). № 2(1), 53–58. URL: <http://repository.kpi.kharkov.ua/handle/KhPI-Press/49133>



- Нерян С. О. (2018) Допис у соцмережі як мовленнєвий жанр інтернет- комунікації. *Науковий вісник Херсонського державного університету, Сер. Лінгвістика*, 33(1), 66-70. URL: <https://journals.indexcopernicus.com/api/file/viewByFileId/708692.pdf>
- Ніколаєва, Т. М. (2019). Лексико-семантичні аспекти мови соціальних мереж. *Закарпатські філологічні студії*, 9(2), 96-101. URL: <https://dspace.uzhnu.edu.ua/jspui/handle/lib/33170>
- Полякова Т. Л. (2021). Лексичні засоби в жанрі твітинг в англomовній політичній інтернет-комунікації. *Закарпатські філологічні студії*, 14(1), 177-181. <https://doi.org/10.32782/tps2663-4880/2020.14-1.32>
- Швелідзе Л. Д. (2021) Мовні засоби реалізації комунікативних стратегій у дискурсі соціальних мереж (на матеріалі української та англійської мов) (дис. ... канд. філол. наук). Донецький національний університет імені Василя Стуса, Вінниця. URL: <https://abstracts.donnu.edu.ua/article/view/9878>
- Bird, S. (2006). NLTK: the natural language toolkit. Proceedings of the COLING/ACL 2006 Interactive Presentation Sessions, (69-72). <https://doi.org/10.3115/1225403.1225421>
- Crystal, D. (2011). A Microexample: Twitter. In *Internet Linguistics: A Student Guide*. (pp. 36-56). London and New York: Routledge. Taylor & Francis Group.
- Mohammad, S. M., & Turney, P. D. (2013). NRC Emotion Lexicon. National Research Council, Canada. <https://doi.org/10.4224/21270984>
- Weisser, C., Gerloff, C., Thielmann, A., Python, A., Reuter, A., Kneib, T., & Säfken, B. (2022). Pseudo-document simulation for comparing LDA, GSDMM and GPM topic models on short and sparse text using Twitter data. *Computational Statistics*, 1-28. <http://dx.doi.org/10.1007/s00180-022-01246-z>
- Yin, J., & Wang, J. (2014). A dirichlet multinomial mixture model-based approach for short text clustering. Proceedings of the 20th ACM SIGKDD International Conference on Knowledge discovery and data mining, (233-242). <https://doi.org/10.1145/2623330.2623715>

## References (translated and transliterated)

- Bird, S. (2006). NLTK: the natural language toolkit. Proceedings of the COLING/ACL 2006 Interactive Presentation Sessions, (69-72). <https://doi.org/10.3115/1225403.1225421>
- Crystal, D. (2011). A Microexample: Twitter. In *Internet Linguistics: A Student Guide*. (pp. 36-56). London and New York: Routledge. Taylor & Francis Group.
- Goroshko, E. I., Poliakova, T. L. (2011). Lingvisticheskiie osobennosti angloiazыchnogo tvittera. [Linguistic features of English-language Twitter]. *Ucheni Zapysky Tavriiskoho Natsionalnoho Universytetu Imeni Vernadskoho. Filolohiia. Sotsialni Komunikatsii Series*, 24(63), No 2–1, 53–58. Retrieved from <http://repository.kpi.kharkov.ua/handle/KhPI-Press/49133>
- Mohammad, S. M., & Turney, P. D. (2013). NRC Emotion Lexicon. National Research Council, Canada. <https://doi.org/10.4224/21270984>
- Nerian, S. O. (2018). Dopys u sotsmerezhi yak movlennievyyi zhanr internet-komunikatsii. [A post in a social network as a speech genre of Internet communication]. *Naukovyi Visnyk Khersonskoho Derzhavnoho Universytetu. Linhvistyka Series*, 33(1), 66-70. Retrieved from <https://journals.indexcopernicus.com/api/file/viewByFileId/708692.pdf>
- Nikolaieva, T. M. (2019) Leksyko-semantychni aspekty movy sotsialnykh merezh [Lexico-semantic aspects of the social networks language]. *Zakarpatski Filolohichni Studii*, 9(2), 96-101. Retrieved from <https://dspace.uzhnu.edu.ua/jspui/handle/lib/33170>
- Poliakova, T. L. (2021). Leksychni zasoby v zhanri tvitynh v anhlomovnij politychnii internet-komunikatsii [Lexical means in the genre Tweeting in English political Internet communication]. *Zakarpatski Filolohichni Studii*, 14(1), 177-181. <https://doi.org/10.32782/tps2663-4880/2020.14-1.32>

- Shvelidze, L. D. (2021) Movni zasoby realizatsii komunikatyvnykh stratehii u dyskursi sotsialnykh merezh (na materialy ukrainskoi ta anhliyskoi mov) [Linguistic Means of Implementation of Communicative Strategies in the Social Media Discourse (Based on the Ukrainian and English Languages)]. Unpublished doctoral dissertation. Extended abstract. Vasyl' Stus Donetsk National University, Vinnytsya. Retrieved from <https://abstracts.donnu.edu.ua/article/view/9878>
- Weisser, C., Gerloff, C., Thielmann, A., Python, A., Reuter, A., Kneib, T., & Säfken, B. (2022). Pseudo-document simulation for comparing LDA, GSDMM and GPM topic models on short and sparse text using Twitter data. *Computational Statistics*, 1-28. <http://dx.doi.org/10.1007/s00180-022-01246-z>
- Yin, J., & Wang, J. (2014). A dirichlet multinomial mixture model-based approach for short text clustering. Proceedings of the 20th ACM SIGKDD International Conference on Knowledge discovery and data mining, (233-242). <https://doi.org/10.1145/2623330.2623715>

## Source

CJE gives recommendations for the use of words “orcs,” “ruscists,” and “putin” in the media. Retrieved from <https://imi.org.ua/en/news/cje-gives-recommendations-for-the-use-of-words-orcs-ruscists-and-putin-in-the-media-i45817> (date of access: 7.12.2022)

# Psycholinguistic Aspects of Representing Aggression in Wartime Media Discourse

Liudmyla Kovalchuk <sup>a,\*</sup>, Yuliia Litkovych <sup>a</sup>

<sup>a</sup> *Lesya Ukrainka Volyn National University, Ukraine*

*Received August 14, 2022; Revised September 23, 2022; Accepted October 4, 2022*

**Abstract.** The article focuses on aggression caused by the Russian-Ukrainian war as a vivid phenomenon in media discourse. The paper reveals the psychological aspects of this phenomenon, the reasons for the use of verbal aggression, its forms, and its impact on recipients. The research also explores lexical and stylistic means of representing aggression in the Ukrainian media discourse: online publications in periodicals and posts on social media such as Facebook, Twitter, and Instagram. It has been identified that the frequently used invective vocabulary and creolized memes in the media are specific verbal and nonverbal means of psychological liberation from aggression and destructive influence on the target audience. Based on the results of a survey involving 100 respondents from different regions of Ukraine, 50 of whom were male and 50 female, it was found that aggression serves to expose such dominant negative emotions evoked by the Russian-Ukrainian war as anger and hatred. However, the object of aggression of the people surveyed is strikingly different: for 58% of men it's the Russian president, while for 52% of women – the Russian troops. When asked about the most common forms of aggression, the majority of the respondents claimed that it is expressed by mockery, curses and obscenity. The survey documented the use of the corresponding war-related emotionally charged vocabulary, including neologisms with various word-building patterns and newly formed set phrases, by both females and males to express their aggression verbally. Additionally, the participants of the survey confirmed that creolized memes are effective functional tools with nearly equally distributed percentage of protesting against the war, ridiculing invaders and resisting the Russian propaganda.

**Keywords:** *aggression, wartime media discourse, verbal means, nonverbal means, creolized memes.*

**Ковальчук Людмила, Літкович Юлія. Психолінгвістичні аспекти репрезентації агресії у медіадискурсі воєнного часу.**

**Анотація.** Стаття присвячена агресії, спричиненій російсько-українською війною, як яскравому феномену в медіадискурсі. У роботі розкрито психологічний аспект цього явища, причини застосування вербальної агресії, її форми та вплив на реципієнтів. Також досліджено лексичні та стилістичні засоби репрезентації агресії в українському медіадискурсі, а саме: онлайн-публікаціях у періодичних виданнях і дописах у соціальних мережах, таких як «Фейсбук», «Твіттер» та «Інстаграм». Встановлено, що часто вживана в медіа інвективна лексика та креолізовані меми належать до арсеналу специфічних вербальних та невербальних засобів психологічного звільнення від агресії та деструктивного впливу на цільову аудиторію. За результатами опитування 100 респондентів із різних регіонів України, 50 з яких особи чоловічої статі і 50 жіночої, виявлено, що агресія слугує вираженню таких домінуючих негативних емоцій, викликаних російсько-українською війною, як злість та ненависть. Однак, об'єкт агресії

\* Corresponding author. Liudmyla Kovalchuk,  <https://orcid.org/0000-0002-4531-1326>, E-mail: [kovalchuk.liudmyla@vnu.edu.ua](mailto:kovalchuk.liudmyla@vnu.edu.ua)

© Kovalchuk, Liudmyla; Litkovych, Yuliia, 2022. This is an Open Access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International Licence (<http://creativecommons.org/licenses/by/4.0>). *East European Journal of Psycholinguistics*, 9(2), 67–81. <https://doi.org/10.29038/eejpl.2022.9.2.kov>

опитаних різюче різняться: для 58% чоловіків це президент Росії, в той час як для 52% жінок – російські війська. Для більшості респондентів найпоширенішими формами прояву агресії є насмішка, лайка та прокльон. Опитування засвідчило, що для вербалізації агресії як жінки, так і чоловіки використовують відповідні емоційно забарвлені лексичні одиниці, у тому числі неологізми різної словотвірної приналежності та крилаті вислови, що виникли в період війни. Окрім цього, учасники опитування підтвердили, що креолізовані мему є майже однаково ефективними у відсотковому співвідношенні функційними інструментами протесту проти війни, висміювання окупантів та протидії російській пропаганді.

*Ключові слова:* агресія, медіадискурс воєнного часу, вербальні засоби, невербальні засоби, креолізовані мему.

## Introduction

The present-day study of media discourse provides deep insight into the realm of human emotions. The media can directly influence human consciousness due to the knowledge of human psychology, using language rules and manipulative potential of a language. Naturally, in recent decades there has been a boom of studies devoted to media psychology and verbalization of various emotional states within the media. The multiperspectivity of the study is presented by the works of such prominent scholars as Infante (1987), Giles (2003), Harris (1999), Kirschner & Kirschner (1997), Wallace (1999), Fairclough (1995).

Wartime has always been associated with people's emotional instability, or so-called emotional swings, when anxiety, anger and hatred are temporarily substituted by apathy or euphoria leading to war adaptation. Negative emotions triggered by the war mostly evoke aggression intended to harm the social relations of individuals or groups from the hostile parties.

Such a resonant event as Russia's full-scale invasion of Ukraine on February 24, 2022 has led to a rapid escalation of verbal aggression by Ukrainians towards Russians especially within the media space, where the information war had started long before the military actions took place. In the intensive information flow the Russian propaganda tried to distort a picture of the real situation by means of jugglery and spreading fakes or deep fakes.

In this context verbal aggression has become an effective tool of resisting the information war and the Russian military invasion in its broadest sense. On the one hand, aggression displaces speech tolerance and spreads at a very fast pace in the information space. On the other hand, it can take a variety of forms and be communicated verbally or/and nonverbally thus providing psychological liberation from negative emotions.

Nonverbal aggression is represented by graphic elements, or so-called memes (ideas, images, objects of culture adopted by many members of the community). Creolized memes form a unity of two inhomogeneous (verbal and nonverbal) constituents, reflecting and intensifying the inevitable response to current events and making destructive influence on the target audience.

## Method

Our integrated psycholinguistic study of representing aggression in wartime media discourse involved the application of two analytical methods: 1) a corpus/text analysis of the vocabulary and creolized memes and 2) an empirical survey.

First, we analyzed the invective vocabulary and creolized memes appearing in the Ukrainian media space. We used a method of continuous sampling to assemble a list of both verbal and nonverbal means for expressing aggression in media texts as observed in real discourse. Having analyzed the collected 116 examples of invective vocabulary (neologisms and recontextualized existing words) we differentiated two types of verbal means representing aggression: lexical and stylistic. We classified the invective lexical means according to various criteria: part-of-speech affiliation (mainly verbs and nouns), word-building patterns (affixation, composition, blending, shortening), the object (Russian president, Russian troops, zombified Russians, Russia, countries hesitantly/not supporting Ukraine) and the form (humiliation, curse, obscenity, mockery) of aggression. On the basis of a detailed factual material analysis we singled out different stylistic means of representing aggression used in the media: pejorative grammar, metaphorical antonomasia, euphemisms, periphrasis. Then we systematized and interpreted the creolized memes appearing in the Ukrainian media discourse after February 24, 2022 and distinguished three main targeted messages: deteriorating Russia's status, weakening the image of the Russian president and the Russian military, criticizing NATO and the European Union.

Second, in order to shed light on the psycholinguistic specificity of aggression we conducted an empirical survey with 100 respondents from different regions of Ukraine, 50 of whom were male and 50 female. The exact period of the survey was 20.04.2022 – 20.05.2022. We designed an online questionnaire and advertised it by Viber, Telegram, and corporate mail of the university. The online questionnaire consisted of six closed-ended questions with predetermined options for the respondents to choose from:

Q 1: What are your dominant negative emotions evoked by the Russian-Ukrainian war?

Q 2: Who is the object of your aggression during the war?

Q 3: What are the typical forms of your verbal aggression at wartime?

Q 4: Which group of words do you usually use to discharge aggression?

Q 5: What is your favourite war-related set phrase?

Q 6: In your opinion, what is the function of war-related creolized memes?

Then we processed the collected data automatically by built-in tools of the questionnaire and interpreted the obtained results (for more details see the Discussion and Conclusions section, Table 1).

Verbal aggression as a psycholinguistic phenomenon is viewed as the use of verbal and nonverbal means contradicting the institutional and situational norms of communication to cause psychological harm to the communicative position and self-concept of other people (Krasnobaieva-Chorna, 2021, p. 276). In this context it's

necessary to draw a distinction between verbal aggression, the act of using aggressive language, and verbal aggressiveness, a person's attitude towards using aggressive language (Levine, Beatty, & Limon, 2004).

Generally, verbal aggression is triggered by negative life events accompanied by the accumulation of negative emotions like anxiety, fear, anger, hatred, etc. From this perspective, an example of a disturbing event of the present time is Russia's full-scale invasion of Ukraine, i.e. the so-called hybrid war containing at least two types of confrontation – military and informational ones. The information war is a destructive form of verbal interaction as it presupposes establishing control over people's thoughts, consciousness, ideological benchmarks, the processes of perceiving information in a non-military way and manipulating others through language (Krylova-Grek, 2018, p. 180).

On the one hand, aggressive language, with its tendency to reverberate over social media, harms society individually and collectively. Between cultures, verbal aggression can spiral out of control, leading to bloodshed or even full-scale war. In short, the incendiary effect of excessive verbal aggression represents an imminent danger to civilized society (Hamilton, 2012, p. 6). On the other hand, in case of the Ukraine's resistance to Russia's invasion, verbal aggression contributes to general protesting against the war and provides psychological liberation from negative emotions.

## Results

### Lexical Means of Representing Aggression

On the basis of continuous sampling from different illustrative sources (online publications in such periodicals as *Ukrainska Pradva*, *Holos Ukrainy*, *Den'/The Day*, and *Unian* as well as posts on Facebook, Twitter, and Instagram) we observed various means of verbal aggression that turned out to be extremely powerful elements of emotionally charged media texts. In general, in the current virtualized communicative space there coexist two major trends: 1) the appearance of war-related neologisms and 2) the reintroduction of already existing words with updated meanings.

Like any new phenomenon, the Russian-Ukrainian war has given rise to the emergence of newly formed words and set phrases for verbalization of people's aggression towards the surrounding reality. Buket (2022), a journalist of the Information Agency of the Ministry of Defense of Ukraine – ArmyInform, has compiled a glossary of war-related neologisms and made it public at the official website of ArmyInform. The glossary doesn't claim to be exhaustive as it encounters around 50 war-related neologisms that are constantly either appearing or going out of use. The newly formed vocabulary encompasses a great number of lexical units belonging to different parts of speech, mainly verbs and nouns.

1. The most numerous group of neologisms is represented by the verbs originated from proper names and nouns denoting different types of military weapons: *зукраїнути*

'*zukrainyty*' – be ukrained (humiliate on the global level when someone invades Ukraine); *макронити* '*makronyty*' – look deeply concerned and worried but not to provide real help (like the French president Emmanuell Macron); *шойгувати* '*shoiguvaty*' – pretend at one's working place that everything is going according to the plan (like the Russian Minister of Defence Sergei Shoigu); *джавелінити* '*dzhavelinyty*', *байрактарити* '*bairaktaryty*', *хімарсити* '*himarsyty*', *стінгерити* '*stingeryty*' – destroy the enemy (modern weapons Javelin, Bayraktar, Himars, Stinger used by Ukrainian soldiers); *чорнобаїти* '*chornobaity*' – suffer from ineffectiveness by making the same mistake (Ukrainian village Chornobaivka where Russian troops were destroyed more than 10 times); *відірпенити* '*vidirpenyty*', *нагостомелити* '*nahostomelyty*' – resist the enemy (Ukrainian hero cities Irpin and Hostomel where fierce battles took place).

2. The following nouns also make up a group of newly formed war-related neologisms: *дебахнулько* '*debakhnulko*' – someone who can do much harm because of excessive curiosity and concern; *рашизм* (*ruscism*) – Russian fascism; *натівець* '*nativets*' – someone who doesn't keep promises (NATO as a military alliance refuses to impose a no-fly zone over Ukraine not to be involved in the military confrontation with Russia); *аналоговнет* '*analogovnet*' (something created in Russia), *затридні* '*zatrydni*' – unrealistic plans (Russia's failed "Blitzkrieg" in Ukraine).

On the other hand, a lot of already existing words were recontextualized during wartime, thus testifying to the enormous potential of language resources: *їжак* (*hedgehog*) – a spiky-looking steel obstacle that can divert or delay Russian tanks; *коктейль Молотова / Бандера-смузи* (*Molotov cocktail / Bandera smoothie*) – a homemade weapon (a mixture of a casing, fuel, and a wick) named after the Ukrainian nationalist S. Bandera; *бандеромобіль* '*banderomobil*' – a combat vehicle of the Armed Forces of Ukraine; *привид Києва* (*ghost of Kyiv*) – a collective image of Ukrainian pilots who appear unexpectedly to protect the capital's sky); *бавовна* (*cotton*) – explosion in Russia. The word *troops* borrowed from English into Ukrainian in its transliterated version '*трупс*' possesses the negative meaning of *corps*.

Depending upon word-building patterns we selected lexical units formed by means of:

1) affixation: *путіністи* (*putinists*), *пропагандисти* (*propagandists*), *депутінізація* (*deputinization*), *денацифікація* (*denazification*), *дерусифікація* (*derussification*);

2) composition: *z-монстри* (*z-monsters*), *свинособаки* (*pig-dogs*), *країна-терорист* (*terroriststate*), *Бандера-смузи* (*Bandera smoothie*), *затридні* (*forthreedays*);

3) blending: *Путлер* (*Путін+Гітлер*) – *Putler* (*Putin+Hilter*), *рашисти* (*російські+фашисти*) – *ruscists* (*Russian+fascists*), *бульбофюрер* (*бульбаиш+фюрер*) – *bulbofuhrer* (*bulbash+fuhrer*);

4) shortening: *Пу* (*Путін*) – *Pu* (*Putin*).

On the whole, the manifestation of aggression in periodicals and social media is mostly realized with a help of invectives – non-standard (non-literary) vocabulary

referred to in linguistics as low colloquialisms, jargonisms, slang, vulgarisms; pejorative, negatively coloured, insulting, obscene, scornful, taboo words that contain a seme of insult in their component structure (Mezhov, Navalna, & Kostusiak, 2020, p. 99).

Thus on the basis of a detailed factual material analysis we classified the invectives in accordance with two criteria: 1) the object of aggression; 2) the form of aggression.

1. Taking into account the object of verbal aggression we identified the following groups of lexical units for nominating:

a) Russian president V. Putin: *Путлер (Putler), Пу (Pu), хуйло (khuilo), пуйло (puilo), бункерний щур (bunker rat), шизофренік (schizophrenic), параноїдальний психопат (paranoid psychopath), садист (sadist), тиран (tyrant), кривавий диктатор (bloody dictator), російський фюрер (Russian fuhrer), потвора (monster), скотина (beast), чорт (devil), чмо (shmutsk), лайно (shit);*

b) Russian troops: *орки (orcs), русня (rusnia), рашисти (ruscists), нацисти (nazis), мрази (scums), варвари (barbarians), мародери (looters), вбивці (murderers), кати (executioners), терористи (terrorists), свинособаки (pig-dogs), виродки (bastards), збоченці (perverts), гвалтівники (rapists), біологічне сміття (biological waste), чмоні (chumps);*

c) zombified Russians: *путіністи (putinists), пропагандисти (propagandists), зазомбоване стадо (zombie herd), зомбонація (zombie nation), плем'я з промитими мізками (brainwashed tribe);*

d) Russia: *путінія (putinia), оркостан (orcistan), педерація (pederazia), мордор (mordor), держава-терорист (terrorist state);*

e) countries hesitantly/not supporting Ukraine: *макроніти (macronuty), натівець (nativets), бульбофюрер (bulbofuhrer – Belarusian president Aleksandr Lukashenko), бульбаші (bulbashi – Belarusians), деруни (deruny – Belarusians).*

2. With respect to the form of verbal aggression we singled out the following emotionally loaded set phrases used for humiliating, cursing and mocking everyone supporting the Russian full-scale invasion:

a) humiliation: *Ласкаво просимо до пекла! (Welcome to the hell!); Смерть ворогам! (Death to the enemies!); Покладіть насіння в кишені, щоб соняшники після смерті проросли (Put sunflower seeds in your pockets so that they will grow after you die) – a statement of extreme disgust towards Russian invaders pronounced by a brave Ukrainian woman;*

b) curse and obscenity: *Будьте прокляті, рашисти! (Be damned, ruscists!); Рускій ваєнний карабль, іди на х\*й! (Russian warship, go fuck yourself! / Russian warship, fuck your ass!) – the last communication by a border guard R. Hrybov to the Russian missile cruiser Moskva made during the Russian attack on Snake Island;*

c) mockery: *Увага! Повітряна тривога! Всі в Мавзолей! (Warning! Air alarm! Everyone to the Mausoleum! (Mausoleum – a burial chamber of a deceased person or people); Квиток на прощальний концерт Кобзона (A ticket for Kobzon farewell concert) – physical destruction of the Russian invaders by joining the deceased singer Kobzon; Путін хуйло (Putin khuilo) – a widespread slogan for condemning and poking*



fun at the Russian president originated in 2014 from a football chant performed by FC Metalist Kharkiv and Shakhtar Donetsk.

### Stylistic Means of Representing Aggression

In our opinion, stylistic means of expressing aggression are much more frequently used on social media than in periodicals due to the anonymous verbal interaction or the pseudonym which is often used by authors, as well as the absence of the appropriate response to norm violation.

1. Pejorative grammar as a derogatory graphical means of expressing aggression presupposes the use of decapitalized proper nouns (Buket, 2022): *путін (putin)*, *росія (russia)*, *rf (russian federation)*, *москва (moscow)*, *кремль (kremlin)*.

2. Metaphorical antonomasia is based on the use of names of historical, literary or biblical personages for a person whose characteristic features make him similar to the well-known originals. According to the norms of the Ukrainian language such names are also decapitalized: *зімлер (hitler)*, *фюрер (fuhrer)* – killer of the century (Putin), *сатана (satan)* – absolute evil, people’s instigator to commit sin (Putin), *мордор (mordor)* – terrorist state (Russia), *орки (orcs)* – looters and murderers (Russian troops) from *The Lord of the Rings* by J. R. R. Tolkien. This stylistic device also works in the opposite direction: *Бункерний Щур (Bunker Rat)* – V. Putin, *Кобиляча Голова (Mare’s Head)* – S. Lavrov, *Зливний Бачок (Drain Tank)* – O. Skabeeva, *Бензоколонка (Oil Station)* – Russia.

3. Euphemisms as substitutions of less offensive expressions for expressions suggesting something unpleasant: *негативно народитись (be negatively born)* – die, *задохсотити ‘zadvokhsotyty’* – destroy / kill the enemy, *затрьохсотити ‘zatriokhsotyty’* – wound the enemy, *іхтамнетити ‘ikhtamnietyty’* – neutralize the enemy, *пуйло ‘puilo’* – хуйло ‘khuilo’ (Putin).

4. Periphrasis consists in using roundabout forms of expression instead of simpler ones and conveys individual perception of objects based on their foregrounded important features or qualities: *за поребриком ‘za porebrykom’* – in Russia, *завести трактор (start the tractor)* – apply unexpected methods of fighting, *йти за російським кораблем (follow the Russian warship)* – fail, *дискотека (disco party)* – military actions, *термоточка (thermal point)* – fire; *хлопець з ядерною зброєю (guy with nuclear weapon)* – V. Putin, *друзі Путіна (Putin’s friends)* – Russian troops.

### Aggression in Creolized Memes

War-time media discourse uses not only verbal means, but often introduces graphic elements for representing aggression. The linguists define creolized text or meme as: a) a special kind of text which consists of two inhomogeneous components (verbal and nonverbal); b) verbal and nonverbal components aimed at a complex pragmatic impact on the recipient (Adler-Nissen, Andersen, & Hansen, 2019, p. 75-95).

Since the beginning of the Kremlin's military attack Ukraine's periodicals and social media are full of the creolized memes highlighting the brutalities Russia is inflicting upon the country. Due to extreme popularity and worldwide sharing within the media space their verbal component was immediately translated into English. Having analyzed the illustrative sources, we distinguished the following targeted messages of the creolized memes: significant deteriorating Russia's status in the international arena, weakening the image of both the Russian president V. Putin and the Russian military, as well as lambasting NATO and the European Union for not providing enough help for Ukraine.

Figure 1 vividly shows Russia's full-scale invasion by means of foregrounding the Russian national symbol matrioshka which is much bigger in size than the destroyed territory of Ukraine thus calling on the whole world to react to the enormous scale of the Ukrainian people's suffering and to recognize Russia as a terrorist state (TERRORUSSIA).

Figure 1

*Russia – a Terrorist State* (Facebook, 12.06.2022)



Fig. 2 presents a strong message of opposing the Ukrainian president V. Zelenskyi (HERO) wearing a bulletproof vest who has already become a real political defender for the Ukrainian people by doing his best to resist the military confrontation to the Russian leader V. Putin (ZERO), a cruel dictator, sitting in his bunker and justifying Russian's war against Ukraine.

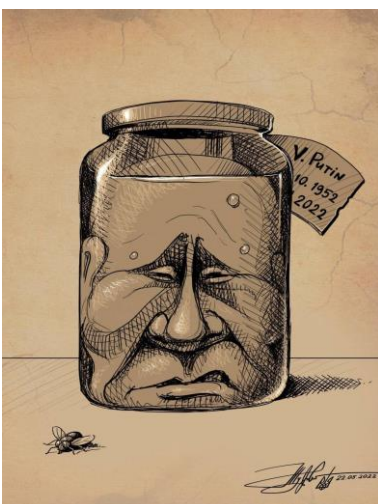
Figure 2  
*V. Zelenskyi vs V. Putin* (Twitter, 01.03.2022)



A great number of war-related creolized memes apply humour as an effective tool of resisting the information war. On the one hand, it can bring people together and allow them to blow off tension of everyday life. On the other hand, when a society experiences distressing events, satire and dark humor can help people counter feelings of powerlessness and grief. Humor can persuade the public that repressive tactics are hilarious and excessive (Dziubina, 2016).

As we may see, Fig. 3 demonstrates mocking V. Putin who is depicted as already dead in 2022, with his head preserved in a glass jar. Such a creolized meme vividly expresses a common desire of all Ukrainians to see Putin's death as soon as possible and makes people smile serving as a form of encouragement not to be defeated.

Figure 3  
*V. Putin's Death* (Facebook, 25.05.2022)



The well-known set phrase “Russian warship, go fuck yourself” originally spoken in Russian that has become a rallying cry for Ukraine’s defenders in protests and demonstrations around the world and the most favourite creolized memes was finally immortalized on a postal stamp. Fig. 4 highlights a view of a Ukrainian soldier giving the middle finger to a Russian warship moving closer. The stamp is a masterful public image campaign boosting the national fortitude.

Figure 4  
*Russian Warship* (Twitter, 16.03.22)

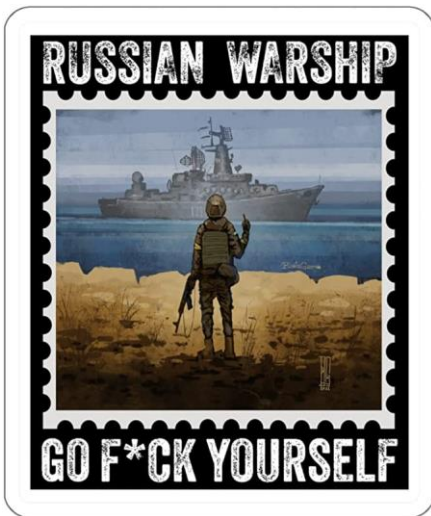
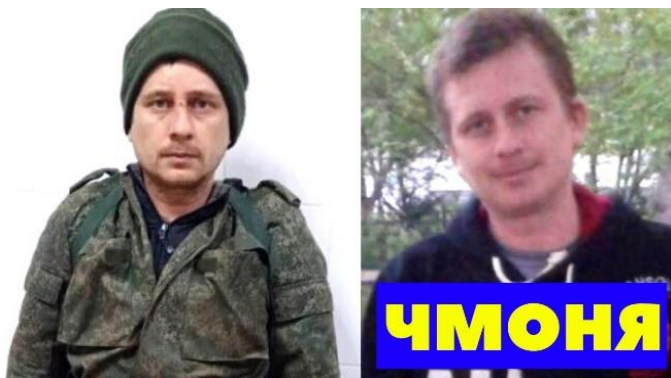


Fig. 5 displays weakening the image of the Russian military. Andrii Riazantsev, a Russian occupier, who surrendered to the Ukrainian military, has become a new Internet meme. He was even given the nickname Chmonia (looser or chump). The audience created humorous videos with the invader and ridiculed the soldier’s awkward appearance as a representative of “the second army of the world” with under-equipped troops lacking supplies and showing low morale.

Figure 5  
*Chmonia* (Unian, 29.03.2022)



Humor as a form of aggressive expression is also a counter-propaganda tool that provides a different interpretation to the main narrative, weakening the propagandist's message. Britain used satirical radio programs to reach ordinary German people during World War II. Today images of periodicals and social media give modern information warfare a visual twist (Bleiker, 2018).

Multiple reports state that the Russian troops came to Ukraine not only to “save and liberate” but also to steal money, jewelry, clothes, rugs, kettles, washing machines, etc. Consequently, the key element of a great number of the present-day creolized memes is a washing machine. Fig. 6 vividly shows ironic ridiculing of the Russian invaders demonstrating the stolen washing machines attached to the helicopters as their “major trophies” during the military parade in Moscow on Victory Day.

Figure 6

*Washing Machines at the Military Parade* (Facebook, 08.04.2022)

#### RUSSIAN MILITARY PARADE 2022



Fig. 7 illustrates a meme that lambasts NATO for not closing the sky and providing enough help for Ukraine by means of a snapshot of a film star Mel Gibson sitting next to Jesus Christ in his 2005 “The Passion of the Christ” drama – barefoot, dressed in a tunic dipped in blood, with a crown of thorns on his head as a symbol of long-suffering Ukraine.

Figure 7

*NATO is Against a No-Fly Zone over Ukraine* (Instagram, 10.03.2022)



Irony, satire and cynicism in memes help Ukrainian people cope with stress, damage, uncertainty and brutality around them. Memes are an outlet for releasing excessive aggression so that Ukrainians are not engulfed in horror, a psychological defense mechanism so that a person doesn't get too affected by the sight of flesh, blood and so on (Maddox, 2022).

Thus the creolized memes are integral verbal and nonverbal media communication devices that help people shape and share important narratives, boost morale, and reflect upon the new reality and experiences for the sake of protesting against the war and ridiculing invaders.

## Discussion

In order to provide a more profound understanding of the reasons of aggression, its typical forms, verbal and nonverbal means of representation in wartime media discourse we conducted a survey. An online questionnaire included six closed-ended questions presented in the table below, along with the respondents' replies to these questions (see Table 1).

Table 1

*Survey questions and results obtained from the respondents' replies*

Q 1 What are your dominant negative emotions evoked by the Russo-Ukrainian war?			
Females		Males	
18%	anxiety	16%	anxiety
18%	fear	8%	fear
26%	anger	31%	anger
36%	hatred	42%	hatred
2%	apathy	3%	apathy
Q 2 Who is the object of your aggression during the war?			
Females		Males	
28%	Russian president V. Putin	58%	Russian president V. Putin
5%	Russian troops	30%	Russian troops
16%	zombified Russians	8%	zombified Russians
3%	Russia	2%	Russia
1%	countries hesitantly/not supporting Ukraine	2%	countries hesitantly/not supporting Ukraine
Q 3 What are the typical forms of your verbal aggression at wartime?			
Females		Males	
2%	threat	2%	threat
1%	humiliation	12%	humiliation
22%	curse	25%	curse
14%	mockery	20%	mockery
52%	obscenity	39%	obscenity

Q 4 Which group of words do you usually use to discharge aggression?

Females	Males
28% Putler, Pu, khuilo, puilo, bunker rat, schizophrenic, paranoid psychopath, sadist, shit	51% Putler, Pu, khuilo, puilo, bunker rat, schizophrenic, paranoid psychopath, sadist, shit
60% orcs, ruscists, looters, pig-dogs, z-monsters, bastards, perverts, biological waste	37% orcs, ruscists, looters, pig-dogs, z-monsters, bastards, perverts, biological waste
9% putinists, propagandists, zombie herd, brainwashed tribe	8% putinists, propagandists, zombie herd, brainwashed tribe
2% putinia, orcostan, rf, pederazia, ruzzia, mordor, terrorist state	2% putinia, orcostan, rf, pederazia, ruzzia, mordor, terrorist state
1% macronyty, nativets, bulbofuhner, bulbashi, deruny	2% macronyty, nativets, bulbofuhner, bulbashi, deruny

Q 5 What is your favourite war-related set phrase?

Females	Males
68% Russian warship, go fuck yourself!	42% Russian warship, go fuck yourself!
16% Put sunflower seeds in your pockets so that they will grow after you die.	11% Put sunflower seeds in your pockets so that they will grow after you die.
8% A ticket for Kobzon farewell concert.	16% A ticket for Kobzon farewell concert.
8% Putin – khuilo!	31% Putin – khuilo!

Q 6 In your opinion, what is the function of war-related creolized memes?

Females	Males
36% protest against the war	34% protest against the war
33% mockery of invaders	34% mockery of invaders
31% resistance to Russian propaganda	32% resistance to Russian propaganda

## Discussion and Conclusions

Having analyzed the respondents' replies, we came to the conclusion that verbal aggression at wartime is mainly evoked by such prevailing negative emotions as anger (for 26% of females and 31% of males) and hatred (for 36% of females and 42% of males). Differences to Q1 did not vary by gender ( $p=.12$ ). However, the survey demonstrated a striking difference regarding the object of aggression: 58 % of men defined it as the Russian president V. Putin, whereas 52% of women – the Russian troops. Indeed, there was a significant difference in pattern of responding on Q2 ( $p=.0004$ ). With respect to the forms of verbal aggression, the most frequent ones are mockery, curse and obscenity. The responses of females and males demonstrated the use of the corresponding emotionally loaded vocabulary to discharge aggression directed towards their objects. No sex differences were observed on Q3 ( $p=.49$ ). For the majority

of women (60%) the verbalization of aggression is realized by lexical units nominating the Russian troops (*orcs, ruscists, looters, pig dogs, z-monsters, bastards, perverts, biological waste*), while for most men (51%) – the Russian president V. Putin (*Putler, Pu, khuilo, puilo, bunker rat, schizophrenic, paranoid psychopath, sadist, shit*). Indeed, the pattern of responding on Q4 showed a significant gender difference ( $p=.01$ ). Naturally, the most favourite war-related set phrase for the respondents of both sexes is “*Russian warship, go fuck yourself*”. Nonetheless, there was a significant gender difference in the pattern of responding on Q5 ( $p=.0002$ ). The last question was designed to clarify the role of a great variety of the creolized memes in wartime media discourse. The survey results demonstrated that the representatives of both sexes distributed the functional potential of memes as protesting against the war, ridiculing invaders and resisting Russian propaganda with nearly equal percentage (more than 30% for each function) that serves to express aggression both verbally and nonverbally in wartime media discourse. No gender difference was observed ( $p=.96$ ).

The results of the study testify to the strong tendency of applying aggression as an effective tool of the information war in the Ukrainian media discourse. Attention has been focused on the specific arsenal of representing aggression both verbally and nonverbally. Among verbal means we differentiated lexical (war-related neologisms and words with updated meanings) and stylistic (pejorative grammar, metaphorical antonomasia, euphemisms, and periphrasis) resources. We singled out the invectives (negatively charged words and set phrases) in accordance with two criteria: the object of aggression (Russian president, Russian troops, zombified Russians, Russia, countries hesitantly/not supporting Ukraine) and the form of aggression (humiliation, curse, obscenity, mockery). Besides, the most vivid examples of the creolized memes combining verbal and nonverbal components made it possible to assert that they record the lived experience of the Ukrainian citizens fighting and fearing for their lives at wartime. Being impolite, aggressive and even humorous, the creolized memes establish a narrative framework for the target audience to know how to think and feel about Russia’s invasion of Ukraine and possess the powerful functional potential of protesting against the war and ridiculing the Russian invaders.

To conclude, our survey demonstrated that the contemporary frequent use of the emotionally loaded invective vocabulary and creolized memes within the media space assists in resisting the informational confrontation and contributes to the liberation from aggression triggered by the Russian-Ukrainian war for the sake of psychological balance.

## References

- Adler-Nissen, R., Andersen, K. E., & Hansen, L. (2020). Images, emotions, and international politics: The death of Alan Kurdi. *Review of International Studies*, 46(1), 75–95.  
<https://doi.org/10.1017/S0260210519000317>
- Bleiker, R. (2018). Mapping visual global politics. In R. Bleiker, (Ed.). *Visual Global Politics*. (pp. 1-29). New York: Routledge,



- Dziubina, O. I. (2016). Klasyfikatsiia, struktura ta funktsionuvannia Internet-memiv v sotsialnykh merezhakh Twitter ta Facebook [Classification, structure and functioning of Internet memes on social networks Twitter and Facebook]. *Molodyi Vchenyi*, 2, 375–379.
- Fairclough, N. (1995). *Media Discourse*. London: Edward Arnold.
- Giles, D. (2003). *Media Psychology*. Mahwah, New Jersey, London: Lawrence Erlbaum Associates.
- Hamilton, M. A. (2012). Verbal aggression: Understanding the psychological antecedents and social consequences. *Journal of Language and Social Psychology*, 31(1), 5–12. <https://doi.org/10.1177/0261927X11425032>
- Harris, R. J. (1999). *A Cognitive Psychology of Mass Communication* (3rd ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Infante, D. A. (1987). Aggressiveness. In J. C. McCroskey, & J. A. Daly, (Eds.). *Personality and Interpersonal Communication* (pp. 157-192). Newbury Park, CA: Sage.
- Kirschner, S., & Kirschner, D. A. (1997). *Perspectives on Psychology and the Media*. Washington, DC: American Psychological Association.
- Kovalchuk, L., & Litkovych, Yu. (2022). Verbalization of Aggression in Wartime Media Discourse. Data. Retrieved from <https://osf.io/b8tdf>
- Krasnobaieva-Chorna, Zh. (2021). Typolohiia verbalnoi ahresii prof. Dominika A. Infante: sprobha frazemnoi adaptatsii [Typology of verbal aggression of prof. Dominic A. Infante: An attempt to phrasemics adaptation]. *Zapysky z Ukrainskoho Movoznavstva. Suhestyvna Linhvistyka. Komunikatyvna Linhvistyka*, 28, 275-283. <https://doi.org/10.18524/2414-0627.2021.28.235553>
- Krylova-Grek, Yu. (2018). Psycholinguistic aspects of the semantic field of the concept “war” in modern media space. *Psycholinguistics*, 23(1), 175-188. <https://doi.org/10.5281/zenodo.1211561>
- Levine, T. R., Beatty, M. J., & Limon, S. (2004). The dimensionality of the verbal aggressiveness scale. *Communication Monographs*, 71, 245-265.
- Maddox, J. (2022). Ukraine’s official Twitter handle is processing the nation’s trauma in real time with memes. Retrieved from <https://scroll.in/article/1019262/ukraines-twitter-handle-is-processing-the-nations-trauma-real-time-with-memes>
- Mezhov, O., Navalna, M., & Kostusiak M. (2020). Invective vocabulary in media discourse of the beginning of the 21st century: a psycholinguistic aspect. *East European Journal of Psycholinguistics*, 7(1), 97–110. <https://doi.org/10.29038/eejpl.2020.7.1.mez>
- Wallace, P. (1999). *The Psychology of the Internet*. Cambridge: Cambridge University Press.

## Sources

- Buket, Ye. (2022). *ArmiiaInform predstavliaie slovnyk neolohizmiv ukrainskoi movy* [ArmyInform presents a dictionary of neologisms of the Ukrainian language]. Retrieved from <https://armyinform.com.ua/2022/07/20/armiyainform-predstavlyaye-slovnyk-neologizmiv-ukrayinskoyi-movy/>
- Buket, Ye. (2022). *Znevazhlyva hramatyka viiny: vlasni nazvy ta imena ahresora pyshemo z maloi litery* [Derogatory grammar of war: decapitalized proper names and aggressor names]. Retrieved from <https://armyinform.com.ua/2022/03/16/znevazhlyva-gramatyka-vijny-vlasni-nazvy-ta-imena-agresora-lyshe-z-maloyi-litery/>
- Den’/The Day. (2022). <https://day.kyiv.ua/uk>
- Golos Ukrainy. (2022). Retrieved from <http://www.golos.com.ua>
- Ukrainska Pradva. (2022). Retrieved from <https://www.pravda.com.ua>
- Facebook. (2022). Retrieved from <https://www.facebook.com>
- Instagram. (2022). Retrieved from <https://www.instagram.com>
- Twitter. (2022). Retrieved from <https://twitter.com/ukraine>
- Unian. (2022). Retrieved from <https://www.unian.ua>

# Psycholinguistic Approach to the Analysis of Manipulative and Indirect Hate Speech in Media

Yuliya Krylova-Grek \*

*University of Hradec Králové, the Czech Republic*

*Received July 3, 2022; Revised November 29, 2022; Accepted December 6, 2022*

**Abstract.** The present study takes a psycholinguistic approach to the analysis of Russian media texts published between December 1, 2020 to May 31, 2021. I aimed to provide a scientific basis for the existence of manipulative and indirect hate speech using an interdisciplinary methodology comprising linguistic, psycholinguistic, and other analytical methods such as fact-checking and logical analysis. This facilitated the identification of techniques employed by the authors of the respective texts. In the article, I describe how I use the methodology to analyse media texts. I discovered that three basic types of hate speech were used to influence the audience's consciousness: (1) direct hate speech; (2) indirect (hidden) hate speech; and (3) manipulative hate speech. The first and second types were the most common. This may be explained by the fact that direct hate speech is condemned by international organisations and its use may be a reason for lawsuits against media outlets and their further penalisation. Texts with evidence of the second and third types of hate speech aimed to create a negative attitude toward a particular nationality, race, citizen, and so on. I consider such behaviour to be an early manifestation of widespread discrimination and other forms of intolerance, including possible violence and genocide. The present study was carried out in collaboration with a Crimean human rights group. The author was invited to participate as an expert in the field of psycholinguistic textual analysis. The research was prepared and completed at the beginning of February 2022, on the eve of the invasion of Ukraine. We have gathered evidence of indirect and manipulative hate speech that dehumanised, demonised, and marginalised Ukrainian citizens. This has led to violence against the civilian population and high numbers of casualties. The aforementioned methodology will continue to be used in the analysis of current media content.

**Keywords:** *media text, psycholinguistic analysis, Ukraine, war, hate speech.*

**Крилова-Грек Юлія. Психолінгвістичний підхід до аналізу маніпулятивної та прихованої мови ворожнечі в медіа.**

**Анотація.** У роботі описано психолінгвістичний підхід до аналізу медіаконтенту, зокрема представлено результати дослідження текстів ЗМІ, що акредитовані Роскомнадзором за період з 1 грудня 2020 до 31 травня 2021 року. Мета дослідження полягала в науковому обґрунтуванні наявності маніпулятивної та непрямой мови ворожнечі серед поданих на експертизу медіатекстів. Для проведення дослідження використовувалась авторська методика психолінгвістичного аналізу тексту, яка базується на міждисциплінарному підході та включає психологічні, лінгвістичні та психолінгвістичні методи аналізу текстів, а також інші аналітичні методи, наприклад, факт-чекінг, аналіз логіки побудови тексту, відповідність стандартам журналістики. Метод психолінгвістичного

---

\* Yuliya Krylova-Grek,  <https://orcid.org/0000-0002-2377-3781>, E-mail: [yulgrek@gmail.com](mailto:yulgrek@gmail.com)

аналізу тексту дає змогу виявити методи та прийоми, якими послуговується журналіст для розповсюдження прихованої та маніпулятивної мови ворожнечі. У результаті роботи авторка дійшла висновку, що сучасні медіа послуговуються трьома типами мови ворожнечі, розподіленими нами залежно від мовленнєвих та немовленнєвих засобів, що використовуються у тексті для здійснення впливу на свідомість читача: 1 тип – пряма мова ворожнечі; 2 тип – непряма мова ворожнечі; 3 тип – маніпулятивна мова ворожнечі. Виявлено, що журналісти здебільшого використовували другий та третій тип мови ворожнечі, оскільки використання прямої мови ворожнечі засуджується на законодавчому рівні, та може призвести до судових позовів та стягування штрафів з медіавидання. Тексти з ознаками мови ворожнечі є інструментом маніпуляції та впливу на свідомість читацької аудиторії з метою створення негативного ставлення до національної, расової приналежності, громадянства тощо. Таку поведінку медіа розглядаємо як початковий етап роздмухування дискримінації, насилля та інших проявів нетерпимості. Робота виконувалася у співпраці з Кримською правозахисною групою в межах міжнародного проекту, до якого авторка була залучена як експерт-психолінгвіст. Дослідження було завершено на початку лютого 2022 напередодні військового вторгнення в Україну. У межах цього дослідження з'ясовано, що систематичне розповсюдження мови ворожнечі вплинуло на сприйняття російським суспільством українців та України, сприяло дегуманізації, демонізації та маргіналізації, що в підсумку вилилося в насильницькі дії проти цивільного населення України. Наразі методологія продовжує використовуватися для аналізу медіаконтенту в теперішній ситуації.

*Ключові слова:* медіатекст, психолінгвістичний аналіз, Україна, війна, мова ворожнечі.

## Introduction

Under modern conditions, the media play an increasingly important role in the formation of public opinion during conflicts and crises, both internally and internationally. The situation in Ukraine has become an example of the foundation on which it is possible to observe the consequences of the informational war and the methods journalists use in their work.

The media's responsibility for inciting hate speech, which can lead to discrimination, violence, and genocide, is stated in Recommendation No. (97) 20 of the Committee of Ministers of the Council of Europe. The Recommendation states that member states, together with local authorities and other officials, are responsible for statements in the media which can contribute to the dissemination of racial hatred, xenophobia, and other forms of discrimination. The recommendations emphasise that while evaluating the work of a media professional, a clear distinction should be driven between the responsibility of a person expressing information that incites hatred and the responsibility of media professionals involved in disseminating such ideas (Recommendation No. R (97) 20).

In this research, I examined the role of the media in shaping negative and hostile attitudes toward certain groups. Specifically, it relates to how the media create the preconditions for future discrimination and possible genocide that generates considerable interest. In the current research, I considered the example of neighbouring communities and government agencies that coexisted peacefully before the informational aggression.

There are numerous examples of informational aggression throughout history when the dissemination of hate speech would lead to murders on the basis of racial, national, ideological, and other differences. For example, the massive Tutsi genocide in Rwanda in 1994 had been provoked by large-scale anti-Tutsi rhetoric on local radio over almost a year (Yanagizawa-Drott, 2014; Melvern, 2004), the Srebrenica massacre (13-22 July 1995) which was preceded by an anti-Muslim information campaign in the Serbian media, which was controlled by Milosevic's government (DellaVigna et al., 2014), and the state terror of Muslims in Myanmar (Selth, 2004).

In the current study of hate speech, certain difficulties in defining the concept of "hate speech" are noted. The main reasons for the difficulties in interpreting the concept lie in the legal and ethical planes: 1) nowadays, there is no unification of the "hate speech" concept in the legislation of different countries; 2) differences exist in the interpretation of the concept in academic science and legal practice (Howard, 2019; Tontodimamma et al., 2021; Strossen et al., 2016; Waldron, 2012, etc.); 3) while determining whether the language used contains hostility, the problem lies in how to delineate the boundary between where freedom of speech ends and the language of hostility begins (Sellars, 2016); and 4) the same statements are perceived differently in various cultures and so may be considered as both offensive and an expression of freedom of speech from different viewpoints. (Salminen et al. 2018).

Douglas (2012) and Ben-David et al. (2016) have considered hate speech in social media. In particular, Douglas (2012) stresses that despite a number of studies investigating hate speech, there is a lack of research exploring its consequences, so this problem should be considered more thoroughly. Ben-David et al. (2016) studied overt and covert hate speech on Facebook in Spanish society and stressed that despite the website's algorithm settings blocking overt hate, covert hate speech is widespread on social media via the "comment," "like," "share," or "report" buttons. In this regard, he stresses that it is not sufficient to use as the only method of content analysis for the identification of covert hate speech; instead, non-linguistic tools, technological affordances, and so on should be taken into consideration. In my research, I consider a set of extra factors such as language means, non-linguistic tools, text building, and social content.

One of the ways to analyse hate speech in the text is linguistic analysis, which often involves identifying the lexical meanings of words in context. At the same time, it is often insufficient, as it is important to consider other factors (current situation, state-society relations, channels of spreading, affected emotions etc.) which influence the creation, perception, and interpretation of texts (Leets, 2002; Fairclough, 2003; Machikova, 2015; Matsuda et al., 1993; Whillock & Slayden, 1995; Paz et al, 2020).

Thus, substantiation of the presence of hate speech in the text requires an interdisciplinary scientific approach that will be applicable in legal practice.

In the current research, journalists' work was investigated from the psycholinguistic point of view; specifically, the work considered the linguistic and non-linguistic tools used to influence the audience.

I considered Russian-language media texts covering the period 1 December 2020 to 31 May 2021. These media outlets were officially registered in Russia and transmitted information on the territory of the Russian Federation and Crimea. The texts were selected using a content analysis programme.

By analysing the selected texts, I took notice of the fact that journalists often use hate speech bypassing formal legal prohibitions (direct insults and calls for action). I deem this manner of hate speech dissemination to be indirect or manipulative.

*The aim of the research* is 1) to substantiate the existence of hate speech in officially registered Russian online media outlets; 2) to identify the types of hate speech used by modern journalists; 3) to show the methods and techniques used by journalists to spread hidden and manipulative hate speech; and 4) to identify whether hate speech in the analysed publications is systematic and purposeful in order to discriminate, dehumanise, and marginalise the community by language and nationality.

*The hypothesis* is that the psycholinguistic analysis of media outlet content will allow the study to reveal the hidden and manipulative language of hostility and to determine whether it is systemic, which allows the prediction of possible manifestations of discrimination, mass killing, or genocide.

## Method

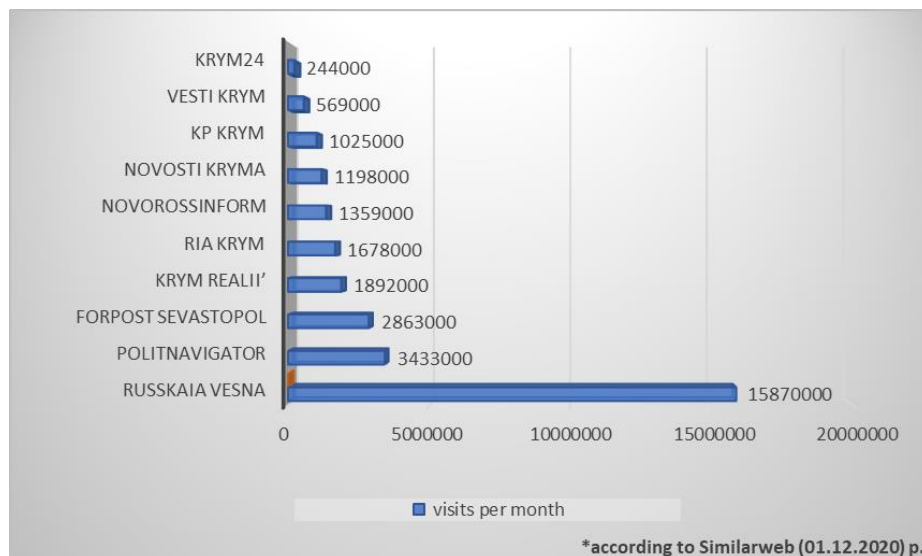
To detect hate speech, I used the author's methodology of psycholinguistic text analysis (patent registration #30563 / 3M / 22). The methodology helps to provide a scientific basis for the existence of manipulative and indirect hate speech with the help of an interdisciplinary methodology. The methodology comprises linguistic, psycholinguistic, method of content analysis and analytical methods such as fact-checking and logical and structural analysis.

The methodology involves analytical linguistic means and non-linguistic tools that are used by journalists, because non-linguistic tools are an important instrument of visual impact on readers' consciousness (photographs, pictures, font and colour, and so on).

In addition, I consider adherence to journalism standards and ethical norms (standards). The methodology requires the consideration of both words and sentences both in the context of the whole text and in the context of the current situation.

For text selection, I used the method of *content analysis* that was carried out with a computer programme technically developed by a specialist belonging to a Crimea Human Rights group. The programme selected texts according to key units that include words and word combinations from ten Russian online media outlets published in Russia and in Ukrainian territories occupied by the Russian Federation. These sites have more than 1 million visitors per month: "Forpost Sevastopol", "RIA Krym", "KP Krym", "Novosti Kryma", "Krym Realii", "Russkaia vesna", "Politnavigator", "Novorossinform", "Krym24", and "Vesti Krym" (see Fig. 1).

Figure 1  
*The Audience of Selected Sites*



The key units (words and word combinations) were gathered from 2014-2017 and express hate, humiliation, negative sarcasm, offence, and other manifestations of hate speech to ethnic groups, nationalities, languages, or gender. During the research the list of words has been constantly supplemented by new words and word combinations.

All selected key words and combinations were gathered in the hate speech dictionary that comprises more than 400 words and word combinations (Sedova & Pechonchik, 2018). Moreover, because the specifics of the newly-created words are unclear for people who are not Russian or Ukrainian native speakers, I constructed a special dictionary where the meaning of these words and expressions are explained (Sedova & Krylova-Grek, 2021).

Among linguistic methods used were lexical and semantic analysis. I use lexical and semantic analysis to identify the meaning of the words and their combinations in context. To carry out such an analysis, researchers usually use dictionaries that offer different explanations and propose several meanings of the word. The lexical approach to text analysis can also be used to consider ambiguous texts to clarify the meaning of certain words or expressions in the context (Kukushkina, 2016). At the same time, while analysing the text we should take into consideration word sense disambiguation, the relationship between them in the text, and the situation in society and culture, because in one situation text that sounds like a joke can be highly painful or offensive in another.

*Psycholinguistic methods.* I used the word association test (WAT) and adapted it to the study. In the text, the associations were connected with the archetypes of the Second World War that are used for the description of the Ukrainians and Ukraine government, for example, such words as “fascist”, “fascism”, “nazi”.

Moreover, based on the phonetic similarity of the words “Nazi” and “nationalism” in Ukrainian and Russian, journalists use the word [natsist] instead of [natsionalist] (Nazi, nationalist).

Considering text as a tool of psychological influence, we also pay attention to media headlines. These attract auditory attention and can form the audience’s opinion and influence its point of view before they read the larger text (Ungerer, 2000). Schneider (2000) considers the headlines and tags of publications as markers of meanings that influence the perception of information before the text is read. Modern information technologies also influence the process of perceiving information: readers are inclined to perceive information quickly and look at headlines, abstracts, and pictures (Outing, 2004). Therefore, if we are talking about the psychological influence surrounding perceiving information, headlines and tags can be considered as tools to influence readers’ consciousness.

*The analysis of the text logic* allows us to identify whether there are logical errors, as well as the faults that affect the meaning of the text and manipulate the facts. Stenberg & Karasik (1993) considered subverted logic within text to be language manipulation, because it leads to fact distortion and misrepresentation; for example, the fallacies related to argumentation, informal fallacies, causation fallacy, and so on.

*The analysis of non-linguistic means*, such as photographs, drawings, and iconography, show all of these serve to reinforce the textual material. These tools need additional verification for the conformity of the information they illustrate and the conformity of the photo to its original appearance (whether there are added details or whether certain elements of the photograph were erased; whether the iconographic information corresponds to facts, etc.).

*Standards of journalism.* The detection of violations of journalistic standards is an extra sign of a journalist's involvement, a lack of objective coverage of events, and support of negative rhetoric towards certain groups or individuals. While evaluating the text, I used the Principles on the Conduct of Journalists adopted by the Bordeaux Declaration in 1954, amended in 1986 (IFJ Declaration of Principles on the Conduct of Journalists, 1954 [1986]).

Our methodology was tested and implemented in a project aimed at studying the language of hostility in the editions published in the occupied territory of Crimea. In the present study, I applied the methodology to identify and prove the presence of hate speech in media outlets.

The information aggression against Ukraine and Ukrainians has been in force since 2014, and on February 24, 2022, it transformed into military aggression. On the example of Ukraine, we saw the Russian media create a dehumanised image of Ukrainians. Consequently, we observed how the Russian military's perception of Ukrainians as “under-people” led to the mass killing based on the people’s citizenship, nationality, and language.

In this paper, the results of the study of the online media content produced in occupied Crimea are presented. Eleven popular Russian-language online publications, with an average readership of more than one million per month, of which the share of Ukrainian readers is at least 25%, were selected for the study. We used the AI (artificial intelligence) platform of media monitoring called “Semantrum” to identify quantitative indicators of attendance (<https://promo.semantrum.net/en/main/>). The complexity of the work was twofold: defining the concept of hate speech and proving the presence of manipulative and hidden hate speech, as from the legal point of view hate speech includes direct insults and calls for violent or discriminatory actions against a group of people based on their race, ethnicity, gender, etc.

Taking into consideration the definition of hate speech in such reputable sources as the Cambridge Dictionary and the United Nations Strategy and Plan of Action on Hate Speech, I define hate speech as a concept with several common traits.

According to the Cambridge Dictionary, hate speech includes public statements that spread hatred or incitement to violence against a person, group of people on the basis of race, religion, gender and other characteristics (Cambridge Dictionary). Wardon (2012) states that hate speech refers to any public communication that attacks or uses derogatory or discriminatory statements about a person or a group of persons on the basis of who they are. The United Nations considers hate rhetoric to be any communication, be it oral, written, or behavioural, that attacks or uses derogatory or discriminatory words and expressions against a person or a group of persons on the basis of who they are; in other words, based on their religion, ethnicity, race, nationality, social origin, gender, and other factors of identity pain. Such expressions and words create intolerance, hatred, and can be humiliating and cause pain (UN Strategy and Plan of Action on Hate Speech, 2019).

As a result, we define hate speech in the media as public statements that humiliate, marginalise, dehumanise, and demonise groups of people based on their race, religion, gender, ethnicity, nationality, language, and other factors. In addition, statements containing hate speech may include calls for violence and discrimination. Publications containing hate speech create intolerance, hatred, and can lead to discrimination and violence.

The difficulty of detecting and proving the presence of hate speech is related to the methods and techniques used by journalists to circumvent formal legal prohibitions and avoid the use of profanity or outright calls for violence. We define this way of spreading hate speech indirect or manipulative.

The hate speech used by the Russian media in the publications selected for our study was void of indirect and manipulative forms of expression, which formally relieved news agencies of legal responsibility for disseminating hate speech.

Depending on the methods and techniques used by journalists in their publications, three types of hate speech used in the Russian media were identified:

Type#1 direct hate speech;



Type#2 indirect hate speech;

Type#3 manipulative hate speech.

The evidence from our study highlighted the techniques that have been increasingly used by online news outlets to discriminate against certain social groups based on people's nationality and religion.

*#1 direct hate speech:* This is defined as incitement to hatred through the use of obscenities, direct insults, dehumanisation (e.g., comparison of humans with animals), calls for action on discrimination, and violence.

It is vital to emphasise that even if a text does not contain direct insults, discriminatory statements, or direct calls for violence, its general content does contain signs of humiliation and marginalisation by a person's nationality, language, and citizenship. Such texts are categorised as those possessing hidden and manipulative language of hostility. With the help of the author's methodology of psycholinguistic text analysis, the instances of both direct and hidden hate speech usage by journalists were singled out and explained.

*#2 indirect or hidden hate speech:* This includes dehumanisation and marginalisation of members of ethnic groups, demonstrations of contempt for these groups or their culture or religion, the distortion of historical facts, sarcasm and humiliation, offensive ethnonyms, the separation of the "in-group" from the "out-group", the generalisation of negative stereotypes as a typical trait of the whole group, and creating new words with negative connotations for members of ethnic groups. To spread the second type of hate speech, modern mass media exploits contempt and ridicule, deliberate exaggeration, or bracketing, which gives the word a figurative meaning or so-called affirmative forms to elucidate historical events.

For example, the idea of separation of the "in-group" and the "out-group" can be illustrated with the following citation "...the country has long been firmly divided into two parts. And none of our people will again stand shoulder to shoulder bearing pitchforks with the Maidan's trash"<sup>1</sup>.

Another example of hate speech shows how different regions of Ukraine (Galicia and other regions) oppose to each other: "I hate these people, who brought the Galician ideology, occupied the positions in Kiev, and put an information hood on your head"<sup>2</sup>.

The example of offensive ethnonym is "rahuli"<sup>3</sup> («рагули»), the word marginalized and humiliate Ukrainian speaking population. In the same article there is also the example of artificially created negatively connoted concepts that humiliate supporters of a national identity: 'Ukroparanoiki', 'Ukromarazm' (can be translated as "Ukronoids", "Ukromarasmus". The words consist of two parts: the word

---

<sup>1</sup>Belaya, T. (09.01.2021). Nado privykat k zhizni na Ukrainе? Ili bunt, ili ne vyzhit! [To Get Accustomed to Life in Ukraine? Riot or Death!], *Polinavigator*. <https://cutt.ly/aNwaL5J>

<sup>2</sup>Gladkov, V. (14.12.2020). Peregovorshchik LNR o skandale iz-za poiavleniia v ukrainskom efire: «Zelenskii derzhit narod za bydlo» [The negotiator from LPR about the scandal due to his appearance in the Ukrainian broadcast: «Zelensky considers people as lemmings»]. *Polinavigator*. <https://cutt.ly/RNwa16I>

<sup>3</sup>Slovník UA. Rahul(or Rohul) Invektive: 1) an ill-mannered, primitive, stupid, uneducated person, a country bumpkin; 2) an inhabitant of any settlement or city who arrived there mostly from the countryside, sloppily dressed, with primitive habits, Web Portal of Ukrainian Language and Culture. Retrieved from <https://clck.ru/Z4faz> (Accessed 20.10.2022)

‘Ukrainian’ (shortened to ukro-) and words that name mental disorders (degeneracy, paranoia) and create a concept intended to show that Ukrainians who support the national identity suffer mental disorders<sup>1</sup>.

In many articles journalists used WWII archetypes and such words as Nazis, Fascist, for example, “Ukrainian Nazism” or “*Galician Nationalism*”<sup>2</sup>.

*#3 manipulative hate speech:* This category employs means of influencing the emotional state of the individual, whipping up negativity, in particular:

- distortion and subjective interpretation of historical facts;
- citing biased “experts”.

For example, we can see an example of distortion of historical facts by an invited expert: “The rollout of Ukrainians and the Ukrainianness has not been launched today, this dates back to Austria-Hungary, non-existing now... First, the Ukrainian language was invented, since there was no Ukrainian language”; “...the Ukraine Western project was concocted by Austria-Hungary...”. Andrey Konovalov represented as “a Donetsk’s philosopher and expert of Izborsky club”. On the site of “Izborsky club” such a person is not on the list of experts<sup>3</sup>: Andrey Konovalov<sup>4</sup> works at Donetsk university as a Lecturer of the Department of Philosophy. The university functions on Russia controlled territory (DNR); he supports anti-Ukrainian and pro-Russian narratives in his comments found on the internet. Moreover, his comments were unilateral and repeated the thesis of Putin’s speech<sup>5</sup>. It is also worth saying that he has no academic rank and does not engage in scientific activities (he has been working as a university teacher for 35 years and has only one publication in a local journal without any impact factor, two tutorials for local students and one conference thesis) and this several works has nothing common with the topic he commented. The abovementioned facts indicated the person represented as an expert is biased and doesn’t have enough qualification to be considered as an expert in the field of history he commented.

- using the technique of substituting the meanings of concepts by other concept that create negative associations and negative images;

The technique of substituting concept "nationalists" can be seen in many media texts: concept “nationalism” is deliberately replaced by the word "Nazis" due to the similarity of the phonetic system; or instead of “peaceful protest” a journalist used “coup d’etat” a concept with a negative connotation, which means a violent and unconstitutional change of power in the state as a result of a secret conspiracy.<sup>6</sup>

---

<sup>1</sup> Toporov, A. (6.01.21). Nashi na Ukraine: geroi-odinochki, zapugannyye oppozitsionery i dremlushchie obyvateli [Ours in Ukraine: Lone Rangers, Intimidated Oppositionists and Ordinary People]. *Novorossinform*, Retrieved from <https://bit.ly/3GGDnKI>

<sup>2</sup> Gladkov, V. (23.05.2021). Ostalsia odin sposob ostanovit ukrainskii natsizm [Single Way Left to Stop Ukrainian Nazism], *Politnavigator*. Retrieved from <https://www.politnavigator.net/ostalsya-odin-sposob-ostanovit-ukrainskij-nacizm.html>

<sup>3</sup> Izborsky club. List of Experts. Retrieved from <https://izborsk-club.ru/experts> (Accessed 20.10.2022)

<sup>4</sup> Konovalov Andrey Grigorievich. Personal page at Donetsk University site. Retrieved from <https://donnu.ru/ud/ph/konovalov-andrey-grigoryevich> (Accessed 20.10.2022)

<sup>5</sup> The Russian President’s official website. (2023). Vladimir Putin’s annual news conference, 23 December 2021. Retrieved from <http://en.kremlin.ru/events/president/news/67438/videos>

Putin, V. (12.07.2021). On the Historical Unity of Russians and Ukrainians. Retrieved from <http://en.kremlin.ru/events/president/news/66181>

<sup>6</sup> Zelen’ko H. (2011). Coup d’etat. *Political Encyclopedia*, 549

- the use of an artificially-created negative statement (fake) or a statement given by a third party as a fact on the basis of which the message creating negative associations and negative images is built. For example, the dissemination of information that Ukraine prepared terrorist attacks in Donbas<sup>1</sup>.

- justification of aggression or violence against a certain group of persons on the basis of speculative conclusions about them presenting danger and the justification of aggression as preventative actions;

For example, by calling Ukraine fascist state a journalist justified war aggression: The fascist Ukraine has no right to exist. Therefore, this is our existential threat, we cannot allow the revival of fascism in the centre of Europe, and if our partners in the anti-Hitler coalition keep silence, we will not be silent, we will act."<sup>2</sup>

- strengthening information by non-linguistic means, which are used to enhance the impact of textual material on the emotional and sensory sphere. For example, photo manipulation and using non-event photos, deleting or adding photos, highlighting certain information, and using photo caricatures; using photograph with negative associations that has no relation to the event;

- use of manipulative names, which make a reader form a certain idea before reading the article. A title is considered manipulative if it does not match or distorts the information presented in the text of the article. According to the Poynter Institute, only two thirds of users read the text to the end. The perception of information by scanning is common: the user pays attention to pictures, photographs, headlines, and the synopsis of the article (Outing, 2004). Therefore, if a title contains an inference or statement with a negative meaning, some readers will form their opinion solely on the basis of the title and a cursory glance at the publication (title, photograph, font, etc.).

All three types are characterised by the use of tools that are designed to influence the emotional and sensory fields of the recipient, to evoke persistent stereotypes, and form a polarised worldview. There is often a violation of causation and the logic of presenting events that distort information in a way that contributes to the formation of hostile, superficial, and contemptuous attitudes based on a person's nationality, language, citizenship, or region of residence.

The study consisted of the following stages:

I. Monitoring of information publications in the media space through the use of a content analysis programme. Machine monitoring can select texts without hate speech. Subsequently, in the second stage all the selected texts are double-checked manually to identify the errors.

II. General evaluation of information in the text and exclusion of texts that do not contain hate speech.

III. Psycholinguistic analysis of the text, identification of signs of hate speech using the three aforementioned types.

---

<sup>1</sup> Goncharov, T. (24.03.2021). Dalshe tianut nekogda: vremia deistvii dlia Rossii v Donbasse prishlo [There is no possibility to proceed: it's time for Russia to act in Donbas], <https://cutt.ly/cNwadsw>

<sup>2</sup> Moskalenko, V. (29.04.2021). V Moskve prishli k vyvodu: «Fashistskaia Ukraina ne imeet prava na sushchestvovanie» [It Was Concluded in Moscow: "Fascist Ukraine Has No Right to Exist"], Politnavigator, <https://cutt.ly/yNwavrN>

IV. Detection of violations of journalistic standards (if they were violated).

V. Conclusion on each text.

VI. General conclusions for the whole monitoring period.

## **Results and Discussion**

The results of our study reveal that the media often uses the second and third categories of hate speech in order to complicate the exposure of hate speech and to evade legislation. The legal systems of many European states prohibit hate speech; however, these laws can still be evaded through the use of sophisticated tools that disseminate hidden hate speech, which can be better detected as a result of combining psycholinguistic science with media analyses.

Stage I. According to the given keywords, the content analysis programme selected 1,284 publications which could contain hate speech.

Stage II. Upon reviewing the selected materials, 724 texts that did not contain hate speech were rejected. Thus, 560 texts remained from the total sample. The reasons for the error (724) are related to the algorithm for configuring the content analysis programme which scans the page together with comments and other information. Therefore, the reasons for the errors are justified by the following factors: 1) comments under the text included hate vocabulary. As the research aimed to analyse the products of the media specialists' activities, the comments were not taken into account and such texts were attributed to error. Among other things, comments can be a product distributed by bots or specifically hired people, which requires additional technical methods for their analysis; 2) texts in which keywords have a direct meaning; for example, the word "fascists" used in the text give a factual retrospective to the military events of the Second World War. At the same time, there were only a few such texts (2%) that were removed from the list for further analysis.

Thus, from the initial sample of 1,284, 560 texts were selected and subjected to psycholinguistic analysis.

Stage III. At this stage, the psycholinguistic analysis of the text as a product of information and communication activities of the media specialist is carried out in order to identify and explain the presence of hate speech in the text, and indicate its type. We analysed the linguistic and non-linguistic means used by journalists in texts in order to dehumanise, marginalise, and demonise people on the basis of their nationality, language, and citizenship.

Stage IV. Detection of journalism standard violations and one-sided coverage of events, including the substitution of facts by judgments, the distortion and falsification of facts, and the use of fake news. Manipulations with hashtags, for example, when the words "#Nazism", "#Punishers", "#Punitive operation", or "#Fascism" are added to the article about Ukraine. Therefore, in terms of our research

the violation of journalistic standards can be seen as deliberately disseminating inaccurate information and inciting hostility.

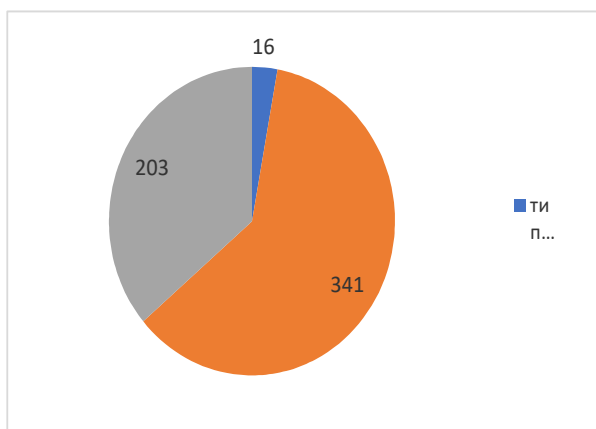
Stage V. Conclusion on each text: determining the type of hate speech.

Stage VI. General conclusions.

Subsequently, the 560 publications that contain manifestations of hate speech were categorised according to type. The language of hostility comprising the first type was present in 16 publications, whilst the second type of hate speech was found in 341 publications and the third type was present in 203 publications (Fig. 2)

Figure 2

*Distribution of Hate Speech in Media Texts for the Period of 12/1/2020-05/30/2021*



The results of the study show that currently, media professionals, in most cases, do not use direct hate speech with direct insults, calls, or incitement to actions against a person or a group of people. On the other hand, in most cases, media professionals utilise hidden or manipulative language of hostility which does not contain direct images or manifestations of intolerance on national, racial, gender, or religious grounds. Simultaneously, however, their content presents readers with a negative attitude towards certain groups and individuals, which can be used by stakeholders to incite violent actions.

## Conclusions

In the analysed content, hate speech includes direct attacks on the target (type 1), indirect attacks by means of ridicule, sarcasm, marginalisation, negative associations based on Second World War archetypes (type 2), and manipulation and suggestion (type 3).

Among the main manifestations of hate speech are messages related to anti-Ukrainian rhetoric. The main negative in the analysed media is directed towards such objects as Ukraine as a state entity, Ukrainians, patriotic citizens, the Ukrainian-speaking population, and participants in the 2014 revolution of dignity.

Psycholinguistic manipulations are actively used in the media for indirect influence, the essence of which is to use both verbal and non-verbal means to influence the emotional and sensory sphere of the content's readers. Repetitions of the same narratives and their frequency indicate the purposeful nature of the impact. The repetition method is used to convince the audience and fix negative information in the minds of the content's users.

Among the actively repeated narratives in the analysed Russian-language media are: calls for the overthrow of the government; non-recognition of Ukraine as an independent state and Ukrainian as a national identity; dehumanisation, marginalisation, and demonisation of activists and Ukrainian-speaking citizens; marginalisation of Ukraine as a sovereign state, the Ukrainian language, and the western regions of Ukraine; and artificial division into good (Russian-speaking) and bad (Ukrainian-speaking).

Thus, hate speech in the Russian media is used to form a critical attitude towards the Ukrainian nationality, language, and citizenship.

The negative rhetoric disseminated by journalists in the analysed Russian publications contained numerous examples of manipulations and indirect hate speech: 1) strengthening the existing negative prejudices and stereotypes with negative rhetoric; 2) creating negative associations on the basis of negative archetypes of the past; 3) creating new stereotypes, prejudices, and fake news and 4) a systemic and frequent repetition of negative information.

The analysis of the hate speech dissemination in the Russian media demonstrates that media texts have become an instrument of influence on the public consciousness. Moreover, they have formed aggressive attitudes and created the preconditions for mass killing, discrimination, and hatred on the basis of national and linguistic grounds, in addition to civic identity.

## References

- Кукушкина О. В. (2016). Методы анализа, применяемые в судебной лингвистической экспертизе. *Теория и практика судебной экспертизы*, 1(41), 118-126.  
<https://doi.org/10.30764/64/1819-2785-2016-1-118-126>
- Мачикова М. (2015). Медіа в контексті психолінгвістики та медіапсихології. *East European Journal of Psycholinguistics*, 2(2), 118–126. URL:  
<https://eejpl.vnu.edu.ua/index.php/eejpl/article/view/154>
- Седова, И. & Печончик, Т. (2018). Язык вражды в информационном пространстве Крыма: Информационно-аналитический доклад о распространении языка вражды на территории Крымского полуострова (Март 2014-Июль 2017). Киев.
- Седова І, Крилова-Грек Ю. (2022). Мова ворожнечі в онлайн-медіа, які висвітлюють події у Криму: Інформаційно-аналітична доповідь про поширення мови ворожнечі в російськомовних онлайн медіа, які регулярно висвітлюють збройний конфлікт України та РФ і пов'язані з ним події у Криму (грудень 2020–травень 2021). Київ.
- Сентенберг И. В., Карасик, В. И. (1993). Псевдоаргументация: некоторые виды речевых манипуляций. *Речевое общение и аргументация*, 1, 30-38.

- DellaVigna, S., Enikolopov, R., Mironova, V., Petrova, M., & Zhuravskaya, E. (2014). Cross-Border Media and Nationalism: Evidence from Serbian Radio in Croatia. *American Economic Journal: Applied Economics*, 6(3), 103–132. <https://doi.org/10.1257/app.6.3.103>
- Fairclough, N. (2003). *Analysing Discourse: Textual Analysis for Social Research*. Routledge
- Leets, L. (2002). Experiencing hate speech: Perceptions and responses to anti-Semitism and antigay speech. *Journal of Social Issues*, 58, 341–361.
- Matsuda, M. J., Lawrence, C. R., Delgado, R., Williams Crenshaw, K. (1993). *Words That Wound*. Westview.
- Outing, S. (2004). *Eyetrack III: What News Websites Look Like Through Readers' Eyes*. The Poynter Institute. <https://www.poynter.org/archive/2004/eyetrack-iii-what-news-websites-look-like-through-readers-eyes>
- Paz, M. A., Montero-Díaz, J., & Moreno-Delgado, A. (2020). Hate Speech: A Systematized Review. SAGE, <https://doi.org/10.1177/2158244020973022>
- Salminen, J., Veronesi, F., Almerexhi, H., Jun, S., & Jansen, B.J. (2018). Online Hate Interpretation Varies by Country, But More by Individual: A Statistical Analysis Using Crowdsourced Ratings. Fifth International Conference on Social Networks Analysis, Management and Security (SNAMS), 88–94, <https://doi.org/10.1109/SNAMS.2018.8554954>
- Schneider, K. (2000). The emergence and development of headlines in English newspapers. In F. Ungerer, (Ed.). *English Media Texts – Past and Present: Language and textual structure*. (pp. 45-66). John Benjamins. <https://doi.org/10.1075/pbns.80>
- Sellars, A. F. (2016). *Defining Hate Speech*. Berkman Klein Center Research Publication, (pp. 16-48). Boston University School of Law, Public Law Research, Boston University School of Law. <https://doi.org/10.2139/ssrn.2882244>
- Selth, A. (2004) Burma's Muslims and the War on Terror. *Studies in Conflict & Terrorism*, 27(2), 107-126, <https://doi.org/10.1080/10576100490275094>
- Tontodimamma, A., Nissi, E., Sarra, A., & Fontanella, L. (2021). Thirty years of research into hate speech: Topics of interest and their evolution. *Scientometrics*, 126(1), 157–179. <https://doi.org/10.1007/s11192-020-03737-6>
- Ungerer, F. (2000). *English Media Texts – Past and Present: Language and Textual Structure*. John Benjamins. <https://doi.org/10.1075/pbns.80>
- Waldron, J. (2012). *The Harm in Hate Speech*. Cambridge, MA: Harvard Univ. Press
- Whillock, R. K., Slayden, D. (Eds.). (1995). *Hate Speech*. Sage.

## References (translated and transliterated)

- Kukushkina, O.V. (2016). Metody analiza, primenyaemye v sudebnoj lingvisticheskoj ekspertize [The methods of analysis used in forensic linguistic expertise]. *Teoriya i Praktika Sudebnoy Ekspertizy*, 1(41), 118-126. <https://doi.org/10.30764/64/1819-2785-2016-1-118-126>
- Sedova, I. & Pechonchik (2018). Yazyk vrazhdy v informacionnom prostranstve Kryma: Informacionnoanaliticheskij doklad o rasprostranении yazyka vrazhdy na territorii Krymskogo poluostrova (Mart-Iyun, 2017) [Hate speech in the information space of Crimea: an information report about spreading of hate speech across the territory of Crimea (March 2014 – July 2017)]. Kyiv.
- Sedova, I & Krylova-Grek, Yu. (2022). Mova vorozhnechi v onlain-media, yaki vysvitliuiut podii u Krymu: Informatsiino-analitychna dopovid pro poshyrennia movy vorozhnechi v rosiiskomovnykh onlain media, yaki rehuliarno vysvitliuiut zbroinyi konflikt Ukrainy ta RF i poviazani z nym podii u Krymu (Hruden' 2020–Traven' 2021) [Hate speech in online media covering events in Crimea: Information and analytical report on the spread of hate

- speech in Russian-language online media, which regularly cover the armed conflict between Ukraine and Russia and related events in Crimea (December 2020-May 2021)]. Kyiv.
- Stenberg, I. V. & Karasik, V. I. (1993). Psevdoargumentaciya: nekotorye vidy rechevyh manipulyacij. [Pseudo-argumentation: some types of speech manipulations]. *Rechevoe obshchenie i Argumenaciya, 1*, 30-38.
- DellaVigna, S., Enikolopov, R., Mironova, V., Petrova, M., & Zhuravskaya, E. (2014). Cross-Border Media and Nationalism: Evidence from Serbian Radio in Croatia. *American Economic Journal: Applied Economics, 6*(3), 103–132. <https://doi.org/10.1257/app.6.3.103>
- Fairclough, N. (2003). *Analysing Discourse: Textual Analysis for Social Research*. Routledge
- Leets, L. (2002). Experiencing hate speech: Perceptions and responses to anti-Semitism and antigay speech. *Journal of Social Issues, 58*, 341–361.
- Machikova M. (2015). Media v konteksti psikholinguistyky ta media psikhologii [Media Within Psycholinguistic and Media Psychological Context]. *East European Journal of Psycholinguistics, 2*(2), 118–126. Retrieved from <https://eejpl.vnu.edu.ua/index.php/eejpl/article/view/154>
- Matsuda, M. J., Lawrence, C. R., Delgado, R., Williams Crenshaw, K. (1993). *Words That Wound*. Westview.
- Outing, S. (2004). Eyetrack III: What News Websites Look Like Through Readers' Eyes. The Poynter Institute. <https://www.poynter.org/archive/2004/eyetrack-iii-what-news-websites-look-like-through-readers-eyes>
- Paz, M. A., Montero-Díaz, J., & Moreno-Delgado, A. (2020). Hate Speech: A Systematized Review. SAGE, <https://doi.org/10.1177/2158244020973022>
- Salminen, J., Veronesi, F., Almerikhi, H., Jun, S., & Jansen, BJ. (2018). Online Hate Interpretation Varies by Country, But More by Individual: A Statistical Analysis Using Crowdsourced Ratings. Fifth International Conference on Social Networks Analysis, Management and Security (SNAMS), 88–94, <https://doi.org/10.1109/SNAMS.2018.8554954>
- Schneider, K. (2000). The emergence and development of headlines in English newspapers. In F. Ungerer, (Ed.). *English Media Texts – Past and Present: Language and textual structure*. (pp. 45-66). John Benjamins. <https://doi.org/10.1075/pbns.80>
- Sellars, AF, (2016). *Defining Hate Speech*. Berkman Klein Center Research Publication, 16-48, Boston University School of Law, Public Law Research, Boston University School of Law. <https://doi.org/10.2139/ssrn.2882244>
- Selth, A. (2004) Burma's Muslims and the War on Terror. *Studies in Conflict & Terrorism, 27*(2), 107-126. <https://doi.org/10.1080/10576100490275094>
- Tontodimamma, A., Nissi, E., Sarra, A., & Fontanella, L. (2021). Thirty years of research into hate speech: Topics of interest and their evolution. *Scientometrics, 126*(1), 157–179. <https://doi.org/10.1007/s11192-020-03737-6>
- Ungerer, F. (2000). *English Media Texts – Past and Present: Language and Textual Structure*. John Benjamins. <https://doi.org/10.1075/pbns.80>
- Waldron, J. (2012). *The Harm in Hate Speech*. Cambridge, MA: Harvard Univ. Press
- Whillock, R. K., Slayden, D. (Eds.). (1995). *Hate Speech*. Sage.

## Sources

- Cambridge Dictionary. Retrieved from <https://dictionary.cambridge.org>
- Recommendation No. R (97) 20 of the Committee of Ministers to Member States on “Hate Speech” (30 October 1997). <https://rm.coe.int/1680505d5b>



UN Strategy and Plan of Action on Hate Speech. (2019). Retrieved from  
<https://www.un.org/en/genocideprevention/hate-speech-strategy.shtml>

# Cultivation of Solidarity and Soft Power: Ukrainian President Zelensky's 2022 Speech to Japan

Misato Matsuoka <sup>a, \*</sup>, Rieko Matsuoka <sup>a</sup>

<sup>a</sup> *Teikyo University, Japan*

*Received August 25, 2022; Revised September 22, 2022; Accepted December 9, 2022*

**Abstract.** Words not only describe the world but also influence the world or modify relationships (Austin, 1965; Pinker et al, 2008). Since Russia's invasion of Ukraine in February 2022, Ukrainian President Volodymyr Zelensky has presented his competence in influencing or even shaping diplomatic relationships through his words and utterances. This study explores the ways in which he has been successful as a strategic speaker (Lee & Pinker, 2010), establishing solidarity with Japan using the soft power introduced by Nye (2004; 2011). By closely examining his 12-minute online speech at the Japanese parliament in March 2022, it investigates the extent to which his speech has exerted influence on the Japanese people as well as on the two countries' relationship. As for methodology, the data of an English-translated script were analyzed by adopting politeness theory (Brown & Levinson, 1987), which stems from the concept of "face" (Goffman, 1967), a positive social value in social interaction. Specifically, all of President Zelensky's utterances were evaluated by three factors that account for politeness strategies – relative power, social distance, and weight of imposition. Based on this analysis and the responses in Japan, this study argues that his speech adopted not only face-threatening but also face-boosting effects (Bayraktaroğlu, 1991), building common ground as an affiliation strategy and generating solidarity and soft power. This study concludes that President Zelensky's speech to Japan contributes to consolidating solidarity in Japanese minds and soft power, which have encouraged the Japanese government and its citizens to continue supporting Ukraine financially, psychologically, and diplomatically.

**Keywords:** *Zelensky's speech, politeness theory, face, common ground, solidarity, soft power, speech act of request.*

**Мацуока Місато, Мацуока Рієко. Культивування солідарності та м'яка сила: промова президента України Зеленського в Японії 2022 року.**

**Анотація.** Слова не лише описують світ, а й впливають на світ або змінюють відносини (Austin, 1965; Pinker et al., 2008). Із моменту вторгнення Росії в Україну в лютому 2022 року президент України Володимир Зеленський продемонстрував свою компетентність у впливі або навіть формуванні дипломатичних відносин за допомогою своїх слів та висловлювань. Це дослідження аналізує шляхи, якими він досяг успіху як стратегічний оратор (Lee & Pinker, 2010), встановлюючи відчуття солідарності з Японією на основі інструменту «м'якої сили» (термін Нюе, 2004; 2011). Уважно вивчаючи його 12-хвилинну онлайн-промову в японському парламенті в березні 2022 року, ми дослідили, якою мірою його промова вплинула на японський народ, а також на відносини між двома країнами. Щодо методології, то дані англійської версії промови

---

\* Corresponding author. Misato Matsuoka,  <https://orcid.org/0000-0003-2864-5022>, E-mail: [mmatsuoka@main.teikyo-u.ac.jp](mailto:mmatsuoka@main.teikyo-u.ac.jp)

було проаналізовано на основі теорії ввічливості (Brown & Levinson, 1987), яка ґрунтується на концепції "обличчя" / "іміджу" (Goffman, 1967), що є позитивною соціальною цінністю у соціальній взаємодії. Зокрема, всі висловлювання президента Зеленського було оцінено за трьома факторами стратегії ввічливості – відносною владою, соціальною дистанцією та вагою впливу. На основі цього аналізу та реакції в Японії у дослідженні доведено, що його промова мала не лише загрозливий для іміджу, а й сприятливий для нього ефект (Bayraktaroğlu, 1991), будуючи спільні основи як стратегію афіліації та генеруючи солідарність та м'яку силу. Автори висновують, що промова президента Зеленського в Японії сприяє зміцненню у свідомості японців солідарності з українцями та «м'якої сили», що заохочують японський уряд та його громадян продовжувати підтримувати Україну фінансово, психологічно та дипломатично.

**Ключові слова:** промова Зеленського, теорія ввічливості, імідж, спільні основи, солідарність, м'яка сила, мовленнєвий акт-прохання.

## Introduction

Since Russia invaded Ukraine in February 2022, Ukraine has experienced Europe's largest refugee crisis since World War II, and the country has also faced food shortages. In this context, President Volodymyr Zelensky has influenced or even shaped diplomatic relationships through his words and utterances. He requested support from countries around the world, including Japan, persuading them to support Ukraine, which has suffered from Russia's unceasing invasion. A prominent example through which his efforts can be understood is his online speech to the Japanese parliament in March 2022. There had been no precedent of making an online speech in the country, and more than 500 Japanese parliament members attended (*Jiji Press*, March 24, 2022; *Nippon.com*, March 16, 2022). Although this attempt was initially criticized, his speech eventually attracted wide attention among the Japanese audience, with high appraisal. Japan has maintained its relationship with Russia, given consideration of energy resources; however, President Zelensky has arguably been successful in strengthening Ukraine's solidarity with Japan using soft power (Nye, 2004; 2011). This article analyzes the script of the 12-minute online speech at the Japanese parliament to shed light on the significant role of language in changing the world, which seems to be implied by Austin's (1965) concept of the perlocutionary force of words.

Pinker et al. (2008) argue that language serves two purposes: to convey a proposition and to negotiate and maintain a relationship (p. 835). Zelensky's speech has the latter purpose of negotiating a relationship; as such, politeness theory enables his speech to be clarified. Politeness theory is a system of interpersonal relations "designed to facilitate interaction by minimizing the potential for conflict and confrontation inherent in all human interchange" (Lakoff, 1990, p. 34), with both positive and negative politeness. Brown and Levinson (1987) added the concept of "face," originally introduced by Goffman (1972), who defined it as something that is emotionally invested and can be lost or increased in communication. The concept of face sketches out the human desire to positively represent ourselves while avoiding any humiliation or embarrassment, and this builds the premise

that many speech acts are intrinsically threatening to face, which are known as “face-threatening acts (FTAs)” (Brown & Levinson, 1987). “Positive face” refers to the human need for approval from others, representing the desire for one’s own actions to be accepted, approved, and also praised by others. Therefore, positive politeness functions as a claim for closeness (Holtgraves, 1997). Conversely, “negative face” refers to the claim for territory, personal space, and preserving them, representing the wish for one’s own actions to be unimpeded by others and maintain private space. Holtgraves (1997) also noted that the most frequently used form of negative politeness is indirectness, and off-record politeness is considered a politeness strategy, which violates Grice’s conversational maxim.

“Politeness” in politeness theory purports to redress face-threatening acts (FTAs), in which certain speech acts would threaten the face of the interlocutor, with positive politeness that attends to positive face and negative politeness for negative face (Cutting, 2002). Politeness theory has three components – relative power (“power gap” in Holtgraves, 1997), which refers to the relative status of the audience; social distance, which refers to intimacy with the audience; and imposition, which refers to the size of the wanted speech act, such as a request. These components allow us to measure the degree of a FTA, which accounts for politeness strategies (Craig et al., 1986). Furthermore, a face-boosting effect (Bayraktaroğlu, 1991) allows the actors to establish common ground as an affiliation strategy, generate solidarity, and eventually soft power in the realm of diplomacy. In addition, Lee and Pinker (2010) proposed the theory of the strategic speaker, based on the premise that indirect speech has a strategic rationale and involves an uncertain mixture of cooperation and conflict. An off-record indirect request is an effort to gain cooperation despite the inefficiency of language use. Based on our study, Zelensky is likely to be labeled as a strategic speaker.

Soft power is another important concept when considering the effectiveness of Zelensky’s speech, which involves the use of economic, diplomatic, and institutional tools. Often used in contrast with hard power, the definition remains debated, but it refers to power that co-opts rather than coerces people.<sup>1</sup> While some scholars argue against a clear-cut differentiation between co-optation and coercion (Mattern, 2005), most empirical studies differentiate between soft and hard power by explicitly or implicitly linking them to resources. Foucault, Bourdieu, Gramsci, and others have also implied the role of soft power, which remains relevant for understanding states’ behaviors. Compared with hard power, soft power can be non-instrumental or passive, but it may also be used instrumentally (Chitty, 2020). Nye (2011, p. 82) unequivocally points out that soft power “is simply a form of power, one way of getting desired outcomes.” Nye (2011) takes a strategic view of soft power, explaining that it is important to consider targets’ view about agents, since attraction

---

<sup>1</sup> While Nye’s conceptualization of soft power is reminiscent of Lukes’ “third face of power,” he even suggests that soft power can be linked to other faces of power (Nye, 2011). For example, whereas a promise of economic gain functions as “inducement” and can be exercised as hard power, this can also be interpreted as soft power in confirming their collective identity (Feklyunina, 2016).

and persuasion are constructed socially.<sup>1</sup> In the vein of soft power, attractiveness helps people be captivated by compelling messages, rather than to be captured and compelled (Chitty, 2020).

Furthermore, power and solidarity are two sides of one coin. As Tannen (1993, p. 22) states, any show of solidarity necessarily involves power, in that the requirement of similarity and closeness limits freedom and independence. At the same time, any show of power encompasses solidarity by involving participants in relation to each other. Soft power could be related to positive politeness strategies of giving reasons (showing one's own expertise) and giving gifts (tokens of one's own culture/pride), while pressure corresponds more to the negative politeness strategies of being conventionally direct, questioning, and hedging (Stopniece, 2018). Hence, this study suggests that the adoption of politeness theory and soft power enables us to show the influence of Zelensky's speech by focusing on his choice of words as well as the responses of the audience in Japan.<sup>2</sup>

The purpose of this study is to investigate the extent to which Zelensky's speech has exerted influence on the Japanese people, as well as on the relationship between Ukraine and Japan, by analyzing all of his utterances. Based on the analysis of the text, our study discusses how Zelensky's speech adopts techniques stemming from politeness theory and soft power by examining the visible responses of the Japanese audience, including politicians. Furthermore, this study argues that the speech act of request has been adopted by making use of soft power.

## Methods

The data consists of the whole script of Zelensky's speech (1,498 words) to Japan translated into English from the original Ukrainian script publicized by the government of Ukraine. The actual speech to Japan was simultaneously translated into Japanese online at the parliament. As a first step, instead of selecting some utterances from the script, all the utterances were selected based on the belief that the utterances cannot be analyzed in isolation, as they are related to each other and thus harbor intertextuality (Kristeva, 1986) and illocutionary and perlocutionary effects (Austin, 1965). Second, the script was analyzed using politeness theory and soft power. Social distance, relative power, and weight of imposition – the three variables for gauging the degree of face-threatening or face-boosting acts – were explicated for each paragraph, and the degree of soft power was examined. As the aim of President Zelensky's speech was to ask Japan for support for Ukraine, the speech acts projected in his speech were mainly requests through developing solidarity. In addition, to assess the degree of solidarity being consolidated and the soft power being exerted on

---

<sup>1</sup> Some propose a social constructivist take on soft power (Feklyunina, 2016; Arquilla & Ronfeldt, 1999).

<sup>2</sup> Stopniece (2018) synthesizes the concepts of positioning theory, politeness theory, and common ground. Borrowing terms of soft power and hedging from international relations, Stopniece offers a new and more comprehensive understanding of negotiation phenomena in a fivefold response scheme.

the Japanese audience, this study looks into their responses, which can be seen from social media. Finally, the results of the discourse analysis and selected public responses were compared and discussed with the concept of soft power, as Zelensky's speech has had an influential diplomatic effect on international society by briefly comparing it with his speech to Finland.

## Results

### Analysis

This section uses politeness theory and soft power to analyze the English translation of the original Ukrainian script of Zelensky's speech.

*1. Dear Mr. Hosoda! Dear Mrs. Santō! Mr. Prime Minister Kishida! Distinguished Members of the Japanese Parliament! Dear Japanese people! It is a great honor for me, the President of Ukraine, to address you for the first time in the history of the Japanese Parliament.*

This excerpt shows an inclusiveness of the people in Japan. By adding "Japanese people," it functions as an effort to include all the Japanese people instead of focusing exclusively on politicians. This functions as a mitigator of relative power, with closer social distance and less imposition. In other words, it can be considered as an attempt to form solidarity between Ukraine and Japan. While the first part is a fixed expression of greeting, the last part – "for the first time in the history of the Japanese Parliament" – has an effect of reducing the social distance that exists between the two countries. Many Japanese people are unlikely to be knowledgeable about Ukraine; therefore, this last phrase reminds the Japanese people of President Zelensky's effort to make the relationship closer and helps establish solidarity.

*2. Our capitals are separated by a distance of 8 thousand 193 kilometers. On average, it's 15 hours on a plane. Depending on the route. But what is the distance between our feelings of freedom? Between our desires to live? Between our aspirations for peace? On February 24, I did not see any distance. Even a millimeter between our capitals. Even a second between our feelings. Because you immediately came to our aid. And I'm grateful to you for that.*

This excerpt shows the contrast between the physical and mental distances, which functions to emphasize the close mental relationship between Ukraine and Japan; President Zelensky focuses on the similarity of the two countries. In this regard, the last utterance of not "even a millimeter" of distance seems to function as a perlocutionary act. It is interpreted, in other words, that Ukraine and Japan are so similar that this seems to attract Japan to assist Ukraine, making use of solidarity stemming from a common ground of similarity. As a result, with more imposition of the need for Japan's support from Ukraine, the Japanese side may feel more pressure from Ukraine. The last utterance is to express gratitude, which is a clear-cut speech

act. However, expressing gratitude may function as a speech act of request, or as an illocutionary and perlocutionary speech act (Searle, 1969), which is an indirect request from an utterance that expresses gratitude. This also leads to building solidarity; it can be argued that the soft power of Ukraine is being exerted to try to attract Japan to feel closer to Ukraine, thus leading to more support from Japan.

*3. When Russia destroyed peace for the entire Ukraine, we immediately saw that the world is truly against the war. Truly for freedom. Truly for global security. Truly for the harmonious development of every society.*

This part reveals face-threatening acts, which can be considered a meaningful prerequisite to asking for further assistance from Japan as a speech act of request. It can be inferred that this first factual statement provides a certain amount of relative power towards Japan, asking for understanding of the current circumstances between Ukraine and Russia. The second statement includes President Zelensky's positionality. This portion seems to be objective; however, its imposition is quite high, with a persuading effect. As the context is comprehensive, this helps build solidarity with agreement, based on the belief that Japanese people are pacifists.

*4. Japan has become the leader of this position in Asia. You immediately started working to stop this brutal war started by the Russian Federation. You immediately started working for peace in Ukraine. Hence, in Europe. And this is really very important. It is important for everyone on Earth. Because without peace for Ukraine, no person in the world will be able to look to the future with confidence.*

This part starts with a compliment, followed by an evaluation of what Japan did. It can be seen as a compliment and a positive evaluation from the Japanese perspective; however, both compliments and positive evaluations function as face-threatening acts, suggesting a possible expectation that Japan should continue to do so. In other words, the speech act of a compliment is a camouflaged request or an off-record indirect request. In this sense, both relative power and imposition seem to be cast with closer social distance, which again leads Japan and Ukraine to establish their solidarity. The message emphasizes the need to take action to keep the world peaceful, not only for Japan but also for Europe to support Ukraine. Therefore, this part also projects relative power and imposition with closer social distance by asking for understanding; it implies that the Japanese contribution may lead to world peace, shedding light on the importance of peace for Ukraine. This can be seen as another use of soft power by Ukraine, attracting Japan's support by emphasizing their relevance. Hence, there are two elements of soft power here: President Zelensky is intentionally attempting to attract Japan to assist Ukraine, and Ukraine is also trying to underscore Japan's global relevance.

*5. Each of you knows what Chernobyl is. Nuclear power plant in Ukraine, where a powerful explosion occurred in 1986. Radiation release. The consequences of which have been*

*recorded in different parts of the planet. The 30-kilometer zone around the Chernobyl station is still closed. It is hazardous. During the elimination of the consequences of the explosion at the station, thousands of tons of contaminated materials, debris and cars were disposed of in the forests in the closed area. Just in the ground. On February 24, Russian armored vehicles passed through this land. Lifting radioactive dust into the air. The Chernobyl station was captured. By force, by weapon.*

This part uses the nuclear power plant of Chernobyl as an example to explain Ukraine's suffering; it not only describes its situation but also hints at an affiliation with Japan and establishes common ground. Although the words "Japan" and "Fukushima" are not explicitly stated, the Fukushima nuclear power plant incident may be implied; as such, it could narrow social distance and build solidarity. It thus helps unveil the chaos and functions as part of a basis to provide certain degrees of imposition and relative power for Japan to support Ukraine, as well as to establish solidarity. By making use of this solidarity through establishing common ground, it is clear that Ukraine is attracting Japan's attention to the detrimental situation in Ukraine, revealing how President Zelensky is using soft power.

*6. Imagine a nuclear power plant where a disaster happened. Confinement that closes the destroyed reactor. Operating nuclear waste storage facility. Russia has turned this facility into an arena of war as well. And Russia is using this 30-kilometer territory, this closed zone, to prepare new attacks against our defense forces. It will take years after Russian troops leave Ukraine to investigate the damage they have done to Chernobyl. What sites of radioactive materials disposal were damaged. And how radioactive dust spread on the planet.*

This part further emphasizes the disastrousness of Ukraine's situation by describing the catastrophe caused by the Russian attack on a nuclear power plant, using "a theater of war" metaphorically. "Imagine" is a keyword that aims to influence the Japanese audience to think about what it would be like if such a situation happened to them. This specific description has a strong impact for illuminating the consequences, which might continue to harm the world. It also strengthens relative power and imposition, as well as closer social distance, developing solidarity because Japanese people are concerned about the effects of nuclear power, as the sole victim of nuclear bombs. With the use of the face-threatening effect, this section can be considered as Zelensky's manipulative use of soft power, which encourages the Japanese audience to pay more attention to the situation in Ukraine.

*7. Ladies and Gentlemen!*

*There are four operating nuclear power plants on our land! These are 15 nuclear units. And they are all under threat. Russian troops have already fired from tanks at the Zaporizhzhia nuclear power plant, the largest in Europe.*

In this part, which is the middle of his speech, Zelensky reframes his speech by calling on "ladies and gentlemen," thus recapturing the attention of the Japanese



audience. This part functions as a general description of the nuclear facilities that Ukraine owns and focuses on Russian aggression in attacking the largest nuclear power plant in Europe. It sheds light on the gravity of the situation brought about by the Russian forces. The content includes imposition and relative power, drawing attention to the seriousness of the consequences of such destruction, and it establishes closer social distance by calling for the Japanese audience's attention. Similar to the previous excerpt, the issue of nuclear power plants could be successful in attracting Japanese attention, providing solidarity and closer social distance through the establishment of common ground.

*8. The fighting has damaged hundreds of plants, many of them particularly dangerous. The shelling threatens gas and oil pipelines. Coal mines. The other day, Russian troops also fired at a chemical plant in the Sumy region of Ukraine. There was a leak of ammonia. We are warned about possible chemical attacks, in particular with the use of sarin. As it was in Syria. And one of the main topics for discussion of world politicians is the question: how to react if Russia also uses nuclear weapons. Any confidence of any person in the world, any country is completely destroyed.*

This excerpt continues to describe various destructive acts by Russian forces, including the use of sarin, which is a familiar chemical to Japanese people due to the 1995 terrorist attack by the Japanese cult Aum Shinrikyo. Although the name of this incident does not explicitly appear in the speech, Japanese people may recall the incident that caused many casualties. As a result, this association may succeed in establishing common ground and eventually solidarity in the Japanese mind; instead of making a direct reference to the Tokyo sarin incident, being indirect seems to attract greater attention and sympathy from the Japanese audience. Meanwhile, the last utterance here has a strengthened impact on Japanese people, as the only victim of nuclear weapons. By adding this utterance, Zelensky seems to reference the overwhelming tribulations that Japanese people suffered during World War II. These two separate references facilitate solidarity by building common ground and narrowing social distance, balancing relative power with heavy imposition and face-boosting effects on the Japanese accomplishment of overcoming these significant hardships. Here, we can infer that the use of soft power by Ukraine is successfully attracting the Japanese audience.

*9. Our servicemen have been heroically defending Ukraine for 28 days already. 28 days of full-scale invasion of the largest state in the world. But not the greatest in potential. Not the most influential. And the smallest from a moral point of view. Russia has used more than a thousand missiles against peaceful cities in Ukraine. Countless bombs. Russian troops destroyed dozens of our cities. Some were burned to the ground. In many towns and villages that have come under Russian occupation, our people cannot even bury their murdered relatives, friends and neighbors with dignity. They have to bury them right in the yards of broken houses, near roads, anywhere where it is possible... Thousands were killed, including 121 children. About 9 million Ukrainians were forced to leave their home, their native places, fleeing from Russian troops. Our northern territories, eastern, southern are becoming empty, because people are fleeing from this deadly threat. Russia has even blocked the sea for us.*

*Usual trade routes. Showing some other – potential – aggressors of the world how to put pressure on free nations by blocking sea navigation.*

This long excerpt details the ways in which Ukrainians and Russians are fighting, resulting in cruel attacks and the burial of bodies without dignity. These descriptions enable understanding of what is going on in his country, giving heavy imposition and relative power to force the audience to agree with continuous support even without making a direct request. The last utterance in this part adds the fear of food distribution problems caused by Russia blocking the sea. This generates heavy imposition and relative power in asking for support for Ukraine with a more persuasive matter. As mentioned earlier, Pinker et al. (2008) describe the two purposes of language: to convey a proposition and to negotiate and maintain a relationship dichotomously. This excerpt is an optimal instance of exerting these two purposes.

*10. Ladies and Gentlemen! Today, it is Ukraine, the partner states and our anti-war coalition that can guarantee that world security will not be completely destroyed. That in the world there will be a foothold for the freedom of nations. For people and for the preservation of diversity in societies. For security of borders. To make sure that we, our children, our grandchildren still have peace. You see that international institutions have not worked. Even the UN and the Security Council... What can they do? They need reform. They need an injection of honesty. To become effective. To really decide and really influence, not just discuss. Due to Russia's war against Ukraine, the world is destabilized. The world is on the verge of many new crises. And who is now sure what tomorrow will be like? Turbulence in world markets is a problem for all countries that depend on imports of raw materials. Environmental and food challenges are unprecedented. And most importantly, it is now being decided whether all the aggressors on the planet – explicit and potential – will be convinced that the war they have waged will lead to a punishment so powerful that they should not start a war. That they should not destroy the world. And it is absolutely logical and correct that the responsible states unite to protect peace.*

This excerpt starts with “ladies and gentlemen,” with an intention of changing the subject and again calling for attention; it emphasizes the importance of keeping the world peaceful. The term “anti-war” is another keyword that reminds Japan of its pacifism. President Zelensky also blames international organizations such as the UN for not functioning sufficiently to stop Russian aggression, which brought on greater crises. He reproaches such organizations’ incompetence in punishing Russia and seeks any alternative to do so to keep the peace, which implies that Japan should be in the position of leading the world. As a result, this provides further heavy imposition and relative power to ask Japan to punish Russia. These are face-boosting utterances because he gives Japan credit for leadership in an indirect manner, but it may also function as a face-threatening act because Japan has not taken on real leadership yet. Still, by evaluating Japan as a possible global leader, the Japanese people may feel proud to be Japanese and be willing to lend a hand to Ukraine. Clearly, this also stirs Japan’s pride, which makes evident that President Zelensky is attempting to strengthen Japan’s soft power. In terms of speech acts, a compliment

seems to be projected on the surface; however, his utterances purport to deliberately make an indirect request as a strategic speaker in Lee & Pinker's (2010) terms.

*11. I am grateful to your state for its principled position at such a historic moment. For real help to Ukraine. You were the first in Asia to put real pressure on Russia to restore peace. Who supported the sanctions against Russia. And I urge you to continue to do so. I call for the united efforts of the Asian countries, your partners, to stabilize the situation. So that Russia seeks peace. And stops the tsunami of its brutal invasion of our state, Ukraine. It is necessary to impose an embargo on trade with Russia. It is necessary to withdraw companies from the Russian market so that the money does not go to the Russian army. It is necessary to help our state, our defenders, our soldiers who are holding back Russian troops even more. It is necessary to start thinking about rebuilding Ukraine already now. About the return of life to the cities destroyed by Russia and the territories devastated by it.*

Related to the previous section, this section starts with expressing direct appreciation towards Japan for supporting Ukraine and emphasizes taking initiative to put pressure on Russia. This is again both face-boosting and face-threatening, as these utterances are based on an expectation or request to continue the sanction; however, the expression “pursue peace and stop the tsunami of brutal aggression” may assure the Japanese conscience. Because of its total defeat in World War II, Japan has kept its pacifist position, which President Zelensky should be aware of. The word “tsunami” is another keyword, as it recalls Japan's suffering from the Great East Japan Earthquake in 2011, when tsunamis killed many people. Using these words, Zelensky succeeds in establishing common ground and solidarity by narrowing the social distance; with heavy imposition and relative power, soft power is exercised rather than hard power.

*12. People need to go back to where they lived. Where they grew up. Where they feel is their home. Their small homeland. I'm sure you understand this feeling. This need. The need to return to your land.*

*We need to develop new security guarantees. So that it is possible to act preventively and strongly every time there is a threat to peace. Is it possible to do this on the basis of existing international structures? After such a war – definitely not. We need to create new tools. New guarantees. Which will work preventively and strongly against any aggression. Which will really help. Japan's leadership can be indispensable in their development. For Ukraine, for the world. I offer it to you. So that the world can feel confident again. Confident about what tomorrow will be like. Confident that tomorrow will come and will be stable and peaceful. For us, for future generations.*

This excerpt starts with a detailed explanation of the difficulties that Ukraine is now facing. From the middle part, Zelensky starts to compliment Japan again as a world leader, highlighting good points that Japan can be proud of, such as its history of development after WWII, its harmony and following of norms, its valuing of life, and its protecting of the environment. A compliment, as a speech act, is both face-threatening and face-boosting, and it effectively functions as a speech act of request. According to the lens of politeness theory, social distance becomes narrower, imposition becomes great, and relative power should be strong, as the degree of request to be a world leader seems to be large. Zelensky deliberately uses both

positive and negative politeness strategies here. In addition, his use of a compliment for a request that is an off-record indirect request indicates that he is a strategic speaker (Lee & Pinker, 2010). The use of soft power is clearly evident in the emphasis on the relevance of Japan's leadership.

*13. Ladies and Gentlemen! Japanese people! We can do a lot together with you. Even more than we can imagine. I know what a brilliant history of development you have. How you can build and defend harmony. Follow the principles and value life. Protect the environment. The roots of this are in your culture. Which Ukrainians really love. My words are not unsubstantiated. This is actually true. Back in 2019, literally six months after I became President of Ukraine, my wife Olena took part in a project for children with visual impairments. In the project to create audiobooks. And she voiced Japanese fairy tales. In Ukrainian. Because they are understandable for us, for children. And it was only a drop in the huge sea of our attention, the Ukrainian attention, to your attainment. We have similar values with you despite the huge distance between our countries. A distance that doesn't really exist. Because we have equally warm hearts. Thanks to joint efforts, thanks to even greater pressure on Russia, we will come to peace. And we will be able to rebuild our country. Reform international institutions. I am sure that Japan will be with us then – just as it is now. In our anti-war coalition. At this crucial time for all of us. Thank you! Arigato gozaimasu! Glory to Ukraine! Glory to Japan!*

In this paragraph, soft power is explicitly used to clarify the long-term effect, using the example of President Zelensky's wife creating an audiobook of a Japanese fairy tale.<sup>1</sup> This cultural phase is soft, and it is not obvious whether he utilizes this book, though the book was used for an educational purpose. Additionally, he uses the first-person plural pronoun "we" to be inclusive, establishing common ground and consolidating solidarity. Furthermore, he successfully exercises his persuasive power to make the audience believe that pressure on Russia will lead to world peace, with close social distance, high imposition, and deliberately manipulative relative power. The concluding utterances include not only fixed expressions of conclusion and appreciation; they also express "glory" to both countries. Adding the Japanese expression of appreciation "*arigato gozaimasu*" encourages the audience to feel closer and gives courtesy to Japan. Therefore, this part narrows social distance without heavy imposition nor asymmetric relative power. A positive politeness strategy is used; however, ironically, the last phrase "glory to Japan" may be interpreted to strengthen the speech act of request as relative power or pressure for Japan to assist and support Ukraine, which is an indirect speech act of request.

### **Responses of the Japanese Audience**

This section presents the responses of Japanese politicians as well as other Japanese audience members, which could be found on the SNS platform showing their responses to Zelensky's speech and its effectiveness in delivering his request to Japan.

---

<sup>1</sup> It was later said that this fairy tale refers to *Momotaro* (Bunshun Online Special Report, 2022).

## Politicians

There were mostly positive comments about President Zelensky's speech. Japanese Prime Minister Kishida explained that he was impressed by the speech, stating that Zelensky renewed his belief that the international community as a whole must firmly support his people. He also mentioned that Japan would consider further sanctions against Russia and additional humanitarian aid to Ukraine. Foreign Minister Hayashi mentioned that the speech made him feel close to Ukraine and feel that Japan is with Ukraine. Yamaguchi, from the coalition party Komeito, stated that he was deeply moved by Zelensky's speech and shared his disappointment about the inability of the United Nations to suppress Russia's outrage; he also said that he thinks that Japan should work hard to make possible the creation of a system that prevents disasters such as the one happening in Ukraine (*NHK News*, March 29, 2022).

Similarly, Izumi, the head of the Constitutional Democratic Party of Japan, one of the major opposition parties, stated that Japan must continue to support the Ukrainian people and do everything in its power to stop Russia's aggression. Fujita, the secretary-general of the Japan Restoration Party, also noted that Japan should make its best efforts toward a ceasefire by taking steps to resolve the conflict. Leader of the Democratic Party for the People Tamaki, appraising the speech, said at the party's general assembly of members of both houses that Japan must consider further pressure and strengthening sanctions while monitoring the development of the situation. Japanese Communist Party Chairman Shii remarked that he could feel deep resentment against Russia's aggression and war crimes, arguing that Japan should provide economic sanctions and non-military reconstruction assistance by raising Japan's voices against the use of biological, chemical, or nuclear weapons (*NHK News*, March 29, 2022).

## Social Media

In addition to the politicians' statements, there were many positive comments on the SNS, specifically Twitter, regarding the content of President Zelensky's speech. For example: "It was a restrained and dignified speech. I think President Zelensky narrowed down his keywords well" and "the emotional appeal was very much for Japanese." Another comment stated, "Because of Japan's devotion to peace diplomacy after World War II, I think that it is not a difficult request, such as the provision of weapons, but a light one, such as cooperation in response to further economic pressure" (*NHK News*, July 13, 2022).

The below graphs compiled by NHK (Nippon Hoso Kyokai, or Japan Broadcasting Corporation) indicate the number of posts on Twitter. The first one shows nearly 300,000 posts about Ukraine immediately after February 24, when Russia invaded Ukraine, dropping to around 100,000, and then starting to rise on March 23, when Zelensky gave the online speech. The second graph shows that the number of posts referring to Zelensky and the number before the Russian invasion on

February 24 was nearly zero, but the number increased up to 20,000 for a week and then surged to nearly 80,000 after his online speech. These graphs prove the impact of President Zelensky’s speech.

Figure 1<sup>1</sup>

*The Number of Posts About Ukraine Immediately After February 24, 2022*

*Source: NHK News (2022, July 13)*



Figure 2

*The Number of Posts Referring to Zelensky*

*Source: NHK News (2022, July 13)*



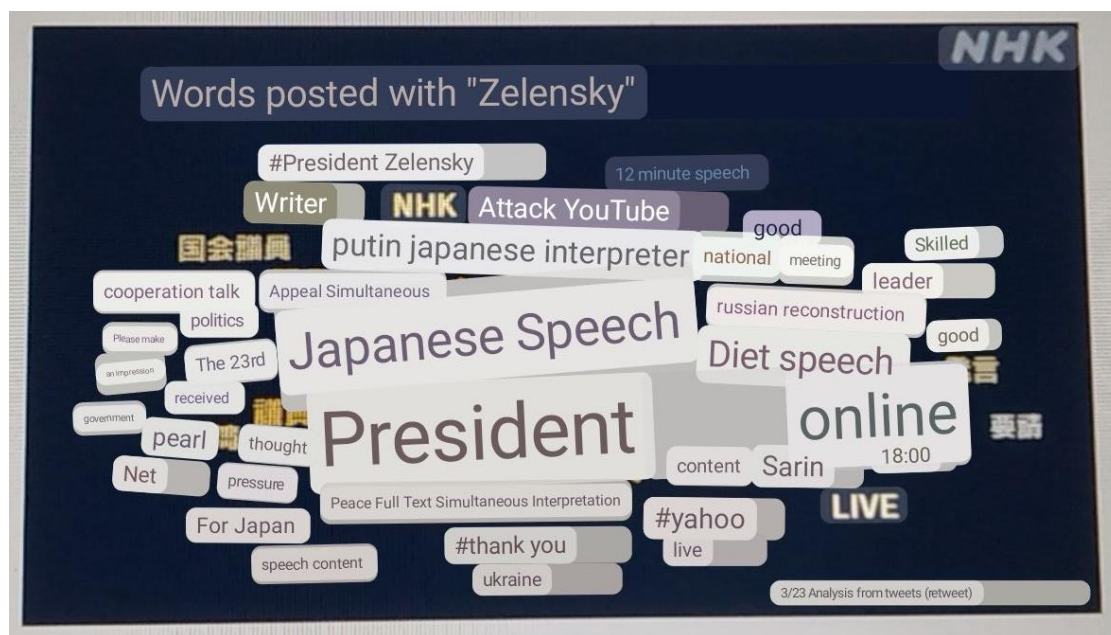
<sup>1</sup> Google Translate was used to translate Japanese into English for Fig. 1, Fig. 2, and Fig. 3. As for Figure 1’s vertical numbers, 30 is 300,000, 20 is 200,000 and 10 is 100,000 whereas, regarding Figure 2’s vertical numbers, 8 is 80,000, 6 is 60,000, 4 is 40,000 and 2 is 20,000.

The following image is a word cloud showing the words posted with “Zelensky.” The words “online,” “Japanese speech,” and “Diet speech” appear with larger fonts than other words, meaning that the Japanese people paid plenty of attention to Zelensky’s speech conducted online at the Diet.

Figure 3

*A Word Cloud Showing the Words Posted with “Zelensky”*

*Source: NHK News (2022, July 13)*



## Discussion

The above observations generally prove that President Zelensky effectively delivered his speech and may change history. Many utterances in his speech exercise perlocutionary force (Austin, 1965). Compared to Zelensky’s speeches to other countries such as to Finland, which consisted of plenty of direct (on-record) requests with more specific examples (*The Independent* 2022), his speech for Japan was milder. This is evident in how he gradually made use of face-threatening and face-boosting effects, increasing the emphasis on the need for Japan’s soft power in the latter sections of his speech, especially as seen in Excerpt 10. In his speech to the Finnish parliament, he used the speech act of an on-record request, starting to describe the specific example of a Russian attack on the train station and asking for concrete support from Finland, which lasted longer than the speech to Japan by more than five minutes (*The Independent*, 2022). Concerning the stark contrast between his speeches to Japan and to Finland, it seems that President Zelensky deliberately modifies the method of delivering his speeches by taking into account the countries’ relationship and sociocultural background.

As discourse analysis of requests using politeness theory suggests, and based on the aforementioned responses of the Japanese audience, Zelensky's speech succeeds in building common ground and generating solidarity, leading to the decision of continuing support from the Japanese government. His speech also demonstrates that he is a strategic speaker (Lee & Pinker, 2010). This is evidenced by Prime Minister Kishida's talk in which he explicitly mentioned his willingness for further humanitarian support to Ukraine. In addition, Foreign Minister Hayashi mentioned that he would support Ukraine in the international community's fight against Russia. Other politicians have also shown determined support for Ukraine, being impressed by President Zelensky's speech. Indeed, this is also evident from Japan's action for additional sanctions following the US and Europe, as well as Japan's request for reforming the UN (Liberal Democratic Party, 2022). These responses mean that the "speech act of request" (Searle, 1969) that President Zelensky exercised was accomplished with perlocutionary force (Austin, 1965). The politicians of the leading parties and the opposition parties have presented similar attitudes towards President Zelensky's speech, asserting their support for Ukraine and agreeing to strengthen sanctions against Russia.

Furthermore, as pointed out in the section of discourse analysis earlier, Zelensky's reference to Chernobyl should remind the Japanese people of Fukushima. This may involve intertextuality (Kristeva, 1986), as an analogy in the Japanese mind may be generated through inner speech. Similarly, the word "sarin" may remind Japanese people of the Aum Shinrikyo incident that happened in Japan in 1995, as pointed out in the previous section. The wording of "tsunami of invasion" also gained expert attention (Bunshun Online Special Report, March 24 2022) because "tsunami" has a significant negative impact in Japanese minds and may allow them to feel closer to Ukrainians. Regarding the selected keywords that attract the attention of the Japanese audience, it can be said that an "empathy switch" was effectively turned on (Ushio, 2022). The speechwriter Kageyama (2022) also highlights the skill in establishing emotional solidarity by using the phrase "you and I." Similarly, the term "we," which appears in a deliberate manner, may be considered an effort to build solidarity (Chilton, 1990).

Analysis using politeness theory for the discourse of request investigates three variables – social distance, relative power, and imposition – and evaluates the degree of face-threatening and face-boosting acts (Bayraktaroğlu, 1991) that could lead to solidarity, which eventually becomes soft power. Our analysis reveals that most of Zelensky's utterances were able to establish solidarity through a face-boosting effects, and the solidarity that the Japanese audience may develop thus enhances its soft power in the international community. Keywords such as "nuclear power", "sarin", and "tsunami" expand the interpretation into the unexpressed realm, with the intertextual implication that Japan is the sole victim of nuclear power.<sup>1</sup>

---

<sup>1</sup> Shinoda gave an analogy of a Japanese haiku with a sense of 'wabi sabi' embodying the Japanese minimalist mentality (Bunshun Online Special Report, March 24 2022).



## Conclusion

The present study investigated the ways in which Ukrainian President Zelensky's speech to Japan affected Japanese minds, using discourse analysis of the speech and the public responses available online. The results of the analysis indicate that all the passages produce solidarity and soft power. His efforts to successfully deliver the speech are embedded in the flow of narrowing social distance and reducing relative power but increasing the weight of imposition, which is the size of the request. The responses of politicians and citizens available from social media show that Zelensky's speech was successful in gaining support from Japan as a whole, including the government. These findings reveal that his speech, his discourse of request, succeeded in establishing solidarity, common ground, and soft power, eventually persuading Japan to continue to support Ukraine by pressuring Russia. Although Zelensky has strategically used different forms of speech to different countries, this study showed the potential for language to change the political scene in an effort to bring peace.

## References

- Arquilla, J., & Ronfeldt, D. (1999). *The emergence of noopolitik*. RAND Corporation.
- Austin, J. L. (1965). *How to do things with words (the William James Lectures delivered at Harvard University in 1955)*. Oxford University Press.
- Bayraktaroğlu, A. (1991). Politeness and interactional imbalance. *International Journal of the Sociology of Language*, 92(1). <https://doi.org/10.1515/ijsl.1991.92.5>
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage (studies in interactional sociolinguistics 4) (Reissue ed.)*. Cambridge University Press.
- Chilton, P. (1990). Politeness, politics and diplomacy. *Discourse & Society*, 1(2), 201–224. <https://doi.org/10.1177/0957926590001002005>
- Chitty, N. (2020). Soft power, civic virtue and world politics (overview). In N. Chitty, L. Ji, C. Hayden, & G. D. Rawnsley (Eds.), *The Routledge handbook of soft power* (pp. 9–36). Taylor & Francis.
- Craig, R. T., Tracy, K., & Spisak, F. (1986). The discourse of requests: Assessment of a politeness approach. *Human Communication Research*, 12(4), 437–468. <https://doi.org/10.1111/j.1468-2958.1986.tb00087.x>
- Cutting, J. (2002). *Pragmatics and discourse: A resource book for students*. Routledge.
- Fajar, M. (2019). Power and solidarity reflected in the use of pronouns portrayed in the hybrid political discourse. *Journal of English Education, Linguistics and Literature*, 5(2), 57. <https://doi.org/10.32682/jeell.v5i2.991>
- Feklyunina, V. (2016). Soft power and identity: Russia, Ukraine and the 'Russian world(s)'. *European Journal of International Relations*, 22(4), 773–796. <https://doi.org/10.1177/1354066115601200>
- Goffman, E. (1967). *Interaction ritual (1st ed.)*. Doubleday & Company.
- Holtgraves, T. (1997). Yes, but...: Positive politeness in conversation arguments. *Journal of Language and Social Psychology*, 16(2), 222–239.

- Kristeva, J. (1986). Word, dialogue, and the novel. In T. Moi (Ed.), *The Kristeva Reader*. (pp. 35–61). Columbia University Press.
- Lakoff, R. T. (1990). *Talking Power: The Politics of Language* (1st ed.). Basic Books.
- Lee, J. J., & Pinker, S. (2010). Rationales for indirect speech: The theory of the strategic speaker. *Psychological Review*, 117(3), 785.
- Mattern, J. B. (2005). Why ‘soft power’ isn’t so soft: Representational force and the sociolinguistic construction of attraction in world politics. *Millennium: Journal of International Studies*, 33(3), 583–612. <https://doi.org/10.1177/03058298050330031601>
- Nye, J. S. (2004). *Soft power: The means to success in world politics* (Illustrated ed.). PublicAffairs.
- Nye, J. S. (2011). *The future of power* (Illustrated ed.). PublicAffairs.
- Pinker, S., Nowak, M. A., & Lee, J. J. (2008). The logic of indirect speech. *Proceedings of the National Academy of Sciences*, 105(3), 833–838.
- Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge University Press.
- Stopniece, S. (2018). Finnish–Chinese investment negotiation: Power positioning and search for common ground. *Economic and Political Studies*, 6(4), 445–468. <https://doi.org/10.1080/20954816.2018.1535760>
- Tannen, D. (1993). *Gender and conversational interaction* (Oxford Studies in sociolinguistics) (1st ed.). Oxford University Press.

## Sources

- Bunshun Online Special Report. (2022, March 24). Wabisabi wo Kanjiru Haiku noyōna Inshō, Kōkateki datta Momotarō no Itsuwa, Zelenskī Daitōryō Kokkai Supīchi Mitsuno Shimitowa?, Heiwa Kōchiku no Senmonka ga Kaisetsu [The “wabi-sabi” haiku-like impression” and the “effective ‘Momotarō’ anecdote”. . . President Zelensky’s “three true meanings” of his speech at the Diet: An expert on peacebuilding explains]. Bunshun Online. Retrieved from <https://bunshun.jp/articles/-/52964>
- Jiji Press (2022, March 24). Senji Daitōryō, Nihon no Kyōkan wo Jūshi ‘Kachikan Kyōtsū’ ‘Heiwa eno Doryoku’ – Ukruraina Daitōryō Enzetsu [Wartime president emphasizes Japan’s empathy “common values” and “striving for peace”: Ukraine’s presidential speech]. Retrieved from <https://www.jiji.com/jc/article?k=2022032301150&g=pol>
- The Independent. (2022, April 8). Watch in full: President Zelensky addresses Finnish parliament on Ukraine crisis [Video]. YouTube. Retrieved from <https://www.youtube.com/watch?v=P2hXkq9baE4>
- Kageyama Y. (2022, March 24). Zelenskī Daitōryō no Enzetsu Kakumei Bōyomi, Muhyōjō demo Impakuto Dai [President Zelensky’s revolution in speeches: Impactful even with monotonous reading with no expressions]. Mainichi Shimbun. Retrieved from <https://mainichi.jp/articles/20220324/k00/00m/030/242000c>
- Liberal Democratic Party. (2022, April). Sekaino Heiwa wo Mamoru Kokuren ni, Oshirase [To the United Nations for World Peace]. <https://www.jimin.jp/news/information/203373.html>
- NHK News (2022, March 29). Ukruraina Zelenskī Daitōryō ga Kokkai de Enzetsu, Seikai no Hanno wa [Ukrainian President Zelensky addresses Parliament, reactions from politicians]. Retrieved from <https://www3.nhk.or.jp/news/html/20220323/k10013548121000.html>
- NHK News (2022, July 13). Zelenskī Daitōryō Enzetsu Yoku Tsukawareta Wādo wa? [President Zelensky’s speech: What Words were used most often?]. Retrieved from <https://www3.nhk.or.jp/news/html/20220325/k10013550991000.html>
- Nippon.com (2022, March 16). Ukraine approaches Japan with offer of Diet speech by Pres. Retrieved from <https://www.nippon.com/en/news/yjj2022031600906/>

- Speech by President of Ukraine Volodymyr Zelenskyy in the Parliament of Japan. (2022, March). President of Ukraine Volodymyr Zelenskyy Official Website. Retrieved from <https://www.president.gov.ua/en/news/promova-prezidenta-ukrayini-volodimira-zelenskogo-v-parlamen-73769>.
- Ushio A. (2022, April 14). Zelenskī Daitōryō Enzetsu, Nihon ni Awasete Mairudo ni? Shikisha ga Kaisetsu [President Zelensky's speech, mildly tailored to Japan? An expert explains]. Asahi Shimbun Digital. Retrieved from <https://www.asahi.com/articles/ASQ3R6KKXQ3RULEI009.html>

# The Influence of Stress on Children's Speech in the Context of War

Antonina Skrypnyk <sup>a,\*</sup>, Olha Labenko <sup>a</sup>

<sup>a</sup> Taras Shevchenko National University of Kyiv, Ukraine

Received September 7, 2022; Revised December 14, 2022; Accepted December 24, 2022

**Abstract.** War is an unpredictable and unbearable burden for the human psyche. Existential threats, fear for life, and loss of loved ones lead to the increase in the incidence of non-psychotic borderline disorders, including post-traumatic stress disorder. Children are the most vulnerable part of the population subject to psychotraumatic experiences. While being in a war zone, they undergo traumatic experiences that deform their consciousness, values, and worldview. Children show signs of mood swings, depression, unprovoked aggression, obsessive behavior, anxiety attacks, and expect reoccurrence of traumatizing events. The article analyzes speech features of children who have witnessed the Russian invasion of Ukraine that started on February 24, 2022. The research explores verbal expressions of young Ukrainian refugees from the war zone, identifies the speech disorders caused by the experienced stress. The study describes specific verbalization of the psychological state of the young witnesses of missile and artillery attacks, the children from the occupied territories as well as those who have not witnessed the military actions but who have had to live in refugee camps. In particular, the paper focuses on the ways to verbalize fear, anxiety, obsessive states, types of verbal aggression and means chosen by the research subjects to talk about deaths of their loved ones.

**Keywords:** *post-traumatic stress disorder, speech, verbalization, fear, speech impairment, cognitive apathy, verbal aggression.*

**Скрипник Антоніна, Лабенко Ольга. Вплив стресу на мовлення дітей в умовах війни**

**Анотація.** Війна є непередбаченим та непосильним тягарем для людської психіки. Загроза існуванню, страх за життя, втрата близьких призводять до росту числа неспсихотичних межових розладів в тому числі і до посттравматичних стресових розладів. Найнезахищенішою та вразливою частиною населення, що є відкритою для психотравматичного досвіду, є діти. Перебуваючи у зоні військового конфлікту, вони набувають трагічного досвіду, який деформує їхню свідомість, цінності та світогляд. У дітей спостерігаються перепади настрою, депресія, немотивована агресія, нав'язливі стани, непереборний страх і очікування повтору пережитих подій. Стаття присвячена огляду особливостей мовлення дітей, які стали свідками російсько-української війни, що розпочалася 24 лютого 2022 року. Дослідження зосереджується на аналізі вербальних висловлювань дітей-біженців із зони військового конфлікту і виявлення мовленнєвих порушень, спричинених пережитим стресом, а також на описі специфічних форм вербалізації психологічного стану дітей, що були свідками бомбардувань та обстрілів, дітей із окупованих територій та дітей, які не будучи прямими свідками воєнних дій, змушені жити у

---

\* Corresponding author. Antonina Skrypnyk,  <https://orcid.org/0000-0001-6904-0738>, E-mail: [enseignante78@gmail.com](mailto:enseignante78@gmail.com)

таборах для біженців. Розглядаються способи вербалізації страху, тривоги, нав'язливих станів, особливості передачі дитиною інформації про смерть близьких, аналізуються види вербальної агресії.

*Ключові слова:* посттравматичний стресовий розлад, мовлення, вербалізація, страх, збіднення мовлення, когнітивна апатія, вербальна агресія.

## Introduction

According to the Presidential Office of Ukraine, as of December 12, 2022, more than 1,298 Ukrainian children have suffered from Russian armed aggression since the outbreak of the war in Ukraine on February 24, 2022: 443 children were killed and over 855 were wounded. Over 332 children are reported missing. More than 1,000,000 have fled to the EU as refugees. Thousands of children have been orphaned, thousands are in the occupied territories, and thousands of children have been deported by Russians and placed under guardianship of strangers.

Extensive research shows that wartime trauma negatively impacts children's mental health (Aziz & Vostanis, 1999; Dimitry, 2012; Drury & Williams, 2012; Liu, 2017; Macksoud et al., 1993; Samara et al., 2020; Slone & Mann, 2016). Stress, anxiety, and other mental health issues associated with wartime trauma are known to have significant impact on children's development and wellbeing (Hill et al., 2018; Price et al., 2016; Saign et al., 2006; Strawn et al., 2021; Yule & Smith, 1995).

Humans express their psychological state and emotions primarily through their speech behavior (Kappen et al., 2022, Slavich et al., 2019). In fact, speakers' emotional strain is verbalized at every language level with linguistic means used to convey tension or anxiety. The purpose of our study is to analyze verbal expressions of war refugee children, to identify their speech disorders caused by stress as well as specific verbalizations of the psychological state used by the children who have witnessed bombing and shelling, the children from the occupied territories, and the children who have not been witnesses of hostilities but who are forced to live in refugee camps.

## Methods

### Ethical Approval

At the stage of organizing the study, the parents of all participants (minors participated in the study) were acquainted with the regulatory documents on the ethics of scientific research. Consent (in writing) for data collection was obtained from the parents. The study was conducted in compliance with the relevant ethical standards and rules; no moral pressure was exerted on the survey participants.

All procedures carried out with the participation of respondents were performed in accordance with the regulatory requirements for ethics and academic integrity

approved at Taras Shevchenko National University of Kyiv enshrined in the “Code of Ethics of the University Community” as well as in the Helsinki Declaration.

## **Participants**

The study involved 60 respondents: Group 1 – 20 children: 10 children-witnesses of bombings and shelling (Kyiv region: Gostomel, Irpin, Moshchun, Bervitsa, Ploske, Svitilnya, Lukianivka; Mariupol, Chernihiv, Kharkiv) and 10 refugee children from the occupied regions (Kherson (four persons), Melitopol two persons), Izyum, Bakhmut, Nova Kakhovka (two persons)), Nova Kakhovka (two persons)); Group 2 – 20 refugee children from the regions where there were no active hostilities, and the children only witnessed air raids and distant bombing and left their place of residence in the first 10 days of the war (Kyiv (12 persons), Mykolaiv (three persons), Sumy (two persons), Cherkasy (one person), Vinnytsia (two persons)). Group 3 is a control group, which includes 20 children, who are French citizens of the corresponding age studying at schools in the settlements of Aigues-Mortes, Le Cailar, and Aubais of the territorial commune of Aimargues, Occitania region. The ages of children in each group are 5-7 years - 10 people (five girls, five boys) and 10 people 8-10 years old (five girls, five boys).

The study was conducted in the Mas de Torras tourist center in the city of Emargue (France), where a camp for Ukrainian refugees was deployed, as well as in the summer camp located in a municipal institution of preschool education (kindergarten) of compensatory type “Romashka” in the city of Vyshneve, Kyiv region (Ukraine), where children with the status of IDP (internally displaced person) stayed.

The children’s parents participated in a separate survey. There were 28 people in total (16 people were the parents of Group 1 children and 12 adults were the parents of Group 2 children).

## **Instruments**

Taking into account the purpose and the objectives of the study, the following methods were used: observation, conversation, testing methods (symptomatic questionnaire by Jerzy Aleksandrowicz (Aleksandrowicz et al., 1981, Rewer, 2000), from which the authors have excluded the questionnaire Group 7 "Sexual disorders" (questions #7, 27, 58, 67, 70, 87, 107,127, 137), as well as question #112 "Alcohol abuse", taking into account the age of the respondents; Buss-Durkee hostility questionnaire (Buss & Durkee, 1957), in which only questions from the position "verbal aggression" were selected: #7, 15, 23, 31, 39, 46, 53, 60. 71, 73, 74, 75); and the parental questionnaire to assess children's traumatic experiences (Tarabrina, 2000).

## Data Collection Procedure

The study was conducted in three stages. The first stage (March 25, 2022 – April, 15, 2022) was devoted to observation of the participants to the experiment. During this period, a survey of the parents was also conducted using the Tarabrina questionnaire. At the second stage (April 18, 2022 – May 20, 2022), the surveys based on the questionnaires by Aleksandrovych and Buss-Durkee were conducted. The third stage (May 23, 2022 – July 22, 2022) involved the statistical processing of the survey results, systematization, and formulating the conclusions.

Psychologists believe that the reliability and the trustworthiness of results depends on a trusting relationship between the tested and the interviewer (Lawrence et al, 2011, Oxburgh, 2011). For three weeks prior to the study, educators and volunteers of the refugee camp supported the researchers in the attempt to build rapport: the researchers spent free time with the children, played, talked with them on various topics.

The following data were recorded in the standardized observation protocol: emotional difficulties; speech features; the peculiarities of the children's interactions with their parents, peers and educators (or volunteers); conflict situations between children, etc.

The parental questionnaire by Tarabrina (2001) was used for independent examination of children's traumatic experiences. The survey involved 28 parents (16 parents of Group 1 children and 12 parents of Group 2 children). Prior to the study, the researchers had a conversation the parents in order to motivate them to fill out the questionnaire accurately and appropriately. The questionnaire consisted of three parts: 1. biographical data of the child; 2. screening (specifics of the stressful event); 3. statements, which included two blocks: the first block contained five questions about the child's behavior immediately after the event, and the second block included 30 statements that described the child's behavior during the following two months. These statements had to be either confirmed or denied.

The psychological state of the respondents was assessed using the Aleksandrovich questionnaire, which allows identification of psychotic and neurotic disorders. The questions of this questionnaire concern difficulties and ailments that occur in neuroses (F40-F48). Knowing which of them have occurred during the following months allows us to assess the degree of psychological problems of Ukrainian children in the refugee camp. When a disorder was detected, the authors tried to establish the manner of verbalization of the detected psychological disorder. For each indicator revealed with the Alexander Symptom Inventory, low, medium, and high levels of PTSD symptom severity are derived in accordance with the keys of the methodology given to this questionnaire by Karsavarsky (2004).

A test using 129 questions of the symptomatic questionnaire was conducted orally in several stages: 10 questions per day for children of 5-7 years old and 15 questions per day for children of 8-10 years old. The wording of the questions was adapted to the age of each child. The survey of the younger children was conducted partly in the form of a game using fairy tales and stories, where the child could draw

a parallel between their emotions and the emotions of the characters. The children aged 8-10 mostly did not need such an adaptation but only clarification of the content.

The results of the behavioral studies were compared with the results of the surveys of participants in the third control group. The symptomatic questionnaire was translated into French. The survey was conducted at a school with the help of tutors and a psychologist.

The analysis of verbal aggression in children-respondents was conducted using the Buss-Durkee Hostility Inventory (BDHI), the reliability and validity of which is confirmed by numerous psychological studies.

When creating their questionnaire, which differentiates the manifestations of aggression and hostility, Buss and Durkee identify different types of reactions (physical aggression, irritation, negativism, verbal aggression, etc.). In our study into the impact of stress on children's speech in wartime, we limit ourselves to one portion of the questionnaire, namely "verbal aggression": expression of negative feelings both through the form (shouting, screaming) and through the content of verbal responses (curses, threats, etc.). That is, during the testing, the authors had to get affirmative answers to questions #7, 15, 23, 31, 46, 53, 60, 71, 73, and negative answers to questions #39, 74, 75.

## Results

Before conducting the study, we got acquainted with the information about the microsocial upbringing conditions of the two experimental groups of respondents (Table 1).

Table 1  
*Family Composition and the Nurturer of the Children in the Study*

Family conditions	Number	%
1. complete family	29	72
2. single-parent family	11	28
Child is raised by:		
2a. mother	8	20
2b. father	2	5
2c. guardian	1	3
<b>Total</b>	<b>40</b>	<b>100%</b>

The analysis of the parental questionnaire allowed us to identify the main problems of children with PTSD (according to their parents). The distribution of the results is presented in Table 2:



Table 2  
*Results of the Parental Questionnaire*

<b>Disorder</b>	<b>Group 1</b>	<b>Group 2</b>
1. increased anxiety and fears	85%	60%
2. persistent symptoms of increased excitability	45%	40%
3. reduction in the number of contacts with others	40%	20%
4. regressive forms of behavior	4%	0%
5. symptoms of avoidance	35%	15%
6. somatic complaints	45%	25%
7. sleep disturbances	70%	50%

Many children had combined problems, which is reflected in the statistics. As can be seen from the table, the parents of the children who directly witnessed hostilities report on average 20% more manifestations of the consequences of the experienced stress than the refugee children from regions where there were no active hostilities.

The parents were also separately asked whether they had noticed any changes in their child's speech in a state of emotional stress (in a shelter during bombing, during evacuation through a dangerous area: for example, through the damaged bridge in Irpin, or on the roads of Kyiv region during shelling). Twelve parents of the children in Group 1 noticed that their children (aged seven, nine and ten) had difficulties in formulating their thoughts, which manifested in an increase in the number and duration of pauses, word searches, and semantically irrelevant repetitions. Two parents of children aged five and six also noted their children's search for words and their replacement with gestures. Another mother noted a decrease in her five-year-old child's vocabulary.

The next stage of the study was testing according to the symptomatic questionnaire of Aleksandrovich, which allowed to quantify the degree of severity of neurotic syndromes in the subject. The results of the questionnaire are presented in Table 3.

Table 3  
*Results of the Aleksandrovich Symptomatic Questionnaire*

<b>No.</b>	<b>Group 1</b>	<b>Group 2</b>	<b>Control group</b>
1. fear/phobias	17 (85%)	10 (50%)	5 (25%)
2. depressive disorders	10 (50%)	5 (25%)	0
3. anxiety/stress	18 (90%)	14 (70%)	1(5%)
4. sleep disorders	15 (75%)	9 (45%)	4 (20%)
5. frequent tantrums	12 (60%)	11(55%)	3 (15%)
6. neurasthenic disorders	10 (50%)	3 (15%)	0
7. derealization	2 (10%)	0	0

<b>8.</b>	obsessions	15 (75%)	11 (55%)	0
<b>9.</b>	difficulties in social contacts	16 (80%)	8 (40%)	1 (5%)
<b>10.</b>	hypochondriac disorders	3 (15%)	1 (5%)	0
<b>11.</b>	somatic disorders	13 (65%)	8 (40%)	0

After calculating the indicators of all subscales of the questionnaire, it turned out that for each item of the questionnaire between 90% and 50% of children from Group 1 and between 55% and 15% of children from Group 2 showed the presence of these disorders. Items 7 (derealization) and 10 (hypochondriac disorders) have a low expression. In the control group, item 1 (fear/phobia) has a high rate, which is explained by the fact that fear is one of the basic emotions of a child (Hoge et al., 2017) and item 4 (sleep disturbance) is quite common in children (Simola et al., 2014). When comparing the average of the survey results, the psychological state of the children who witnessed hostilities immediately (arithmetic mean 12) has more manifestations in all items of the questionnaire than in children who indirectly witnessed war (arithmetic mean 8) by 20% and 55% more than in children of the control group (arithmetic mean 1).

The authors analyzed the verbalization of the detected indicators of psychological problems according to the following points: stress (fear, phobias, anxiety), tantrums, derealization, obsessive states, difficulties in social contacts.

Fear is one of the dominant human emotions, which is characterized by various forms of its manifestation (Dymond et al., 2015). Considering the vital importance and fundamentality of the emotion of fear, it can be assumed that the potential of means of verbalizing it is high. We identified the following types of fear (Table 4):

Table 4  
*Types of Fear*

Types of fear	Group 1		Group 2		Control group	
	Number	%	Number	%	Number	%
fear of war	20	100	20	100	2	10
fear of parent's death	16	80	15	75	5	25
fear of being alone	20	100	17	85	8	40
constant feeling of danger	15	75	7	35	0	0
fear of the dark	18	90	13	65	7	35

The children from the experimental groups verbalize their fear of war with the following questions: “*When will the war end?*” (30 people), “*When will our army win?*” (25 people), “*Our country (city, village, i.e., place of permanent residence) will not be captured by the Russians, will it?*” (20 people), “*The Russians will not reach here (place of temporary residence), will they?*” (15 people), “*They won't bomb us, right?*” (10 people). Sixteen out of the twenty-eight parents noted that

during the first weeks (up to a month) of the war, the question "*When will the war end?*" had taken on an iterative nature: the child had asked it at least once a day.

The authors noted one case of a complete mutism of a five-year-old boy who had witnessed the bombings. Another respondent (G. boy, 9 y.o.) had temporary mutism after the explosion, which occurred when the child was outside. The boy's mother said that he was silent for a week. The first single phrases that the boy constantly repeated were: "*I will never go out again. I will sit at home. I will not go anywhere else.*"

The fear of explosions or bombings is also manifested in an inappropriate perception of sharp sounds. Ten children who witnessed the bombing and shelling when hearing a sharp sound (a plane, construction works nearby, a balloon explosion), fell onto the floor, covering their heads with hands or hiding under furniture. It is noteworthy that all the children, having realized that the panic was unjustified, felt guilty or ashamed, especially if other children who had not got frightened witnessed this, and excused themselves with the words "*I was just scared*".

The children's fear of their parents' death is verbalized in different ways. The children from Group 2 (12 people) in this context express fear for their father, who is at the frontline. The fear of losing the father is constant and is expressed by the following statements of 5–7-year-old children: "*Did dad call?*", "*Call my dad*", "*When will dad take us?*", "*I want to see dad*", "*And dad won't be killed?*". Children of 8-10 y.o.: "*Did dad call?*", "*Did you call dad? Did he answer?*", "*Call dad*", "*When will dad come back?*", "*I'm worried about my dad*". The children of this age understand and explain their fear of losing a close person: "*I am worried about this situation and I worry about those who are in Ukraine now. I am very worried about my grandmother and others*" (V., boy, 10 y.o.).

The children from Group 1, who witnessed the bombing and shelling, besides the fear for their relatives who remain in Ukraine, also express the fear for their own lives. Six children from Group 1 testified an obsessive fear of death: "*I'm afraid that they will kill us*" (D., boy, 8 y.o.), "*I'm afraid of being buried alive under rubble*" (M., boy, 9 y.o.). "*Now I'm afraid of silence. I feel anxious when there is silence, I think that there will be an explosion and we will die*" (M., girl, 10 y.o.).

All members of both experimental groups admitted that they often see bombings and shelling in their dreams.

While conducting the survey on the fear of losing parents, the authors identified a subgroup of respondents (7 persons) in Group 1 — the children who witnessed the death of family members or friends. It was noted that younger children (5-6 years old, 3 persons), when talking about the experience, use exclamations denoting an explosion, accompanying these onomatopoeias with gestures and directly nominating the fact of death: "*Grandma was killed*" (D., girl, 5 y.o.), "*My two dogs and grandpa died*" (I., boy, 6 y.o.), "*My uncle was killed. And bombs are flying*" (S., girl, 5 y.o.). The study revealed two cases when children, talking about the loss of their mother

(T., girl, 6 y.o.) and father (D., boy, 5 y.o.), used the phrase *“It was a long time ago”*, as if convincing themselves of a new stage of life.

Older children (7-8 years old) report the death of a relative more extensively, specifying the circumstances, *“Mum was sleeping and sleeping, and then dad said she was dead”* (V., boy, 7 y.o.), *“Grandma ran to me, grabbed me and shouted ‘Mum was killed!’”* Children of this age as well as older children (8-10 years old) avoid nominating death directly. As in the two previous examples, a ten-year-old boy from Mariupol, when talking about his mother’s death, which he witnessed, replaces the word *“died”* with the word *“is not here”*: *“They asked me where my mother is. And I said ‘Mum is not here anymore!’”* It is noteworthy that while telling this, the boy smiles, the smile intensifies at the words *“is not here anymore!”*, after which the child bursts into tears. The stupor of two children (boys 9 and 10 years old) was noted during the story about the death of the father: the child stops speaking, the face acquires a mask-like appearance, the gaze is fixated. Five children from this subgroup periodically asked questions: *“What happens after death?”*, *“Why do people die?”*, *“Where do dead people go?”*

Eighty percent of respondents from Group 1 retell the experienced event many times with all the details. These manifestations can be classified as recurrent flashback memories. Such retelling sometimes takes the form of an obsessive state. For example, the six-year-old girl M. from Mariupol repeatedly recounted being hit in the leg by a shrapnel, *“And then I look – the leg is covered in blood”*. Another girl (K., 9 y.o.) witnessed the death of her older sister. The family initially reacted with confusion, despair and depression, but tried not to discuss the situation with their youngest daughter. Now the girl draws many, as she says, “greeting cards” with flowers and butterflies, and explains that she draws *“for my sister”* because she *“sees these pictures”*. The parents note the non-standard nature of the sister's nomination. Before the tragic incident, K., when talking about her sister, called her only by her name and in its various interpretations and never *“my sister”*. According to the mother, the child thus distances herself from acute emotions, making an effort not to return to the currently painful memories of a happy life before the war, using (even in conversations with her parents) the neutral word *“sister”* and not family variations of the name, which are intimate for a child. The research revealed two more similar cases of dealing with the stress with the help of drawing. A girl (D., 6 y.o.), whose mother was killed during the shelling, periodically during the day draws hearts with *“mother”* written inside them. Another girl from the Kyiv region (Y. 7 y.o.), who lost her father in the shelling of cars, draws her family every day and writes *“dad”* under her father's portrait.

When retelling the experienced events, the children give many details, describe their emotions, and often include verbal reactions of adults to this event. For example, a girl (S., 6 y.s o.), who was protected from a shell by a neighbor who dragged her to a shelter, repeats the “adult” phrase *“May the Lord bless him and his family”* when recounting this event. A girl (T., 5 y.o.): *“Rockets were flying. It was*

*scary. Everyone was crying. And we went to France. What can you do? We have nothing to do at home”. Girl (M., 10 y.o.): “I think that Putin will bring us calamity, will bring much damage to our people”.*

Emphatic use of the first-person possessive pronoun *my* is characteristic for the respondents of both groups, which is not typical of the Ukrainian language: “*When I left my Ukraine, I got confused*” (D. boy, 10 y.o.), “*Why are they bombing my house?*” (V., girl, 4 y.o.), “*When will we return to my city?*” (V. boy, 7 years old), “*I want to return to my Kyiv*” (D. boy, 8 y.o.). It can be assumed that in this way children unconsciously protest against being abroad because the cliché “*at home/not at home*” is present in the minds of both adults and children.

The authors recorded two cases of derealization in Group 1 children of five and eight years old. A girl (V., 6 y.o.) imagined herself in the world of her favorite cartoon. When her mother tried to distract her from her fantasies, the child protested and became hysterical (*I want to live with Peppa Pig!*). The second case is a ten-year-old boy’s feelings that he is living outside reality and acts “*like a robot*”.

Disruption of social contacts is expressed by impoverishment of speech (one-word answers, reduction of speech to short questions), cognitive apathy and loss of interest in anything as well as complete refusal to communicate with peers, volunteers, psychologists (five cases: one child aged 7, one child aged 8 and three children aged 10).

War can be a direct causal agent of aggression that occurs in both adults and children who have experienced its devastating consequences (Qouta et al., 2008). A comparative analysis of the answers to the question about verbal aggression in the Buss-Durkee questionnaire shows the following results (Table 5):

Table 5  
*Verbal Aggression Test Results*

<b>Level</b>	<b>Group 1</b>	<b>Group 2</b>	<b>Control group</b>
High	6 (30%)	4 (20%)	1 (5%)
Average	8 (40%)	4 (20%)	3 (15%)
Low	6 (30%)	12 (60%)	16 (80%)

The data obtained as a result of using the Buss-Durkee questionnaire indicate that the degree of aggression and hostility in children of the experimental groups is significantly higher than in the children of the control group.

High level of aggression is more typical for respondents aged 5-7 years, who express it by hysterical demands, overly emotional reactions to external stimuli, moodiness, and a categorical refusal to comply with adults’ requests or instructions. However, this type of aggression is characteristic of children in any stressful situation, not necessarily caused by war. The events experienced in Ukraine in children of this age have affected their games rather than their nonverbal behavior.

The children play air raid alerts, imitate sirens, and they can express their aggression while playing with toys. The authors witnessed boys playing with shooting cars and bombing, drawing and crossing out tanks, planes or soldiers of the Russian army. All these actions directed at the enemies give the child a sense of control and help to overcome fear and powerlessness.

The average level of verbal aggression of the children in the experimental groups is expressed in fantasies of revenge on the enemy. It should be noted that such speech behavior is very typical of boys aged 6-8 years. Children can voice their fantasies to adults, but they are especially willing to share plans of “revenge” with their peers. The authors noted that in conversations about the war the children aged 5-7 years use the name “*Putin*” in most cases metonymically to refer to the image of the enemy in the Russo-Ukrainian war, while older children use the word “Russians” (and stylistic synonyms: “*Rusnya*”, “*Moskals*”, “*Katsaps*”) and “*orcs*”.

Eight- and ten-year-old children consciously verbalize their hostility and hatred towards Russia: “*When I watch the news and see the Russian army attacking innocent people, I get angry*” (V., boy, 10 y.o.); “*When my mother cries, I get quite angry at Putin*” (P., boy, 9 y.o.), “*Why they want to kill us, I do not understand. It scares me and makes me angry*” (I., girl, 8 y.o.). When analyzing the level of aggression, we did not register any qualitative differences in verbal aggression between the respondents of Group 1 and Group 2. The parents of Group 1 children, who witnessed the hostilities, emphasized that during the bombardment and shelling, the children who had been prone to some aggression before the war had been very quiet, mostly kept silent and followed all instructions of adults.

## Conclusions

The analysis of the impact of the war on children's speech shows that children who witnessed the hostilities of the Russian-Ukrainian war in 2022 display the symptoms of post-traumatic stress and signs of a high level of situational and personal anxiety combined with fears associated with the extreme situations they experienced.

The speech of refugee children from the military conflict zone contains markers of speech disorders caused by stress. The analysis also revealed specific expressions used by the children to talk about their psychological state and the experienced events.

The speech disorders identified during the study are:

- 1) difficulties in formulating thoughts;
- 2) increase in the number and duration of pauses;
- 3) searching for words and replacing them with gestures;
- 4) semantically irrelevant repetitions;

5) impoverished speech (one-word answers, reduction of speech to short questions, lexical narrowing);

6) stupor during speech;

7) cases of complete or temporary mutism.

The authors analyzed the verbalization of the identified indicators of psychological problems by the following points: stress (fear, phobias, anxiety), hysteria, derealization, obsessions, difficulties in social contacts. We refer to specific forms of verbalization of psychological state:

1) iterative nature of speech: obsessive questions about personal threat in the war, questions about parents at the frontline and relatives who remained in Ukraine, repetition of the narrative about the experienced events;

2) incorporation of previously heard verbal reactions of adults into the story about the experienced event;

3) excessive details in the story about the event;

4) shame and justification for a panic attack;

5) emphatic use of the first-person possessive pronoun in the context of conversations about the homeland (*my Ukraine, my Kyiv, my home*), which implies rejection of being away from home;

6) peculiarities of verbalization of the experienced death of loved ones:

- children aged 5-6 accompany their speech with gestures and exclamations to indicate the explosion and directly nominate the fact of death;

- children aged 7-10 report about the death of a loved one in detail, indicating the circumstances and avoiding any direct nomination of death, replacing the words "died", "was killed" with "is not here".

The experienced events cause high and medium level of aggression in young respondents, which is verbally expressed in fantasies of revenge on the enemy.

Further research of children's speech in the context of war can provide the material for development and testing of psychological help and pedagogical guidance employed to children suffering from post-traumatic stress disorder caused by hostilities. The study lays the foundation necessary to elaborate practical recommendations for teachers, psychologists, social pedagogues, parents aimed at improving the content and methods of psychological and pedagogical support of children with post-traumatic stress disorder.

## References

- Aziz, A., Vostanis, P. (1999). Post-traumatic Stress Reactions in Children of War. *Journal of Child Psychology and Psychiatry*, 40(3), 385-391. <https://doi.org/10.1111/1469-7610.00456>
- Buss, A. H., Durkee, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consulting Psychology*, 21(4), 343-349. <https://doi.org/10.1037/h0046900>
- Dimitry, L. (2012). A systematic review on the mental health of children and adolescents in areas of armed conflict in the Middle East. *Child: Care, Health and Development*, 38(2), 153-161. <https://doi.org/10.1111/j.1365-2214.2011.01246.x>

- Drury, J., Williams, R. (2012). Children and young people who are refugees, internally displaced persons or survivors or perpetrators of war, mass violence and terrorism. *Current Opinion in Psychiatry*, 25(4), 277-284. <https://doi.org/10.1097/YCO.0b013e3283533ee6>
- Dymond, S., Dunsmoor, J.E., Vervliet, B., Roche, B., Hermans, D. (2015). Fear Generalization in Humans: Systematic Review and Implications for Anxiety Disorder Research. *Behavior Therapy*, 46(5), 561-582. <https://doi.org/10.1016/j.beth.2014.10.001>
- Herbert, M. (2006) Posttraumatic stress disorder in children. Leicester: British Psychological Society.
- Hill, D.C., Moss, R.H., Sykes-Muskett, B., Conner, M., O'Connor, D.B. (2018). Stress and eating behaviors in children and adolescents: Systematic review and meta-analysis. *Appetite*, 123, 14-22. <https://doi.org/10.1016/j.appet.2017.11.109>
- Kappen, M., Hoorelbeke, K., Madhu, N. [et al.]. (2022). Speech as an indicator for psychosocial stress: A network analytic approach. *Behavior Research Methods*, 54, 910-921 <https://doi.org/10.3758/s13428-021-01670-x>
- Karvasarskiy, B. D. (2004). Klynycheskaia psikhohohyia. [Clinical psychology]. S.-Petersburg: Piter, 512-516.
- Kheirbek, M. A. Klemenhagen, K.C., A. Sahay A. (2012). Neurogenesis and generalization: a new approach to stratify and treat anxiety disorders. *Nature Neuroscience*, 15, 1613-1633. <https://doi.org/10.1038/nn.3262>
- Lawrence, E., Barry, R.A., Brock, R.L., Bunde, M., Langer, A., Ro, E., Fazio, E., Mulryan, L., Hunt, S., Madsen, L., Dzankovic, S. (2011). The Relationship Quality Interview: evidence of reliability, convergent and divergent validity, and incremental utility. *Psychological Assessment*, 23(1), 44-63. <https://doi.org/10.1037/a0021096>
- Liu, M., War and Children. (2017). *American Journal of Psychiatry*, 12(7), 3-5. <https://doi.org/10.1176/appi.ajp-rj.2017.120702>
- Macksoud, M., Dyregrov, A., Raundalen, M. (1993). Traumatic war experiences and their effects on children. *International Handbook of Traumatic Stress Syndromes*. Herston: University of Queensland, Australia, 625-633. [https://doi.org/10.1007/978-1-4615-2820-3\\_52](https://doi.org/10.1007/978-1-4615-2820-3_52)
- Oxburgh G. (2011). Psychology and interviewing: What direction now in our quest for reliable information? *British Journal of Forensic Practice*, 13, 135-144. <https://doi.org/10.1108/14636641111134378>
- Pearn, J. Children and war. (2003). *Journal of Paediatrics and Child Health*, 39, 166-172. <https://doi.org/10.1046/j.1440-1754.2003.00124.x>
- Price, J., Kassam-Adams, N., Alderfer, M. A., Christofferson, J., & Kazak, A. E. (2016). Systematic Review A Reevaluation and Rpdate of the Integrative (Trajectory) Model of Pediatric Medical Traumatic Stress. *Journal of Pediatric Psychology*, 41(1), 86-97. <https://doi.org/10.1093/jpepsy/jsv074>
- Qouta, S., Punamäki, R-L., Miller, T., [et al]. (2008). Does war beget child aggression? Military violence, gender, age and aggressive behavior in two Palestinian samples. *Aggressive Behavior*, 34(3), 231-244. <https://onlinelibrary.wiley.com/doi/10.1002/ab.20236>
- Saign, P. A., Yasik, A. E., Oberfield, R. A., Halaman-Daris, P. V., Bremner, J. D. (2006). The intellectual performance of traumatized children and adolescents with or without posttraumatic stress disorder. *Journal of Abnormal Psychology*, 115(2), 332-340. <https://doi.org/10.1037/0021-843X.115.2.332>
- Samara, M., Hammuda, S., Vostanis, P., El-Khodary, B., Al-Dewik, N. (2020). Children's prolonged exposure to the toxic stress of war trauma in the Middle East. *British Medical Journal*, 1-6. <https://doi.org/10.1136/bmj.m3155>
- Slone, M., Mann, S. (2016). Effects of War, Terrorism and Armed Conflict on Young Children: A Systematic Review. *Child Psychiatry & Human Development*, 47, 950-965. <https://doi.org/10.1007/s10578-016-0626-7>



- Strawn, J. R., Lu, L., Peris, T. S., Levine, A., & Walkup, J. T. (2021). Research Review: Pediatric anxiety disorders—what have we learnt in the last 10 years? *Journal of Child Psychology and Psychiatry*, 62(2), 114-139. <https://doi.org/10.1111/jcpp.13262>
- Tarabrina, N.V. (2001). *Praktykum po psicholohyy posttravmatycheskoho stressa*. [Practical course on psychology of post-traumatic stress]. S.-Petersburg: Piter, 240-243.
- Trickey, D., Siddaway, A.P., Meiser-Stedman, R., Serpell, L., Field, A. (2012). A meta-analysis of risk factors for post-traumatic stress disorder in children and adolescents. *Clinical Psychology Review*, 32(2), 122-138. <https://doi.org/10.1016/j.cpr.2011.12.001>
- Yule, W. & Smith, P. (2015). Post traumatic stress disorder. In A. Thapar, D. S. Pine, J. F. Leckman, S. Scott, M. J. Snowling, & E. Taylor, (Eds.). *Rutter's Child and Adolescent Psychiatry*. (pp. 392-406). Oxford: Blackwell. <https://doi.org/10.1002/9781118381953.ch59>

# From Conflict of Discourses to Military Conflict: Multimodality of Identity Construction in Russo-Ukrainian War Discourse

Valentyna Ushchyna \*

*Lesya Ukrainka Volyn National University*

*Received September 13, 2022; Revised September 28, 2022; Accepted November 7, 2022*


**Abstract.** This study is an attempt to grasp the discursive nature of Russo-Ukrainian war. The critical discourse analysis of the conflicting ways Russian and Ukrainian identities are constructed in discourse and by discourse can shed light onto the covert reasons of the unprovoked military aggression Russia has been executing against Ukraine. Our assumptions are based on the idea that identity is a manifold of stances taken by individual as well as collective speakers in various situations of communication. Having epistemic and affective dimensions, stances are inherently interactive, and, thus, have a collective or social nature. Generally speaking, conflictual stances, built in war discourse, express national, political, or sociological worldviews of the stance-takers, reflecting their ideologies, values, and beliefs. The way people see the conflict differs according to what "frames" they choose to see it through. In this study, the frames circumscribing Ukrainian and Russian conflictual identities, as they are built in Ukrainian and Russian media discourse, including social media, have been deconstructed and analyzed. As there are diverse semiotic systems that are used to create, transmit and understand meanings (e.g., verbal and non-verbal, written and oral, visual and audial) various modalities employed in the process of discursive construction of these identities were taken into consideration.

**Keywords:** discourse, identity, multimodality, stance, stancetaking, semiosis.

**Ущина Валентина. Від конфлікту дискурсів до воєнного конфлікту: мультимодальність конструювання ідентичності під час російсько-української війни.**

**Анотація.** Це дослідження є спробою осягнути дискурсивний характер російсько-української війни. Критичний дискурс-аналіз конфліктних шляхів конструювання російської та української ідентичностей у дискурсі та за допомогою дискурсу може пролити світло на приховані причини неспровокованої військової агресії, яку Росія здійснює проти України. Наші припущення ґрунтуються на ідеї, що ідентичність – це сукупність позицій, котрі займаються індивідуальними та колективними мовцями в різних ситуаціях спілкування. Маючи епістемічний та афективний виміри, позиції за своєю суттю є інтерактивними, і, таким чином, мають колективну або соціальну природу. Інакше кажучи, конфліктні позиції, вибудовані учасниками дискурсу війни, виражають національний, політичний чи соціологічний світогляди суб'єктів позиціювання, відображаючи їхні ідеології, цінності та переконання. Те, як люди трактують конфлікт, відрізняється залежно від того, у які фрейми вони його вкладають. У цій роботі на основі критичного аналізу українського та російського медіа-дискурсу, було деконструйовано та проаналізовано фрейми, що окреслюють українську та російську конфліктні ідентичності. До уваги бралися різноманітні семіотичні

---

\* Valentyna Ushchyna,  <https://orcid.org/0000-0003-3086-4224>, E-mail: [vushchyna@vnu.edu.ua](mailto:vushchyna@vnu.edu.ua)

системи, які використовуються для створення, передачі та розуміння значень (наприклад, вербальних та невербальних, письмових та усних, візуальних та аудіальних), а відтак були враховані різні модальності, що використовуються у процесі дискурсивної побудови цих ідентичностей.

*Ключові слова:* дискурс, ідентичність, мультимодальність, позиціонування, станс, семіозис.

## Introduction

This study aims at researching discursive mechanisms of conflictual identity construction in the discourse of an unprovoked war, launched by Russia against independent Ukraine. The notion of “identity” is seen here as a complex phenomenon which can be researched both as an individual, as well as a collective issue. Identity is multifaceted and multidimensional. Identity is fluid, unstable, and consequential. But first and foremost, identity is discursively constructed. Therefore, this study focuses on discursive structures deployed by the discourse participants to build their respectful identities in the context of Russo-Ukrainian war. Identity communication processes become crucially important in the times of conflicts, when the very existence of identities may be questioned, debated, and even aggressed. In his essay, published in July 2021, Vladimir Putin, the President of the Russian Federation, asserted that Ukraine never truly existed as a sovereign country, and that the territories of Ukraine are basically the Russian lands. He, along with other Russian public actors, claimed that “Ukrainian is an artificial identity, mistakenly created by Bolsheviks” (Putin, 2021). Consequently, Russians officially deny Ukrainians the right for their ethnic and national self-identification as an independent people with their own history, culture, and language. Such claims apparently represent the discursive reproduction of power abuse (van Dijk, 2008b, p. 6), and, thus, are best approached in the theoretical framework of critical discourse studies (CDS), specifically interested in the investigation of social problems of inequality, ideological domination, and power abuse in their relation to discourse practices and language use. According to van Dijk (2008b, p. 87), “language use, discourse, verbal interaction and communication belong to the micro level of the social order, while power, dominance, and inequality belong to a macro level of analysis”. “This means, as van Dijk further explains, that CDS has to theoretically bridge the ‘gap’ between micro and macro approaches” to discourse, as well as its cognitive and social dimensions.

Situated within CDS as the general theoretical and analytical framework, a sociocognitive approach was used to analyze verbal and non-verbal elements in the process of Ukrainian identity discursive construction. This particular approach to discourse analysis builds on the study of discourse structures to make explicit the relations between discourse, cognition and society. Van Dijk stresses the role cognition plays in the mediation between discourse structures and social structures: “[T]o explain how real language users go about producing and understanding discourse, how their personal and socially shared beliefs affect discourse production and how these are in turn affected by discourse. No critical account of discourse is

theoretically complete without such a cognitive interface” (van Dijk, 2008a, p. 79). In the current aggressive Russian discourse, it is important to detect the underlying attitudinal mental representations shared by Russians who support the physical and cultural destruction of Ukraine. As a result, such analysis might offer an explanation to the general permissibility of military offensive among the Russian audience and trace the discursive ways of its legitimization in Russian society.

The overall discursive architecture of national ideologies concerning conflicting identities is an extremely complicated issue for analysis, yet I shall assume that it is approachable via the notions of “stance” (Du Bois, 2007; Englebretson, 2007; Jaffe, 2009; Kiesling et al., 2018) and “indexicality” (Silverstein, 1979; 2003), where stances (verbal and non-verbal means for discursive manifestation of positions in communication) are seen as a building material used for identity construction, and indexicality is seen as contextually bound meaning. In an indexical theory of stance (Eckert 2004), linguistic and non-linguistic forms of stancetaking become significant if they acquire certain social meanings, and become recognizable by the members of certain social groups, or in other words, become identification resources. As a broad term, stance covers a range of linguistic features that have long been studied separately, such as modality, evaluation, evidentiality, hedging, affect, footing etc. The advantage of stance is that stancetaking is a public act of taking a point of view rather than somebody’s private opinion on an issue. It also is interactive, involving aligning or disaligning with others. Accumulating, discourse stances signal stancetakers’ identities, both individual and collective.

There are various definitions of identity relevant for discursive and sociolinguistic investigations. Among them we choose the ones that treat identity as an ever-changing and fluctuating discursive construct rather than pre-existing and stable entity. Identity is the product rather than the source of linguistic practices (Bucholtz & Hall, 2005, p. 585). One of the most influential theorists of identity, Michael Foucault (1988) argued that identity is constructed through certain techniques or practices, by which we get to understand and shape ourselves. Giddens (1991), another researcher of identity, considered identities as dynamic, ever-changing and evolving. Giddens argued that we constantly create and revise our personal narratives, our “life stories”, on the basis of information from our environment. This process is undertaken through the resources we have at our disposal. In the last decades, the variety of instruments people use for identity creation has grown dramatically. We use signs belonging to diverse semiotic systems to create, transmit and understand meanings: verbal and non-verbal, written and oral, visual and audial, gestures and facial expressions, spatial structures and movements. Moreover, everyone who has access to Internet, automatically receives access to global audiences, which makes discursive stancetaking a potential tool for mutual identification. In this article, I attempt to analyse multimodal resources engaged for stancetaking activities in Russo-Ukrainian war discourse. I start my analysis with interpreting the semantics of several pictorial images, media photographs, and some song lyrics. Further, I offer a detailed critical discourse analysis of a case study represented by a scandalous programmatic article published in the Russian state

media. In my analysis I focus on specificity of Ukrainian identity construction through the lens of discursive stance.

## Material and Methods

While approaching identity as a discursive construct which is not stable, but created during the multimodal interactive practices, I needed an approach that would suit this view of identity and would best serve my analytic needs. Such approach, to my mind, could be found through the notion of “bricolage”, introduced by the famous social anthropologist Claude Lévi-Strauss (1962). According to Lévi-Strauss, bricolage is the ability of a “bricoleur” (the person involved in the process of bricolage) to use the variety of available resources to construct and interpret signs. Lévi-Strauss bases his explanations of “bricoleur’s” work on Saussure’s interpretation of the linguistic signs when he explains how the mind of a “bricoleur” operates (Saussure, 1916 [2011]). According to Lévi-Strauss, signs or bricolage elements (the so-called “bricks”) link language, concepts, and reality. They act as mediators between a surrounding reality on the one hand and an interpretation of this reality on the other. He compares the bricoleur’s actions to those of an engineer: they both create something new out of what building material they have at hand. To sum it up, the process of bricolage functions very much as a metaphor for discursive (re)construction of identity creation. It can offer an explanation on how identities are negotiated through language or other semiotic systems in postmodern communicative conditions.

In my deconstruction of Ukrainian identity in the discourse of Russo-Ukrainian war, I treated discursive stances as “bricks”, used for identity “bricolage”. Each instance of stancetaking involves a “stance triangle” (Du Bois 2007), in which two (or more) speakers commonly and intersubjectively construct their stances on a certain object, evaluating it, positioning themselves towards it and aligning with each other. Stancetaking is a public act, not a private cognitive state. Thus, there should be evidence in the text of WHAT is being signaled and of HOW the readers interpret those signals in context. The stance markers indicate a person’s position on a certain issue, including such information as knowledge, affect, evaluation. The stance markers may include both “all-topics” lexical units and can be context-specific. It should be noted that an awareness of the important role public discourse plays in society makes critical discourse analysts themselves take explicit positions (or stances) in their analysis. That is why the CDS subjects can never be neutral in their assumptions and conclusions. And their stances are meant to resist social injustice and power abuse, as well as lies and manipulation.

Because the 21st century can be described as the era of creating images of reality by means of various modalities, I paid attention to the stance tools involving these diverse modalities. A multimodal social semiotic perspective that has developed in linguistics of the last decades (Kress and van Leeuwen, 2001), enabled examining sign-making via multiple modes beyond language. Such an approach is

seen as especially relevant for the study of multimodality of identity creation in modern media, where signs are often made in combinations of different modes. A multimodal perspective suggests that all the modes equally contribute to the complexity and efficiency of meaning-making in social semiosis.

The data for this study consists of two blocks – verbal (language and text) and non-verbal (mainly graphical: pictorial images and photos). The conclusions were based on the analysis of 52 images and 178 texts: 68 media articles and 110 blogs by popular Ukrainian and Russian bloggers (49,874 words; 334,150 characters). The corpus was manually gathered during the period of three months (from March till June 2022) from open sources of the Ukrainian segment of Facebook, Telegram, Twitter, and Instagram, as well as from the state news agencies Ukrinform (Ukraine) and RIA Novosti (Russia). As an illustrative case study for this article, I used the programmatic piece entitled “What Russia should do with Ukraine?”, published by RIA Novosti in early April 2022.

## Results and Discussion

I’d like to start my deconstruction of Ukrainian identity bricolage by looking at pictorial images profusely used in present-day media to create the identity under analysis. Framing of the Russian-Ukrainian conflict through non-verbal signs of different nature can be very potential in modern multidimensional discursive environments, as they activate different ways of information transmission and information perception. Among multiple illustrations of Ukraine, deployed by the modern Ukrainian media, female images are among the most popular in metaphorizing Ukrainian identity. Usually, this “*Ukraine-as-a-woman*” construal (Fig. 1) is represented through the image of young, beautiful, and courageous woman.

Figure 1

*An Illustration of Ukraine*



She is strong and tender at the same time. Female images representing Ukrainian identity are deployed not only in social networks media, but also in modern Ukrainian literature, song lyrics, and murals. For instance, in a popular song (released in 2018) by “Numer 482”, Ukraine is romantically personified as “*mala*” [little girl, sweetheart] which often is the way young Ukrainian men address their beloved girlfriends: “*Добрий ранок, Україно, прокидайся вже, мала! Я несу тобі, єдина, чашку кави й молока*” [=Good morning, Ukraine! Get up, my little girl! I’m getting a cup of coffee and milk for you, my only one!]. Such an unusual “animate” (personified) treating of the country could be interpreted in different ways but one of the main underlying implications is that the addresser sees his Motherland as someone worth loving and taking care of. Another Ukrainian singer Max Barskikh similarly serenades his love for his country in a chant: “*Ти і я, Україна. Ти – моя половина*” [You and me, Ukraine! You are my other half], verbalizing his stance towards his Motherland in a matrimonial frame (i. e. Ukraine is represented as the stance-taker’s young wife; together they are a family). So, the affective component of stance found in pictorial impersonation of Ukraine as a young and beautiful woman, as well as in the verbalized address forms used in song lyrics, constitutes positive evaluation of the stance-taker to Ukraine as the object of their stancetaking. Such stances are indexical of the views of Ukrainian identity characteristically shared by the representatives of the Ukrainian society.

Identities are not just framed in discourse and by discourse, but they also can be re-framed or re-semanticised. As an example of such re-framing of an identity image, I can offer a photograph of a young woman breastfeeding her newly born baby in a Kyiv metro station (Fig. 2), where she was hiding from the Russian bombings in early March 2022.

Figure 2

*A Young Woman Breastfeeding Her Newly Born Baby in a Kyiv Metro Station*



This photograph was shared on multiple Internet platforms and became viral, having got the global attention and popularity. As a symbol of motherhood and

sufferings, this image not only became an icon of a Ukrainian woman in semiotic sense, but later it was used as a religious icon representing saint Madonna in one of the catholic churches in Naples, Italy. So, an image of a regular woman that was feeding her baby under irregular circumstances of undeclared war was transformed into the image of a Holy Mother, gaining some features of metaphysical fortitude and absolute positivity of a saint.

Another case of social semiosis during war time could be illustrated by the photoshoot of Ukrainian First Lady Olena Zelenska, produced by famous American photographer Annie Leibowitz for *Vogue* magazine. Entitled “Portrait of Bravery” (Fig. 3), this photo-narrative became an iconic symbol of Ukraine, and was used not only as an emblematic simulacrum of national resilience and heroism, but also as an instrument for popularization of Ukrainian identity in the world.

Figure 3

*Olena Zelenska, Vogue Cover*



Having powerful ethical, feminist, and political implications, it caused strong resonance in Ukrainian society and abroad, including hot discussions of its somewhat controversial aesthetics.

In the Russian discursive tradition of the last months, Ukraine is represented in a very contradictory way. On the one hand, Russian propagandists try to depict Ukraine as an ugly “neo-nazi” country – mean and despicably cruel, but on the other hand, Ukraine is often shown as impoverished, weak and easy to conquer. As it often happens, conflictual construction of the warring identities is based upon ideological opposition of US and THEM, where US usually is associated with positive evaluations, and THEM is characterized by negative stances. Such antithetical contrast may be found in the monument erected in Belgorod (a Russian city on the Eastern border of Ukraine) at the early stages of invasion (Fig. 4).



Figure 4  
*A Monument in Belgorod, Russia*



The monument depicts poor, old, and presumably Ukrainian woman, seeing the Russian soldiers in, with the red (Soviet) flag in her hands. She is supposed to represent Ukraine as a tired, elderly female, happy to be “liberated” by the Russians. Consequently, Russian pictorial representation of Ukrainian identity is usually neither about beauty nor about courage, but rather about Ukraine being an inseparable part of Russia and Soviet Union, which is the reflection of the Russian narrative of a non-existent Ukrainian identity as it is portrayed by Russian mass media.

No less emblematic are the textual properties of the political rhetoric on the war Russia launched in Ukraine. One of the most striking cases, exemplifying such aggressive textual bricolage of identity is the media piece entitled “What Russia should do with Ukraine?”<sup>1</sup> (Sergeytsev, 2022). The article was published on April 3, 2022, by the state Russian news agency RIA NOVOSTI. This medium voices the Kremlin’s positions on various social, political and cultural issues. Consequently, the analyzed piece can be treated as a programmatic proclamation of the intended actions by Russia concerning Ukraine. The level of openly manifested disrespect for the sovereignty of Ukraine and the rules of international law is off the charts, which makes the public discourse of this kind valuable material for critical discourse analysis.

According to van Dijk (2008a, p. vii), “it is not the social situation that influences (or is influenced by) discourse, but the way the participants define such a situation.” Instead of a direct naming the Russian aggression against Ukraine, official Russian media continue using euphemism “Special Military Operation” directed on “denazification” of Ukraine. The intended implicature hidden in this terminological

---

<sup>1</sup> Translation into English is mine

creation presupposes that there is some inherent “nazism” in the very existence of Ukraine as a sovereign country, and, thus, it paints Ukrainian identity into very gloomy colors. The abundance of terms, synonymous with “nazism” is striking. The procedure of simple word count provides us with the following information: lexeme ‘fascist’ is used four times in different collocations with Ukraine; the word *нацист* [‘nazi’, n.] is repeated 29 times; *нацизм* [‘nazism’, n.] – 18; *нацистский* (-ая, -ие) [‘nazified’, adj.] – 6; *денацификация* [‘denazification’, n.] – 31; *денацифицировать* [‘denazify’, v.] – 8; *денацификатор* [‘denazifier’, n.] – 1, *укронацизм* [‘ukronazism’, n.]. So, the word “nazi” and its derivatives are used 96 times within the flow of this piece (1962 words), that makes almost 5% out of all the lexemes (including function words). Such frequency undoubtedly advances “fight against Nazism” into a topical dominant, as well as makes it the designed core message of this text.

The stance of the author (=official Russia) is framed already in the headline “*What Russia should do with Ukraine?*” where two stance subjects (Russia and Ukraine) and a stance object (“What”) can be distinguished. In this stance triangle, the most prominent is the AGENCY of the participants. As is well-known, through AGENCY, it is possible to detect how social, ethnic or economic groups are represented in various discourses and practices. And within Western philosophy, since Hegel, agency has always been tied to the “subject” in power. So, as a grammatical subject of the sentence, Russia is an Agent of the action, while Ukraine is represented as a Patient. Such syntactic positioning immediately delimits the horizon of readers’ expectations concerning the power / dominance relations between these two actors. Such AGENT-PATIENT disposition is consistently reproduced throughout the whole text, and not just in syntactic structures but also in the choice of words and flexions (e.g. Ukraine as a Patient is “a denazified country”, while Russia as an Agent is “the denazifying state”, or “denazifyer”). From such verbalization of the participants’ (Russia and Ukraine) roles, readers may infer the initially strong belief of the authors into one of the actors’ power and privilege to execute aggressive actions involving missiles, aviation and numerous ground troops on the territory of the neighboring sovereign country with no fear of consequences or punishment. Moreover, Russia’s agency is intensified by the use of the verb “*должна*” (‘must’, ‘should’) with the meaning of deontic modality that inherently entails the semantics of obligation and duty rather than possibility and / or choice.

The “WHAT” part of the stance triangle or the object of stancetaking is presented as a detailed plan that outstretches for more than 30 years (for longer than one generation) and involves such different spheres of life as politics, economics, religion, and education. It consists of such radical actions against Ukrainian identity as an imminent change of the country’s name (“*The name “Ukraine” apparently cannot be retained*”); liquidation of Ukrainian elites (“*Ukrainian elites must be eliminated*”); necessary ethnic assimilation with Russians (“*to achieve the goals of denazification, the support of the population is necessary, its transition to the side of Russia after liberation from terror, violence and ideological pressure of the Kiev regime*”. *The social “mud” must survive the hardships of war and assimilate the*

*experience as a historical lesson and atonement for its guilt*"); current and future military actions (*"Military victory over Kyiv regime". "Liquidation of armed "Nazi" formations"*). *"Permanent Russian military presence in the West of Ukraine due to its potential non-compliance with the Russian civilization"*); change of information policy (*"Deployment of Russian information space", "Adoption of supervision of Russia and liquidation of Russia haters"*). *"Establishments of memorials and monuments to the victims of Ukrainian Nazism"*); education policy (*"Withdrawal of Ukrainian educational materials and prohibition of educational programs"*).

Discursive construction of the participants' identities is framed through power relations between several acting pairs, in which Russia is omnipresent and always plays a leading role:

1. Russia and Ukraine, where Russia is a dominant supervisor, and Ukraine is a subordinate culprit needing to "be punished" or "denazified". All the efforts to depict Ukraine as a *"terrorist, monstrous Nazi creation"* are broken up by the numerous discursive disclaimers of Russia's attitude to Ukraine as a weak and dependent state: *"amorphousness and ambivalence of Ukraine"*, *"Ukraine is a subordinate element"*, *"Ukraine is Little Russia"*. On the other hand, the very existence of Ukraine is seen as a threat to Russia. Ukraine is not just the enemy of Russia but it is its antipode (*"anti-Russia"*, *"Ukrainism is an artificial anti-Russian construction" which has to be "eradicated"*).

2. Russia and Europe, where Russia is portrayed as an "altruist savior" of "historical Europe" (*"the Old World"*), outstretching the hand of friendship but also feeling offended that its efforts were not appreciated; while Europe is represented as an ungrateful and not very smart relative (*"Russia will be forced to acknowledge itself the last resort of protection and preservation of historical Europe's (the Old World's) values"*).

3. Russia and collective "West". Here Russia is depicted as a fair and sacrificing guardian, the so-called *"fighter for the future of civilization"*, while "the West" is seen as a *"degrading and disintegrating totalitarian regime"*, controlled by the "superpower of the USA" (e.g. *Everything that Russia has done for the West, it has done at its own expense, by making the greatest sacrifices. The West ultimately rejected all these sacrifices, devalued Russia's contribution to resolving the Western crisis, and decided to take revenge on Russia for the help that it selflessly provided*).

4. Russia and "the countries oppressed by the West". In this pair Russia fulfills the role of a *"leader in the global process of decolonization and liberation"*. (e.g. *"Further, Russia will go its own way, not worrying about the fate of the West, relying on another part of its heritage - leadership in the global process of decolonization. As part of this process, Russia has a high potential for partnerships and allies with countries that the West has oppressed for centuries and which are not going to put on its yoke again. Without Russian sacrifice and struggle, these countries would not have been liberated"*).

5. Russia and "the World". This is the most interesting pair of participants, because on several occasions Russia opposes itself to "the World", as if it is not the part of it, but it stands aside or even higher than the world, being its guardian (e.g.

*“Ukronazism” carries a great threat to the world and Russia”. Russia came to grips with the West for the future of the world”*).

As we may see, in the analyzed piece, the author depicts Russia as a powerful and dominant world leader. The Russian identity is discursively constructed through the variety of stances on many political, military, economic and educational issues, but from the perspective of Russia’s alignment with Ukraine. Ukrainian identity is portrayed antithetically – as a weak but wicked antagonist (‘anti-Russia’). However, fairly often the author’s arguments are immanently faulty and self-contradictory. For instance, after acknowledging that *“there is no main Nazi party, no Fuhrer, no full-fledged racial laws”* in Ukraine, he makes an irrelevant and unproven conclusion that *“Ukronazism”* not only exists but *“carries a great threat to the world and Russia”*. Such fallacy of reasoning can be treated as an argumentative ploy that enables disclosing the hidden intention of the author – justification and legitimization of the inhuman aggression of Russia on Ukraine. Generally speaking, proclaimed *“denazification”* equals de-Ukrainization and de-Europeanization of Ukraine. Through the verbalization of inevitable Russia’s isolation in this process (*“Russia will have no allies in the denazification of Ukraine, since it is purely Russian business”*), the author signifies the maleficence of Russia’s actions and his own awareness of it.

Summarizing, I’d like to outline two basic ways (see Fig. 5 and 6) the Russian and the Ukrainian stances on the current war are discursively framed and constructed (both verbally and non-verbally) in the context of Russo-Ukrainian war. My modeling is based on the stance triangle by Du Bois (2007, p. 163).

In these models, Russia and Ukraine are represented as the collective stance-takers – subjects of the process of identity creation and identity negotiation. Russo-Ukrainian war is seen as the object of stancetaking. It is worth mentioning that outlined stances are characteristic for 99 % of the analyzed Ukrainian official and other public media, and 98% of Russian official and propagandist media. At the same time, these “official” stances are not so voluble when it comes to private twitter, telegram or Facebook accounts. The numbers of such stance patterns fall to around 90 % of Ukrainian stance-takers, and up to 76 % of the Russia-based communicators.

So, in the Ukrainian stance triangle (Fig. 5), war as an object of stancetaking is represented as *“Russian aggression against Ukraine, a source of grief, a fight for freedom, and a necessity to defend Ukraine and the Ukrainian identity”*. While the Russian stance depicts the war as *“the noble mission, fight against nazi, liberation, and defense of the Russian world and the Russian identity”*. It is interesting that the Russian stance-takers never openly call it a war, but prefer using euphemistic *“Special military operation”* or abbreviation (SMO). The affective component of Ukrainian stance is associated with the negative identification of Russia as an *“invader, intruder, aggressor, occupant, terrorist state, fascists, rascists, Terrorussia etc.”* At the same time, Ukraine positively self-identifies as a *“defender, winner, hero, victim, fighter for freedom, savior”*.

Russian verbalization of Ukrainian identity is also indexical of the Russian societal values and beliefs, political actions, and ideological attitudes. Ukraine is labelled *“nazi state, non-existent state, anti-Russia”*, while Russia is seen as *“a*

savior, defender, protector, warrior”. So, we can see that self- and mutual identification of Russia and Ukraine in their official stancetaking activities is very similar. They use basically the same lexical units to build antithetical senses. Consequently, in a hostility of Russo-Ukrainian war discourse, the antagonistic identities are being created and promoted. However, while Ukrainians defend their identities both in discourse and on the battlefield, Russians aggressively attack them.

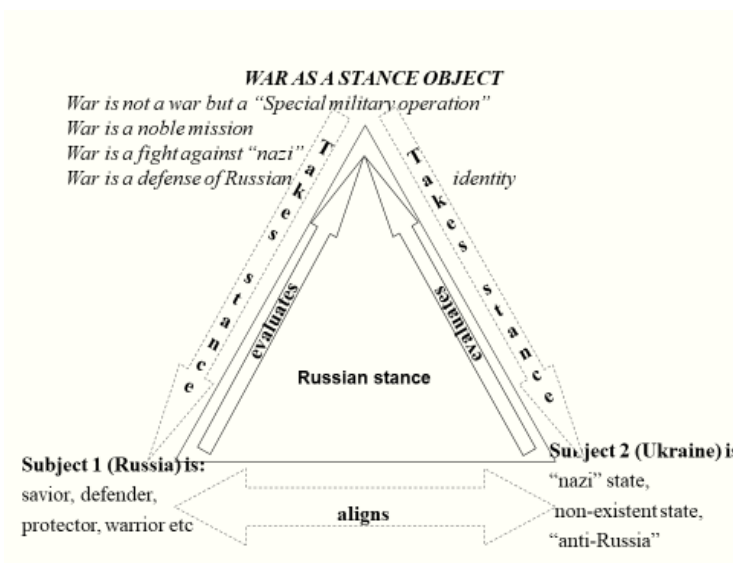
Figure 5

*The Ukrainian Stance Triangle*



Figure 6

*The Russian Stance Triangle*



Conflicting stances, laid out in the above models, compile, accumulate, and expand. As a result, stance clusters become semiotically significant and ideologically indexical of the conflicting identities the main participants construct in their discursive activities.

## Conclusions

Ukraine's identity construction can be seen as an important component of Ukraine's fight for its statehood and as an inherent element of the Russia's network-centric warfare, which is the complex of communicative strategies, techniques, and procedures, meant to have a systematic manipulative impact on modern society. These are new war tactics emerging in the Information Age, where along with the fights in physical battlefields, the aggression spreads to virtual space, involving influence on people's worldviews, beliefs and ideological positions. As a consequence, multimodal bricolages of stances and identities become inseparable and an important part of network-centric wars. The main discursive strategy used in the Russian discourse on Ukrainian identity during Russia's war against Ukraine can be defined as the strategy of "demonstrative falsehood". The use of this strategy presupposes that any object of stancetaking (be it a person, a nation, or an event) is discursively distorted or falsified. By means of this strategy the discourse subjects shift the Overton's Window from absurdity to reality, so that completely paradoxical assumptions slowly are integrated into the societal perception and finally are tolerated and even accepted as socially and morally normal. In such a way, invasion is seen as a liberation, occupation is treated as homecoming, and the independence of a neighboring country is represented as Nazism. Identity work fulfilled by the Russian war discourse actively exploits the tactics of "alternative facts production" and "alternative reality creation", which may be very dangerous due to their ability to influence the cognitive perceptions of surrounding life. Discursively inflated hatred changes the way people see the world, makes them believe into the virtues of murder and torture. As a result, and as witnessed by the whole world now, Ukrainian identity is being aggressed not only verbally but it is being physically assaulted, damaged, and destroyed, which could finally bring the whole nation to full extinction if not resisted.

## References

- Bucholtz, M. & Hall, K. (2004). Language and identity. In A. Duranti, (Ed.). *A Companion to Linguistic Anthropology* (pp. 369-394). Malden: Blackwell.
- De Saussure, F. (1916). *Cours de linguistique générale*, eds. Charles Bally & Albert Sechehaye, with the assistance of Albert Riedlinger. Lausanne – Paris: Payot. [1st trans.: Wade Baskin, trans. *Course in General Linguistics*. New York: The Philosophical Society, 1959; subsequently edited by Perry Meisel & Haun Saussy, NY: Columbia University Press, 2011].
- Dijk, T.A. van. (2008a). *Discourse and context: A sociocognitive approach*. Cambridge, New York: Cambridge University Press.

- Dijk, T.A. van (2008b). *Discourse and Power*. London: Palgrave.
- Du Bois, J. (2007). The stance triangle. In R. Englebretson (Ed.). *Stancetaking in Discourse: Subjectivity, Evaluation, Interaction* (pp. 139-182). Amsterdam: John Benjamins.
- Eckert, P. (2004). The meaning of style. In W. F. Chiang, E. Chun, L. Mahalingappa and S. Mehus, (Eds.). *Proceedings of the Eleventh Annual Symposium About Language and Society*. Austin, Texas Linguistic Forum 47, Ellegård, Alvar. (41-53).
- Englebretson, R. (2007). Stancetaking in discourse: An Introduction. In R. Englebretson (Ed.). *Stancetaking in Discourse: Subjectivity, Evaluation, Interaction* (pp. 1-25). Amsterdam – Philadelphia: John Benjamins.
- Foucault, M. (1988). Technologies of the Self. Lectures at University of Vermont. In *Technologies of the Self*, (pp. 16-49). Univ. of Massachusetts Press.
- Giddens, A. (1991). *Modernity and Self-Identity. Self and society in the late modern age*. Cambridge: Polity Press.
- Jaffe, A. (2009). Introduction: the sociolinguistics of Stance. In A. Jaffe (Ed.). *Stance: Sociolinguistic Perspective* (pp. 3-28). Oxford: Oxford University Press.
- Kiesling, S. F., Pavalanathan, U., Fitzpatrick, J., Han, X. & Eisenstein, J. (2018). Interactional Stancetaking in Online Forums. *Computational Linguistics*, 44(4), 689-718.  
[http://dx.doi.org/10.1162/coli\\_a\\_00334](http://dx.doi.org/10.1162/coli_a_00334)
- Kress, G., & Van Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. London: Arnold Publishers.
- Silverstein, M. (1979). Language structure and linguistic ideology. In R. Cline, W. Hanks, and C. Hofbauer, (Eds.). *The Elements: A Parasession on Linguistic Units and Levels* (pp. 193-247). Chicago: Chicago Linguistic Society.
- Silverstein, Michael (2003). Indexical order and the dialectics of sociolinguistic life. *Language & Communication*, 23(3-4), 193-229.

## Sources

- Putin, V. V. (2021) On the Historical Unity of Russians and Ukrainians (in Russian). Retrieved from <http://kremlin.ru/events/president/news/66181>.
- Sergeytsev, T. (2022). What Russia should do with Ukraine? (in Russian). RIA Novosti, April, 3, 2022. Retrieved from <https://archive.ph/78PuH>

# Threat of War on Cognitive Development of Refugee Children

Özlem Yeter <sup>a,\*</sup>, Hugh Rabagliati <sup>b</sup>, Duygu Özge <sup>a</sup>

<sup>a</sup> *Middle East Technical University, Turkey*

<sup>b</sup> *University of Edinburgh, UK*

*Received August 25, 2022; Revised September 7, 2022; Accepted December 18, 2022*


**Abstract.** War trauma is often accompanied by poor living conditions in the new environment in a manner preserving or even deteriorating the negative influences of war. Several researchers have investigated the refugee experiences of displaced children. Often they have focused on the detrimental effects of war on psychological well-being, mental health, educational settings, social adaptation, quality of nutrition, financial difficulties, safety and language learning experiences. Each of these effects has been proven to negatively affect cognitive abilities; however, the current study reviews the key studies to reveal the cognitive and linguistic outcomes of holding refugee status in the early childhood period. Doing this, we aim to reveal the adverse conditions that affect refugee children's three core abilities of executive functions, namely working memory, inhibitory control and shifting. In addition to cognitive outcomes, we present the factors that have an impact on these children's native language development and their experiences with the language spoken in the host country in the context of schooling. This study suggests that refugee children should be assessed for their cognitive and language abilities after arriving in the country of resettlement so that their needs can be identified and addressed effectively. Caretakers should also be given both psychological and financial support to enrich their children's language and cognitive input. Also, the outcomes of the research in this field should be effectively shared with different stakeholders from the caregivers and teachers of the refugee children to the NGOs and policymakers responsible to take solid actions to counter the adverse effects of displacement.

**Keywords:** *refugee children, cognitive development, war trauma, executive function, language development.*

**Стер Озлем, Рабагліаті Г'ю, Озге Дуйгу. Війна як загроза когнітивному розвитку дітей-біженців.**

**Анотація.** Воєнну травму часто супроводжують погані умови життя в новому середовищі, які зберігають або й погіршують негативні наслідки війни. Деякі дослідники вивчали досвід дітей-біженців у статусі переміщених осіб. Часто автори зосереджувалися на згубних наслідках війни для психологічного благополуччя дитини, її психічного здоров'я, освітніх умов, соціальної адаптації, якості харчування, фінансових труднощів, безпеки та проблемах вивчення мови. Доведено, що кожен із названих аспектів негативно впливає на когнітивні здібності. Ця праця має за мету проаналізувати ключові дослідження, аби з'ясувати когнітивні та лінгвістичні наслідки перебування в статусі біженця в період раннього дитинства. Автори прагнули виявити несприятливі умови, які впливають на три основні екзекутивні функції мозку дітей-біженців, а саме: оперативну пам'ять, гальмівний контроль і зсув. Окрім когнітивних наслідків,

---

\* Corresponding author. Özlem Yeter,  <https://orcid.org/0000-0002-2184-3192>, E-mail: [o.yeter@rug.nl](mailto:o.yeter@rug.nl)



обговорюємо чинники, які можуть вплинути на розвиток рідної мови у цих дітей та їхній досвід спілкування мовою, якою розмовляють у приймаючій країні, у контексті шкільного навчання. Це дослідження засвідчує про те, що у дітей-біженців слід оцінювати їхні когнітивні та мовні здібності після прибуття в країну переселення, щоб можна було визначити їхні потреби та ефективно задовольнити їх. Піклувальникам також слід надавати і психологічну, і фінансову підтримку, щоб вони могли збагатити мову та когніцію їхніх дітей. Крім того, результати дослідження в цій царині слід активно поширювати серед різних зацікавлених сторін, – від піклувальників і вчителів дітей-біженців до громадських організацій та політиків, відповідальних за прийняття рішучих заходів для протидії негативним наслідкам переміщення.

**Ключові слова:** діти-біженці, когнітивний розвиток, екзекутивна функція, розвиток мови, воєнна травма.

## Introduction

Even today, wars affect millions of people and force them to seek asylum outside their countries: 6.8 million people from The Syrian Arab Republic, 4.6 million from Venezuela, 2.7 million people from Afghanistan, 1.2 people from Myanmar, and very recently 6.3 million people from Ukraine (UNHCR, 2021b) were forced to flee and resettle in countries that are new to them. More than 27.1 million people worldwide are in refugee status, around half of which consist of children under 18 (UNHCR, 2021b). This number reaches as high as 89.3 million when internally and externally displaced people, stateless people and asylum seekers are also included (UNHCR, 2021). These individuals go through difficult and sometimes life-threatening experiences such as torture, physical assault, fear, malnutrition, separation from family, loss of loved ones, loss of property, displacement, harsh living conditions, lack of health care and lack of education (Klugman, 2022; UN, 2014; WHO, 2021). The aftermath of war remains to be stressful even after resettlement in a new country as it is the beginning of another challenging journey. Throughout this journey in the host country, refugees encounter several problems that may cause them experience excessive stress: poverty, social integration difficulties, language barrier, and discrimination (Hadfield et al., 2017; Şafak-Ayvazoğlu, Kunuroglu, & Yağmur, 2021; Tummala-Narra & Claudius, 2013).

Children's cognition is especially more vulnerable to adverse experiences as they are still in a developmental phase (Brown et al., 2012; Woodburn et al., 2021). Although several action plans addressing financial, health and safety problems of refugee populations have been made (e.g., European Commission, 2016; UNICEF, 2019), there is no comprehensive action plan addressing the enhancement of cognitive development of refugee children (Brown et al., 2012; Mehnert et al., 2013; Woodburn et al., 2021). It is highly crucial that the cognitive needs of refugee children are addressed because early cognitive skills predict later life achievements (Blair & Razza, 2007; Sasser, Bierman, & Heinrichs, 2015), physical health (Batty, Deary, & Gottfredson, 2007; Miller, Barnes, & Beaver, 2011) and social adaptability (Fong & Iarocci, 2020; Gligorović & Buha Đurović, 2014).

## Method

This paper aims to bring together findings from various disciplines related to the cognitive and linguistic outcomes of holding refugee status. Throughout this review, we aim to reveal the adverse conditions that affect refugee children's three core executive functions, namely working memory, inhibitory control and shifting, ii) present the factors that have an impact on their language development, and iii) to present possible directions for future research.

## Results and Discussion

### Effect of Refugee Status on Executive Functioning

The term executive function (EF) is used to refer to cognitive processes including working memory (WM), inhibitory control (IC) and shifting ability that is responsible for purposeful, goal-oriented activity enabling physical, cognitive and emotional self-control (Corbett et al., 2009; Diamond, 2013; Lezak, 1995). Being a sub-component of short-term memory, WM deals with the manipulation of information while processing a complex cognitive task (Baddeley & Hitch, 1974). The second core EF reviewed in this paper is IC, which refers to the ability "to control one's attention, behaviour, thoughts, and/or emotions to override a strong internal predisposition or external lure, and instead do what's more appropriate or needed" (Diamond, 2013, p. 137). As for shifting, it is the ability to shift between two or more competing mind-sets, environments or situations selectively and appropriately (Davidson et al., 2006; Scott, 1962).

### Traumatic Experiences

EFs may be hindered by depression, stress and traumatic experiences (Ilonen et al., 2000). Refugees are specifically prone to mental health problems due to life-threatening events they go through both following and prior to their arrival in the host country (Eruyar, Maltby, & Vostanis, 2018; Özer et al., 2016). Their EFs are likely to be adversely affected too (Park et al., 2014). This effect become especially prominent if adversities are experienced in the early years of life because the brain is still in the process of maturation, which puts children's cognitive functioning in a vulnerable position (Bick & Nelson, 2016). For instance, in a recent study with children who were displaced before the age of 5 because of the Syrian war, refugee children performed poorer on their WM, IC and shifting abilities than their non-refugee peers (Yeter, Rabagliati, & Özge; 2021). This is one of the first pieces of evidence showing that war trauma experienced at early ages that are critical for brain maturation may influence EFs negatively. In line with this finding, Gabrys, Dixon, & Anisman (2017) could find no association between trauma and shifting ability for university students

who experienced trauma at the age of 6 and older whereas the ones reporting adverse traumatic experiences before the age of 5 had more difficulty in shifting tasks. This highlights that early childhood period is particularly sensitive to trauma exposure (see also; Pang et al., 2014; Sack et al., 1996; Skowron et al., 2014; Tuncer, 2021).

Parents' or caretakers' psychological well-being is another significant factor in children's mental health and their cognitive development. Refugee caregivers might be depressed, traumatised and stressed due to cumulative adverse experiences both before and after migration to the country of asylum (Browne et al., 2017; Gredebäck et al., 2021). Bryant and colleagues (2018) interviewed 411 refugee caretakers regarding their trauma history and postmigration difficulties and they found that individuals with greater trauma exposure had harsher parenting styles, which led to higher levels of hyperactivity and emotional problems in children. Several other studies found parallel findings such that harsh and inattentive parenting may cause attention deficit and hyperactivity disorder (ADHD), which crucially leads children to lag behind their typically developing peers in their WM and IC (Joseph et al., 2021; Nyman et al., 2010). Yet, considering the third component of EF, namely shifting ability, the findings are inconsistent (Elosúa, Del Olmo, & Contreras, 2017; Oades & Christiansen, 2008; cf., Irwin et al., 2019). Moreover, adverse experiences of caretakers may also result in neglected and uninvolved parenting. This type of parenting style may adversely impact children's psychological and cognitive well-being too (Garber, 2006; Locke et al., 1996; Hermansen et al., 2022; Sulik et al., 2015).

## **Schooling**

School is the first place children step their foot out of their houses, where they socialize with their peers and get involved in intellectually demanding activities, which in turn leads to enhanced linguistic and cognitive development (Albert et al., 1995; Brod et al., 2017; Heckman, 2006; Kim, 2015; Parisi et al., 2012; Yeniad et al., 2014). However, this educational process is usually interrupted in conflict-zones (Ahmadzadeh et al., 2014). About half of the refugee children have no access to schooling (UNHCR, 2018) and those who go to school are 5 times more likely to drop out than their non-refugee peers in the country of resettlement (UNICEF, 2017).

Due to interrupted schooling, refugee children who are resettled in a host country are likely to have less skills than expected for the grade level their age falls into (Dryden-Peterson, 2015). As a result, they are assigned to grades lower than their age, which triggers an increase in the dropout rate (Sunny et al., 2017; Wils, 2004). The underlying reason behind this pattern could be that these students receive education that targets improving skills that are below their cognitive capacity. Thus, they cannot benefit from the challenging and enriched learning environments that boost their EF (Diamond & Lee, 2011). A recent study by Kim and colleagues (2020) provided supporting evidence for this such that Syrian refugee children who attended

a grade with peers younger than them in Lebanon showed poorer performance on cognitive tasks.

The medium of instruction is another crucial topic that should be considered. School is a means of social integration, especially for refugee children (Osman et al., 2020). However, if the child cannot understand the language, s/he might face social exclusion, bullying, racism, which would lead to depression, stress and cognitive impairments in turn (Birman, Trickett, & Buchanan, 2005; Coogan et al., 2020; Çelik & İçduygu, 2019; Steinberger & Barch, 2021). Moreover, it could be overwhelming for the displaced children to be immersed in a language other than their mother tongue while trying to catch up with their peers in the school, and they may fail to meet the objectives of the lessons due to the language barrier, which would eventually delay the cognitive development (Frumkin, 2013; Ibragimova & Tarasova, 2018; Tunga, Engin, & Çağiltay, 2020; Tsimpli et al., 2020). Such disadvantageous educational conditions may render refugee children behind their non-refugee peers in cognitive functioning (Gagné et al., 2018; Wilkinson, 2002).

### **Socioeconomic Status and Home Environment**

Socioeconomic status (SES), which is usually measured by the family income and maternal education level, is documented to be strongly associated with children's cognitive development (Huang et al., 2021; Lambert et al., 2017; Lynn, 1990; Sheridan et al., 2017). Unfortunately, due to various reasons (e.g., language barrier and legal restrictions) many refugee families go through financial difficulties and live in poor conditions in the country of resettlement (UNHCR, 2014; UN, 2014). Assari (2020) proposed that SES might even have a healing effect on the after-effects of trauma since richer and healthier nutrition promotes neurocognitive development (Liu & Raine, 2017). Yet, children growing up in low-income households have poor access to good quality nutrition they need to develop both physically and cognitively (Lee & Jackson, 2017). For instance, a recent study by Chen and colleagues (2019) tested 12-18-year-old Syrian refugees in Jordan for their WM and IC, and they found that although those who had more traumatic experiences showed more PTSD symptoms, their WM and IC scores were not associated with trauma exposure or PTSD, but with poverty. Thus, Chen et al. (2019) concluded that poverty is a stronger predictor of EF than trauma exposure. Mother education is another determinant of healthy nutrition. Wachs & McCabe (2001) showed that mothers with higher education were making healthier dietary choices, and thus, children with more educated mothers had better nutrition intake. This was also the case for pregnant women; more educated mothers had more nutritional knowledge (Abdul Manaf et al., 2014; Cheng et al., 2009).

Parents are the first individuals the children interact with and the quality of the parent-child relationship is highly associated with maternal education and household income (Kong et al., 2015; Rouchun et al., 2021). Parents with higher levels of

education and income also provide higher quality and quantity of linguistic and cognitive input to their children: they play educative games, interact more, provide linguistically and cognitively stimulating materials such as books, and computers, and afford good schools, which stimulate the cognitive networks (APA, 2017; Weiland et al., 2017). Therefore, children with high socioeconomic background develop better psychological and academic skills (Anders et al., 2013; Gottfried et al., 2014) as well as WM, IC and shifting abilities compared to low-SES children (Asadollahpour et al., 2015; Cascio et al., 2022; Clark et al., 2013; Micalizzi et al., 2019; Suor et al., 2017).

### **Language Development in Refugee Children**

The language input provided by the family plays a crucial role in vocabulary development (Bohnacker, Lindgren, & Öztekin, 2016; Morton & Harper, 2007; Ongun, 2018). Children's L1 input resources expand as they grow up and build their social circles (Sun et al., 2016). However, in the case of forced displacement, refugee children's L1 exposure does not exceed the home input because they usually start getting input a language different than their L1 when they arrive in the host country (e.g., television, school, society, etc.). So, unlike their non-refugee peers, their L1 development remains dependent on home input (Dixon et al., 2012; Duursma et al., 2007; Scheffner Hammer et al., 2008). For children who arrive in the host country at an early age, L2 exposure starts before they master their L1. As a result, they are more likely to show regression in their L1 development (Jia & Aaronson, 2003; McDonald, 2006; Portocarrero et al., 2007).

School is another major source of language input after home (Schwartz & Katzir, 2012). Usually, the language of instruction is different from the one spoken at home for minorities, immigrants and refugees. When the formal language is different from the one spoken at home, a shift of language dominance from home language to school language can be observed (Gagarina & Klassert, 2018; Kohnert & Bates, 2002). That is, children obtain higher vocabulary scores in the majority language, but perform significantly lower in their home language after exposure to the majority language (Gibson et al., 2012; Hammer et al., 2008; Kan & Kohnert, 2005; Oller et al., 2007), and this difference between the languages become more evident as the systematic L2 exposure at school increases (Kohnert & Bates, 2002). Yeter and colleagues (2021) investigated language abilities of 9-year-old Syrian children who arrived in Turkey around the age of 5 and compared their performance to non-refugee Arabic-Turkish minority bilinguals. Arabic was the dominant language at refugee homes while it was Turkish for the non-refugee bilinguals. Syrian children's Arabic performance was poorer than non-refugee bilinguals' Turkish after 2-3 years of schooling. Mori & Calder (2013) investigated the vocabulary abilities of bilingual Japanese students who attend Japanese-medium supplementary high schools in the U.S. and found high correlations between age of arrival and vocabulary size in the

language of the host country. While the L1 Japanese participants who arrived in the U.S. before the age of 9 developed good L2 vocabulary at the cost of diminished L1, those whose age of arrival was above 9 could maintain their L1 vocabulary with grade-level equivalent vocabulary in L2 (Mori & Calder, 2013). This may suggest that a later age of arrival may be beneficial for L1, but disadvantageous for L2.

## **Conclusions and Future Directions**

In conclusion, war displacement results in a chain of disadvantages for the healthy cognitive and linguistic development of a child. The trauma brought by the war atrocities before dislocation is likely to have direct negative impacts on the maturing brain and cognition. It is very likely to cause PTSD and decrease the volume of brain areas crucial for higher-order cognitive abilities. Limitations in the exposure to mother tongue also cause refugee children to fall behind their non-refugee bilingual peers. The trauma of dislocation, parental distress and the adverse living conditions in the relocated country sustains, and even intensifies all the negative cognitive consequences that are typically caused by pre-migration experiences. Poor nutrition, low socioeconomic status, insecurity experienced due to lack of healthy and consistent home environment, poor parenting arising from poor psychological well-being of the caregivers, discrimination, and disadvantages in schooling (e.g., interruptions as well as postponed, limited or no access to schooling in the relocated country, drop-out rates, losing the right for education in mother tongue, etc.) are some factors that further cause serious limitations in children's psychological and cognitive well-being.

Poor WM, IC and shifting abilities have often been associated with long-term cognitive, psychological, social, and physical health problems. These abilities are also correlated with future financial difficulties, substance dependence and criminal behaviour (Moffitt et al., 201). Hence, being a war-torn refugee would have life-long adverse consequences for children in general. Therefore, it is of utmost importance to offer sustainable programs to prevent or to heal displacement trauma in refugee children as well as programs fostering cognitive, linguistic and psychological development. These actions would improve healthier adaptation of these children in the society, which would indirectly enhance the welfare of the society.

United Nations High Commissioner for Refugees (UNHCR) provides financial support, basic goods, shelter and food to displaced individuals in many countries (UNHCR, 2021a). However, refugees have limited to no access to mental health services in some countries (International Medical Corps, 2015) and a systematic action plan for refugees' cognitive well-being is non-existent. First, it is imperative that an assessment is made to check the psychological well-being and cognitive abilities of refugee children before they are registered to schools. Following this investigation, needs of refugee children can be identified and intervention strategies addressing their needs can be implemented so that they will be able to meet their

potential academically and build healthier connections with their peers (Diamond & Lee, 2011). Psychological support should not be limited to refugee children only. Caregivers should also be able to benefit from mental health services when necessary. Through trainings and outreach activities, the caregivers should also be informed of their children's psychological and cognitive well-being.

Second, teachers in the host countries should be given special training for better integration of refugee children in the classroom. Governments should offer seminars to teachers with refugee children in their classes with the right techniques and approaches for children with psychological difficulties (PTSD, depression, anxiety, ADHD, etc.) to optimise learning outcomes.

Third, language classes both in refugees' mother tongue and the language of the host country should be provided for the children to facilitate their competence both in their first and second language. Training in the majority language should be provided for the caregivers to ease their adaptation process, which would also help them find a job more easily. This in return would decrease the caregivers' level of distress.

Finally, more research needs to be conducted to have a better understanding of how being a refugee influences the cognitive and linguistic development of a child. Also, the outcomes of the research in this field should be effectively shared with different stakeholders from the caregivers and the teachers of the refugee children to the NGOs and policy makers responsible to take solid actions to counter the adverse effects of displacement. If wars cannot be prevented, raising awareness about these issues becomes crucial to pave the way for diminishing these adverse effects.

## References

- Abdul Manaf, Z., Johari, N., Yee Mei, L., Sim Yee, N., Kai Yin, C., & Wai Teng, L. (2014). Nutritional Status and Nutritional Knowledge of Malay Pregnant Women in Selected Private Hospitals in Klang Valley. *Jurnal Sains Kesihatan Malaysia*, 12(2), 53–62. <https://doi.org/10.17576/JSKM-2014-1202-08>
- Ahmadzadeh, H., Hashem, L., Husseini, J. Al, Wahby, S., Alasil, M., Bali, Z., & Waziri, H. (2014). Ensuring quality education for young refugees from Syria (12 – 25 years) - A mapping exercise Research report supervised by Dawn Chatty. In *Refugee Studies Centre*. Retrieved from <http://s3.amazonaws.com/inee-assets/resources/rr-syria-youth-education-2014.pdf>
- Albert, M. S., Jones, K., Savage, C. R., Berkman, L., Seeman, T., Blazer, D., & Rowe, J. W. (1995). Predictors of cognitive change in older persons: MacArthur studies of successful aging. *Psychology and Aging*, 10(4), 578–589. <https://doi.org/10.1037/0882-7974.10.4.578>
- Anders, Y., Grosse, C., Rossbach, H. G., Ebert, S., & Weinert, S. (2013). Preschool and primary school influences on the development of children's early numeracy skills between the ages of 3 and 7 years in Germany. *School Effectiveness and School Improvement*, 24(2), 195–211. <https://doi.org/10.1080/09243453.2012.749794>
- APA. (2017). *Education and socioeconomic status [Fact sheet]*. Retrieved from <https://www.apa.org/pi/ses/resources/publications/factsheet-education.pdf>

- Asadollahpour, F., Baghban, K., Mirbalochzahi, P., Naderifar, E., & Tahmasebi, B. (2015). The performance of bilingual and monolingual children on working memory tasks. *Iranian Rehabilitation Journal*, 13(3), 53–57.
- Assari, S. (2020). Family Socioeconomic Status and Exposure to Childhood Trauma: Racial Differences. *Children*, 7(6), 57. <https://doi.org/10.3390/children7060057>
- Baddeley, A. D., & Hitch, G. (1974). Working Memory. In G. H. Bower (Ed.), *Psychology of Learning and Motivation* (pp. 47–89). [https://doi.org/10.1016/S0079-7421\(08\)60452-1](https://doi.org/10.1016/S0079-7421(08)60452-1)
- Batty, G. D., Deary, I. J., & Gottfredson, L. S. (2007). Premorbid (early life) IQ and Later Mortality Risk: Systematic Review. *Annals of Epidemiology*, 17(4), 278–288. <https://doi.org/10.1016/j.annepidem.2006.07.010>
- Bick, J., & Nelson, C. A. (2016). Early adverse experiences and the developing brain. *Neuropsychopharmacology*, 41(1), 177–196. <https://doi.org/10.1038/npp.2015.252>
- Birman, D., Trickett, E., & Buchanan, R. M. (2005). A tale of two cities: Replication of a study on the acculturation and adaptation of immigrant adolescents from the former Soviet Union in a different community context. *American Journal of Community Psychology*, 35(1–2), 83–101. <https://doi.org/10.1007/s10464-005-1891-y>
- Blair, C., & Raver, C. C. (2016). Poverty, Stress, and Brain Development: New Directions for Prevention and Intervention. *Academic Pediatrics*, 16(3), S30–S36. <https://doi.org/10.1016/j.acap.2016.01.010>
- Blair, C., & Razza, R. P. (2007). Relating Effortful Control, Executive Function, and False Belief Understand... *Child Development*, 78(2), 647–663. Retrieved from <http://eds.b.ebscohost.com.proxy-iup.klnpa.org/ehost/pdfviewer/pdfviewer?vid=1&sid=be96dddc-40b5-4e9a-916c-4065f92670dc%40sessionmgr102>
- Bohnacker, U., Lindgren, J., & Öztekin, B. (2016). Turkish- and German-speaking bilingual 4-to-6-year-olds living in Sweden: Effects of age, SES and home language input on vocabulary production. *Journal of Home Language Research*, 1(0), 17. <https://doi.org/10.16993/jhrlr.26>
- Brod, G., Bunge, S. A., & Shing, Y. L. (2017). Does One Year of Schooling Improve Children’s Cognitive Control and Alter Associated Brain Activation? *Psychological Science*, 28(7), 967–978. <https://doi.org/10.1177/0956797617699838>
- Brown, T. T., Kuperman, J. M., Chung, Y., Erhart, M., McCabe, C., Hagler, D. J., Venkatraman, V. K., Akshoomoff N., Amaral, D. G., Bloss C. S., Casey, B. J., Chang, L., Ernst, T. M., Fraizer, J. A., Gruen, J. R., Kaufman, W. E., Kenet, T., Kennedy, D. N., Murray, S. S., Sowell, E. R., Jernigan, T. L., Dale, A. M. (2012). Neuroanatomical assessment of biological maturity. *Current Biology*, 22(18), 1693–1698. <https://doi.org/10.1016/j.cub.2012.07.002>
- Browne, D. T., Kumar, A., Puente-Duran, S., Georgiades, K., Leckie, G., & Jenkins, J. (2017). Emotional problems among recent immigrants and parenting status: Findings from a national longitudinal study of immigrants in Canada. *PLOS ONE*, 12(4), e0175023. <https://doi.org/10.1371/journal.pone.0175023>
- Bryant, R. A., Edwards, B., Creamer, M., O’Donnell, M., Forbes, D., Felmingham, K. L., ... Hadzi-Pavlovic, D. (2018). The effect of post-traumatic stress disorder on refugees’ parenting and their children’s mental health: a cohort study. *The Lancet Public Health*, 3(5), e249–e258. [https://doi.org/10.1016/S2468-2667\(18\)30051-3](https://doi.org/10.1016/S2468-2667(18)30051-3)
- Cascio, C. N., Lauharatanahirun, N., Lawson, G. M., Farah, M. J., & Falk, E. B. (2022). Parental education is associated with differential engagement of neural pathways during inhibitory control. *Scientific Reports*, 12(1), 260. <https://doi.org/10.1038/s41598-021-04152-4>
- Çelik, Ç., & İçduygu, A. (2019). Schools and Refugee Children: The Case of Syrians in Turkey. *International Migration*, 57(2), 253–267. <https://doi.org/10.1111/imig.12488>



- Chen, A., Panter-Brick, C., Hadfield, K., Dajani, R., Sheridan, M., & Hamoudi, A. (2019). *Minds under siege: Cognitive signatures of poverty and trauma in refugee and non-refugee adolescents*. *Child Development, 90*(6), 1856–1865. <https://doi.org/10.1111/cdev.13320>
- Cheng, Y., Dibley, M. J., Zhang, X., Zeng, L., & Yan, H. (2009). Assessment of dietary intake among pregnant women in a rural area of western China. *BMC Public Health, 9*, 1–9. <https://doi.org/10.1186/1471-2458-9-222>
- Clark, C. A. C., Sheffield, T. D., Chevalier, N., Nelson, J. M., Wiebe, S. A., & Espy, K. A. (2013). Charting early trajectories of executive control with the shape school. *Developmental Psychology, 49*(8), 1481–1493. <https://doi.org/10.1037/a0030578>
- Coogan, P., Schon, K., Li, S., Cozier, Y., Bethea, T., & Rosenberg, L. (2020). Experiences of racism and subjective cognitive function in African American women. *Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring, 12*(1), 1–8. <https://doi.org/10.1002/dad2.12067>
- Corbett, B. A., Constantine, L. J., Hendren, R., Rocke, D., & Ozonoff, S. (2009). Examining executive functioning in children with autism spectrum disorder, attention deficit hyperactivity disorder and typical development. *Psychiatry Research, 166*(2–3), 210–222. <https://doi.org/10.1016/j.psychres.2008.02.005>
- Davidson, M. C., Amso, D., Anderson, L. C., & Diamond, A. (2006). Development of cognitive control and executive functions from 4 to 13 years: Evidence from manipulations of memory, inhibition, and task switching. *Neuropsychologia, 44*(11), 2037–2078. <https://doi.org/10.1016/j.neuropsychologia.2006.02.006>
- De Houwer, A. (2007). Parental language input patterns and children's bilingual use. *Applied Psycholinguistics, 28*(3), 411–424. <https://doi.org/10.1017/S0142716407070221>
- Diamond, A. (2013). Executive Functions. *Annual Review of Psychology, 64*(1), 135–168. <https://doi.org/10.1146/annurev-psych-113011-143750>
- Diamond, A., & Lee, K. (2011). Interventions Shown to Aid Executive Function Development in Children 4 to 12 Years Old. *Science, 333*(August), 959–964.
- Dixon, L. Q., Zhao, J., Quiroz, B. G., & Shin, J. Y. (2012). Home and community factors influencing bilingual children's ethnic language vocabulary development. *International Journal of Bilingualism, 16*(4), 541–565. <https://doi.org/10.1177/1367006911429527>
- Dryden-Peterson, S. (2015). *The Educational Experiences of Refugee Children in Countries of First Asylum*. Washington, DC.
- Duursma, E., Romero-Contreras, Si., Szuber, A., Proctor, P., Snow, C., August, D., & Calderón, M. (2007). The role of home literacy and language environment on bilinguals' English and Spanish vocabulary development. *Applied Psycholinguistics, 28*(1), 171–190. <https://doi.org/10.1017/s0142716406070093>
- Elosúa, M. R., Del Olmo, S., & Contreras, M. J. (2017). Differences in Executive Functioning in Children with Attention Deficit and Hyperactivity Disorder (ADHD). *Frontiers in Psychology, 8*(JUN), 1–11. <https://doi.org/10.3389/fpsyg.2017.00976>
- Erucar, S., Maltby, J., & Vostanis, P. (2018). Mental health problems of Syrian refugee children: the role of parental factors. *European Child and Adolescent Psychiatry, 27*(4), 401–409. <https://doi.org/10.1007/s00787-017-1101-0>
- European Commission. (2016). *State of Play: Measures to Address the Refugee Crisis*.
- Fong, V. C., & Iarocci, G. (2020). The Role of Executive Functioning in Predicting Social Competence in Children with and without Autism Spectrum Disorder. *Autism Research, 13*(11), 1856–1866. <https://doi.org/10.1002/aur.2350>
- Gabrys, R. L., Dixon, K., & Anisman, H. (2017). Traumatic Life Events in Relation to Cognitive Flexibility: Moderating Role of the BDNF Val66Met Gene Polymorphism. *Frontiers in Behavioral Neuroscience, 11*, 1–10. <https://doi.org/10.3389/fnbeh.2017.00241>

- Gagarina, N., & Klassert, A. (2018). Input Dominance and Development of Home Language in Russian-German Bilinguals. *Frontiers in Communication*, 3. <https://doi.org/10.3389/fcomm.2018.00040>
- Gagné, M., Janus, M., Milbrath, C., Gadermann, A., & Guhn, M. (2018). Early emotional and communication functioning predicting the academic trajectories of refugee children in Canada. *Educational Psychology*, 38(8), 1050–1067. <https://doi.org/10.1080/01443410.2018.1475627>
- Garber, J. (2006). Depression in Children and Adolescents. *American Journal of Preventive Medicine*, 31(6), 104–125. <https://doi.org/10.1016/j.amepre.2006.07.007>
- Gibson, T. A., Oller, D. K., Jarmulowicz, L., & Ethington, C. A. (2012). The receptive-expressive gap in the vocabulary of young second-language learners: Robustness and possible mechanisms. *Bilingualism*, 15(1), 102–116. <https://doi.org/10.1017/S1366728910000490>
- Gligorović, M., & Buha Đurović, N. (2014). Inhibitory control and adaptive behaviour in children with mild intellectual disability. *Journal of Intellectual Disability Research*, 58(3), 233–242. <https://doi.org/10.1111/jir.12000>
- Gottfried, A. W., Gottfried, A. E., Bathurst, K., Guerin, D. W., & Parramore, M. M. (2014). Socioeconomic status in children's development and family environment: Infancy through adolescence. *Socioeconomic Status, Parenting, and Child Development*, (2), 189–207. <https://doi.org/10.4324/9781410607027-17>
- Gredebäck, G., Haas, S., Hall, J., Pollak, S., Karakus, D. C., & Lindskog, M. (2021). Social cognition in refugee children: an experimental cross-sectional study of emotional processing with Syrian families in Turkish communities. *Royal Society Open Science*, 8(8). <https://doi.org/10.1098/rsos.210362>
- Hadfield, K., Ostrowski, A., & Ungar, M. (2017). What can we expect of the mental health and well-being of Syrian refugee children and adolescents in Canada? *Canadian Psychology*, 58(2), 194–201. <https://doi.org/10.1037/cap0000102>
- Heckman, J. J. (2006). Investing in Disadvantaged Children. *Social Sciences*, 312(June), 2005–2007.
- Hermansen, T. K., Syrstad, K. E., Røysamb, E., & Melinder, A. M. D. (2022). Child internalizing and externalizing behaviors: Interplay between maternal depressive symptoms and child inhibitory control. *JCPP Advances*, (February). <https://doi.org/10.1002/jcv2.12107>
- Huang, X., Hua, L., Zhou, X., Zhang, H., Zhang, M., Wang, S., ... Wang, X. (2021). The Association between Home Environment and Quality of Life in Children and Adolescents in Hangzhou City, China. *Journal of Child and Family Studies*, 30(6), 1416–1427. <https://doi.org/10.1007/s10826-021-01951-1>
- Ibragimova, E. R., & Tarasova, A. N. (2018). Language-related problems of international students of Elabuga Institute of Kazan Federal University. *Espacios*, 39(2).
- Ilonen, T., Taiminen, T., Karlsson, H., Luerma, H., Tuimala, P., Leinonen, K.-M., ... Salokangas, R. K. R. (2000). Impaired Wisconsin Card Sorting Test performance in first-episode severe depression. *Nordic Journal of Psychiatry*, 54(4), 275–280. <https://doi.org/10.1080/080394800448156>
- Irwin, L. N., Kofler, M. J., Soto, E. F., & Groves, N. B. (2019). Do children with attention-deficit/hyperactivity disorder (ADHD) have set shifting deficits? *Neuropsychology*, 33(4), 470–481. <https://doi.org/10.1037/neu0000546>
- Jia, G., & Aaronson, D. (2003). A longitudinal study of Chinese children and adolescents learning English in the United States. In *Applied Psycholinguistics* (Vol. 24). <https://doi.org/10.1017/s0142716403000079>
- Joseph, H. M., Mckone, K. M. P., Molina, B. S. G., & Shaw, D. S. (2021). Maternal Parenting and Toddler Temperament : Predictors of Early School Age Attention - Deficit / Hyperactivity

- Disorder - Related Behaviors. *Research on Child and Adolescent Psychopathology*, 763–773. <https://doi.org/10.1007/s10802-021-00778-0>
- Kan, P. F., & Kohnert, K. (2005). Preschoolers learning Hmong and English: Lexical-semantic skills in L1 and L2. *Journal of Speech, Language, and Hearing Research*, 48(2), 372–383. [https://doi.org/10.1044/1092-4388\(2005/026\)](https://doi.org/10.1044/1092-4388(2005/026))
- Kim, H. Y., Brown, L., Tubbs Dolan, C., Sheridan, M., & Aber, J. L. (2020). Post-migration risks, developmental processes, and learning among Syrian refugee children in Lebanon. *Journal of Applied Developmental Psychology*, 69(May), 101142. <https://doi.org/10.1016/j.appdev.2020.101142>
- Kim, Y. (2015). The roles of schooling types in first language development of Korean overseas children. *KEDI Journal of Educational Policy*, 12(1), 61–81.
- Kluczniok, K., Lehl, S., Kuger, S., & Rossbach, H.-G. (2013). Quality of the home learning environment during preschool age – Domains and contextual conditions. *European Early Childhood Education Research Journal*, 21(3), 420–438. <https://doi.org/10.1080/1350293X.2013.814356>
- Klugman, J. (2022). *The Gender Dimensions of Forced Displacement: A synthesis of New Research*.
- Kohnert, K. J., & Bates, E. (2002). Balancing Bilinguals II: Lexical Comprehension and Cognitive Processing in Children Learning Spanish and English. *Journal of Speech, Language, and Hearing Research*, 45(2), 347–359. [https://doi.org/10.1044/1092-4388\(2002/027\)](https://doi.org/10.1044/1092-4388(2002/027))
- Kong, F., Chen, Z., Xue, S., Wang, X., & Liu, J. (2015). Mother’s but not father’s education predicts general fluid intelligence in emerging adulthood: Behavioral and neuroanatomical evidence. *Human Brain Mapping*, 36(11), 4582–4591. <https://doi.org/10.1002/hbm.22934>
- Lambert, H. K., King, K. M., Monahan, K. C., & McLaughlin, K. A. (2017). Differential associations of threat and deprivation with emotion regulation and cognitive control in adolescence. *Development and Psychopathology*, 29(3), 929–940. <https://doi.org/10.1017/S0954579416000584>
- Lee, D., & Jackson, M. (2017). The Simultaneous Effects of Socioeconomic Disadvantage and Child Health on Children’s Cognitive Development. *Demography*, 54(5), 1845–1871. <https://doi.org/10.1007/s13524-017-0605-z>
- Liu, J., & Raine, A. (2017). Nutritional status and social behavior in preschool children: the mediating effects of neurocognitive functioning. *Maternal & Child Nutrition*, 13(2), e12321. <https://doi.org/10.1111/mcn.12321>
- Locke, C. J., Southwick, K., McCloskey, L. A., & Fernández-Esquer, M. E. (1996). The Psychological and Medical Sequelae of War in Central American Refugee Mothers and Children. *Archives of Pediatrics & Adolescent Medicine*, 150(8), 822. <https://doi.org/10.1001/archpedi.1996.02170330048008>
- Lynn, R. (1990). The role of nutrition in secular increases in intelligence. *Personality and Individual Differences*, 11(3), 273–285. [https://doi.org/10.1016/0191-8869\(90\)90241-I](https://doi.org/10.1016/0191-8869(90)90241-I)
- McDonald, J. L. (2006). Beyond the critical period: Processing-based explanations for poor grammaticality judgment performance by late second language learners. *Journal of Memory and Language*, 55(3), 381–401. <https://doi.org/10.1016/j.jml.2006.06.006>
- Mehnert, J., Akhrif, A., Telkemeyer, S., Rossi, S., Schmitz, C. H., Steinbrink, J., ... Neufang, S. (2013). Developmental changes in brain activation and functional connectivity during response inhibition in the early childhood brain. *Brain and Development*, 35(10), 894–904. <https://doi.org/10.1016/j.braindev.2012.11.006>
- Micalizzi, L., Brick, L. A., Flom, M., Ganiban, J. M., & Saudino, K. J. (2019). Effects of socioeconomic status and executive function on school readiness across levels of household

- chaos. *Early Childhood Research Quarterly*, 47, 331–340.  
<https://doi.org/10.1016/j.ecresq.2019.01.007>
- Miller, H. V., Barnes, J. C., & Beaver, K. M. (2011). Self-control and health outcomes in a nationally representative sample. *American Journal of Health Behavior*, 35(1), 15–27.  
<https://doi.org/10.5993/AJHB.35.1.2>
- Mori, Y., & Calder, T. M. (2013). Bilingual vocabulary knowledge and arrival age among Japanese heritage language students at Hoshuukoo. *Foreign Language Annals*, 46(2), 290–310. <https://doi.org/10.1111/flan.12027>
- Moriguchi, Y., & Hiraki, K. (2013). Prefrontal cortex and executive function in young children: A review of NIRS studies. *Frontiers in Human Neuroscience*, 7(DEC), 1–9.  
<https://doi.org/10.3389/fnhum.2013.00867>
- Morton, J. B., & Harper, S. N. (2007). What did Simon say? Revisiting the bilingual advantage. *Developmental Science*, 10(6), 719–726. <https://doi.org/10.1111/j.1467-7687.2007.00623.x>
- Nyman, A., Taskinen, T., Grönroos, M., Haataja, L., Lähdetie, J., & Korhonen, T. (2010). Elements of Working Memory as Predictors of Goal-Setting Skills in Children With Attention-Deficit/ Hyperactivity Disorder. *Journal of Learning Disabilities*, 43(6), 553–562.  
<https://doi.org/10.1177/0022219410375001>
- Oades, R. D., & Christiansen, H. (2008). Cognitive switching processes in young people with attention-deficit/hyperactivity disorder. *Archives of Clinical Neuropsychology*, 23(1), 21–32.  
<https://doi.org/10.1016/j.acn.2007.09.002>
- Oller, D. K., Pearson, B. Z., & Cobo-Lewis, A. B. (2007). Profile effects in early bilingual language and literacy. *Applied Psycholinguistics*, 28(2), 191–230.  
<https://doi.org/10.1017/s0142716407070117>
- Ongun, Z. (2018). *Bilingualism, vocabulary knowledge and nonverbal intelligence: Turkish-English bilingual children in the UK*.
- Osman, F., Mohamed, A., Warner, G., & Sarkadi, A. (2020). Longing for a sense of belonging—Somali immigrant adolescents’ experiences of their acculturation efforts in Sweden. *International Journal of Qualitative Studies on Health and Well-Being*, 15(sup2), 1784532.  
<https://doi.org/10.1080/17482631.2020.1784532>
- Özer, S., Şirin, S., & Oppedal, B. (2016). *Bahçeşehir Study of Syrian Refugee Children in Turkey*.
- Pang, E. W., Sedge, P., Grodecki, R., Robertson, A., MacDonald, M. J., Jetly, R., ... Taylor, M. J. (2014). Colour or shape: examination of neural processes underlying mental flexibility in posttraumatic stress disorder. *Translational Psychiatry*, 4(8), e421–e421.  
<https://doi.org/10.1038/tp.2014.63>
- Parisi, J. M., Rebok, G. W., Xue, Q. L., Fried, L. P., Seeman, T. E., Tanner, E. K., ... Carlson, M. C. (2012). The role of education and intellectual activity on cognition. *Journal of Aging Research*, 2012, 20–24. <https://doi.org/10.1155/2012/416132>
- Park, S., Kim, B., Choi, N., Ryu, J., Cobham, V., Song, S., ... Cho, S.-C. (2014). The effect of persistent posttraumatic stress disorder symptoms on executive functions in preadolescent children witnessing a single incident of death. *Anxiety, Stress, & Coping: An International Journal*, 27(3), 241–252. <https://doi.org/10.1080/10615806.2013.853049>
- Portocarrero, J. S., Burright, R. G., & Donovan, P. J. (2007). Vocabulary and verbal fluency of bilingual and monolingual college students. *Archives of Clinical Neuropsychology*, 22(3), 415–422. <https://doi.org/10.1016/j.acn.2007.01.015>
- Rizkalla, N., Mallat, N. K., Arafa, R., Adi, S., Soudi, L., & Segal, S. P. (2020). “Children Are Not Children Anymore; They Are a Lost Generation”: Adverse Physical and Mental Health Consequences on Syrian Refugee Children. *International Journal of Environmental Research and Public Health*, 17(22), 1–21. <https://doi.org/10.3390/ijerph17228378>

- Rouchun, D., Zongkui, Z., Shuailei, L., Qingqi, L., & Chen, G. (2021). Family socioeconomic status and the parent-child relationship: Children's Internet use as a moderated mediator. *Current Psychology, 40*(9), 4384–4393. <https://doi.org/10.1007/s12144-019-00356-0>
- Sack, W. H., Clarke, G. N., & Seeley, J. (1996). Multiple Forms of Stress in Cambodian Adolescent Refugees. *Child Development, 67*(1), 107–116. <https://doi.org/10.1111/j.1467-8624.1996.tb01722.x>
- Şafak-Ayvazoğlu, A., Kunuroglu, F., & Yağmur, K. (2021). Psychological and socio-cultural adaptation of Syrian refugees in Turkey. *International Journal of Intercultural Relations, 80*(February 2020), 99–111. <https://doi.org/10.1016/j.ijintrel.2020.11.003>
- Sasser, T. R., Bierman, K. L., & Heinrichs, B. (2015). Executive functioning and school adjustment: The mediational role of pre-kindergarten learning-related behaviors. *Early Childhood Research Quarterly, 30*(PA), 70–79. <https://doi.org/10.1016/j.ecresq.2014.09.001>
- Scheffner Hammer, C., Lawrence, F. R., & Miccio, A. W. (2008). Exposure to English Before and After Entry into Head Start1: Bilingual Children's Receptive Language Growth in Spanish and English. *International Journal of Bilingual Education and Bilingualism, 11*(1), 30–56. <https://doi.org/10.2167/beb376.0>
- Schwartz, M., & Katzir, T. (2012). Depth of lexical knowledge among bilingual children: The impact of schooling. *Reading and Writing, 25*(8), 1947–1971. <https://doi.org/10.1007/s11145-011-9308-9>
- Scott, W. A. (1962). Cognitive Complexity and Cognitive Flexibility. *Sociometry, 25*(4), 405–414. <https://doi.org/https://doi.org/10.2307/2785779>
- Sheridan, M. A., Peverill, M., Finn, A. S., & McLaughlin, K. A. (2017). Dimensions of childhood adversity have distinct associations with neural systems underlying executive functioning. *Development and Psychopathology, 29*(5), 1777–1794. <https://doi.org/10.1017/S0954579417001390>
- Skowron, E. A., Cipriano-Essel, E., Gatzke-Kopp, L. M., Teti, D. M., & Ammerman, R. T. (2014). Early adversity, RSA, and inhibitory control: Evidence of children's neurobiological sensitivity to social context. *Developmental Psychobiology, 56*(5), 964–978. <https://doi.org/10.1002/dev.21175>
- Steinberger, D., & Barch, D. (2021). The Effect of Perceived Discrimination on Mental Health and Cognitive Functioning. *Modern Psychological Studies, 27*(1). <https://doi.org/10.15154/1519007>
- Sulik, M. J., Blair, C., Mills-Koonce, R., Berry, D., & Greenberg, M. (2015). Early Parenting and the Development of Externalizing Behavior Problems: Longitudinal Mediation Through Children's Executive Function. *Child Development, 86*(5), 1588–1603. <https://doi.org/10.1111/cdev.12386>
- Sun, H., Steinkrauss, R., Tendeiro, J., & De Bot, K. (2016). Individual differences in very young children's English acquisition in China: Internal and external factors. *Bilingualism, 19*(3), 550–566. <https://doi.org/10.1017/S1366728915000243>
- Sunny, B. S., Elze, M., Chihana, M., Gondwe, L., Crampin, A. C., Munkhondya, M., ... Glynn, J. R. (2017). Failing to progress or progressing to fail? Age-for-grade heterogeneity and grade repetition in primary schools in Karonga district, northern Malawi. *International Journal of Educational Development, 52*, 68–80. <https://doi.org/10.1016/j.ijedudev.2016.10.004>
- Suor, J. H., Sturge-Apple, M. L., & Skibo, M. A. (2017). Breaking cycles of risk: The mitigating role of maternal working memory in associations among socioeconomic status, early caregiving, and children's working memory. *Development and Psychopathology, 29*(4), 1133–1147. <https://doi.org/10.1017/S095457941600119X>

- Tsimplici, I. M., Vogelzang, M., Balasubramanian, A., Marinis, T., Alladi, S., Reddy, A., & Panda, M. (2020). Linguistic Diversity, Multilingualism, and Cognitive Skills: A Study of Disadvantaged Children in India. *Languages*, 5(1), 10. <https://doi.org/10.3390/languages5010010>
- Tummala-Narra, P., & Claudius, M. (2013). The effect of surface sealant on micro-leakage and solubility of nano-glassionomer restoration. *Cultural Diversity and Ethnic Minority Psychology*, 19(3), 257–268. <https://doi.org/10.1037/a0032960>
- Tuncer, N. (2021). Comparing the Executive Function Skills of Turkish and Refugee Preschool Children: Flexible Item Selection Task (Fist). *European Journal of Education Studies*, 3(1), 235–265. <https://doi.org/10.46827/ejrs.v8i1.3535>
- Tunga, Y., Engin, G., & Çağiltay, K. (2020). A Literature Review on the Issues Encountered in Educating Syrian Children in Turkey. *Inonu University Journal of the Faculty of Education*, 21(2020), 317–333. <https://doi.org/10.17679/inuefd.535845>
- Umbel, V. M., Pearson, B. Z., Fernandez, M. C., & Oller, D. K. (1992). Measuring Bilingual Children's Receptive Vocabularies. *Child Development*, 63(4), 1012. <https://doi.org/10.2307/1131250>
- Wachs, T. D., & McCabe, G. (2001). Relation of maternal intelligence and schooling to offspring nutritional intake. *International Journal of Behavioral Development*, 25(5), 444–449. <https://doi.org/10.1080/016502501316934879>
- Weiland, C., McCoy, D. C., Grace, E., & Park, S. O. (2017). Natural Window of Opportunity? Low-Income Parents' Responses to Their Children's Impending Kindergarten Entry. *AERA Open*, 3(1), 233285841668150. <https://doi.org/10.1177/2332858416681509>
- Wilkinson, L. (2002). Factors Influencing the Academic Success of Refugee Youth in Canada. *Journal of Youth Studies*, 5(2), 173–193. <https://doi.org/10.1080/1367626022013443>
- Wils, A. (2004). *LATE ENTRANTS LEAVE SCHOOL EARLIER: EVIDENCE FROM MOZAMBIQUE*. 50(1), 17–37.
- Woodburn, M., Bricken, C. L., Wu, Z., Li, G., Wang, L., Lin, W., ... Cohen, J. R. (2021). The maturation and cognitive relevance of structural brain network organization from early infancy to childhood. *NeuroImage*, 238(April), 118232. <https://doi.org/10.1016/j.neuroimage.2021.118232>
- Yeniad, N., Malda, M., Mesman, J., van IJzendoorn, M. H., Emmen, R. A. G., & Prevoe, M. J. L. (2014). Cognitive flexibility children across the transition to school: A longitudinal study. *Cognitive Development*, 31 (May 2019), 35–47. <https://doi.org/10.1016/j.cogdev.2014.02.004>
- Yeter, Ö., Rabagliati, H., & Özge, D. (2021). Are Refugee Bilingual Children Disadvantaged in Their Cognitive and Linguistic Abilities? *Proceedings of the 45th Annual Boston University Conference on Language Development*. (790–804).

## Sources

- UN. (2014). *Regional refugee & resilience plan 2016-2017*. Retrieved from <http://doi.wiley.com/10.1002/1944-2866.POI360%5Cnhttp://www.edelman.com/post/millennialsand-brands/%5Cnhttp://dx.doi.org/10.1108/QMR0620130041%5Cnhttp://onlinelibrary.wiley.com/doi/10.1111/j.1468-2958.1977.tb00519.x/abstract%5Cnhttp://dx.doi.org/10.10>

- UNHCR. (2014). *Living in the Shadows – Jordan Home Visits Report 2014*. Retrieved from <http://www.unhcr.org/54b685079.pdf>
- UNHCR. (2018). *Stepping up: Refugee Education in Crisis*.
- UNHCR. (2021a). *Global Report*. Retrieved from [https://www.unaids.org/sites/default/files/media\\_asset/JC3032\\_AIDS\\_Data\\_book\\_2021\\_En.pdf](https://www.unaids.org/sites/default/files/media_asset/JC3032_AIDS_Data_book_2021_En.pdf)
- UNHCR. (2021b). *Global Trends: Forced Displacement in 2021*. Retrieved from <https://www.unhcr.org/refugee-statistics>
- UNICEF. (2019). *Action for Refugee Children*. 32.

# War Stories in Social Media: Personal Experience of Russia-Ukraine War

Serhii Zasiiekin <sup>a, \*</sup>, Victor Kuperman <sup>b</sup>,  
Iryna Hlova <sup>a</sup>, Larysa Zasiiekina <sup>a</sup>

<sup>a</sup> *Lesya Ukrainka Volyn National University, Ukraine*

<sup>b</sup> *McMaster University, Canada*

*Received August 7, 2022; Revised November 26, 2022; Accepted December 2, 2022*


**Abstract.** In light of the current Russia-Ukraine war, traumatic stress in civilian Ukrainians is a critical issue for psychological science to examine. Social media is often viewed as a tribune for authors' self-expressing and sharing stories on the war's impact upon their lives. To date, little is known about how the civilians articulate their own war experience in social media and how this media affects the processing of traumatic experience and releasing the traumatic stress. Thus, the goal of the study is to examine how the personal experience of the Russia-Ukraine war 2022 is narrated on Facebook as a popular social media venue. The study uses a corpus of 316 written testimonies collected on Facebook from witnesses of the Russia-Ukraine war and compares it against a reference corpus of 100 literary prosaic texts in Ukrainian. We analyzed both corpora using the Ukrainian version of the Linguistic Inquiry and Word Count software – LIWC 2015 (Pennebaker et al., 2015). We identified psychological and linguistic categories that characterized the war narratives and distinguished it from the literary reference corpus. For instance, we found the style of Facebook testimonies to be significantly less narrative and more analytic compared to literary writings. Therefore, writers in the social media focus more on cognitive reappraisal of the tragic events, i.e., a strategy known to lead to a reduction of stress and trauma.

**Keywords:** *Russia-Ukraine war, Facebook, narrative, LIWC, categorical-dynamic index.*

**Засєкін Сергій, Куперман Віктор, Глова Ірина, Засєкіна Лариса. Розповіді про війну в соцмережах: особистий досвід переживання російсько-української війни.**

**Анотація.** Під час нинішньої російсько-української війни травматичний стрес у цивільних українців є критичним питанням для психологічної науки. Соціальні мережі часто розглядаються як трибуна для самовираження дописувачами та обміну своїми історіями про вплив війни на їхні життя. Сьогодні в літературі є небагато досліджень про те, як цивільне населення відображує в соціальних мережах власний досвід війни і як вони впливають на перероблення травматичного досвіду та звільнення від травматичного стресу. Отже метою цього дослідження було з'ясувати, як особистий досвід російсько-української війни 2022 року відтворено у популярній соцмережі Facebook. У дослідженні використано корпус із 316 письмових свідчень, зібраних у Facebook від свідків російсько-української війни, який надалі порівнюється з корпусом із 100 художніх прозових текстів українською мовою. Унаслідок аналізу обох корпусів за допомогою української версії програми Linguistic Inquiry and Word Count – LIWC 2015 (Pennebaker et al., 2015) визначено психологічні та лінгвістичні

---

\* Corresponding author. Serhii Zasiiekin,  <https://orcid.org/0000-0001-9453-3534>, E-mail: [sergiozasyekin@vnu.edu.ua](mailto:sergiozasyekin@vnu.edu.ua)



категорії (включаючи категорійно-динамічний індекс), які характеризували наративи про війну. Статистично доведено, що стиль розповідей у Facebook більш аналітичний, порівняно з літературними творами. Відтак, користувачі соціальних мереж здебільшого були зосереджені на когнітивному переробленню трагічних подій, тобто застосовували стратегію, спрямовану на зменшення стресу й травми.

*Ключові слова:* російсько-українська війна, Facebook, наратив, LIWC, категорійно-динамічний індекс.

## Introduction

Social media is fast becoming a key instrument in reflecting the experience of war in civilian population. The war narratives, written for and broadcasted via social media, are considered to be an important resource for all conflict actors and a tool for shaping the conflict itself (Prier, 2020). In addition, social media optimizes communication and makes it time-efficient in terms of disseminating information among a large audience. Social media is especially useful under circumstances of social isolation due to active warfare, including artillery shelling (Singer & Brooking, 2018).

As of 2022, there are over 2.9 billion active Facebook users and over 400 million active Twitter users (<https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>). Studies on the role of social media show its ability to impact the well-being of social media users and even shape critical political events of the twenty first century. For instance, there is evidence that social media played a crucial role in regulating Russia's use of cyber warfare and disinformation in annexing Crimea in 2014; President Trump's election used Twitter as a (mis/dis)information tool as well (Zeitzoff, 2017). At least in part, the social-political impact of social media derives from its role as a platform for constructing individual and collective memories. Specifically, social media expresses the individuals' and community's preferences and choices in describing events and thus may bias the readers' memories accordingly. As Bartoletti (2011) points out, social media defines the trajectory for individual remembrance and forgetting, which influences the collective memory of important historical events. This function of social media is also aligned with a positive relationship between social media use and social capital as a system of networks, norms, and trust, which enable individuals to work together effectively (Brown & Michinov, 2019; Tefertiller et al., 2020). Additionally, recent results show that individuals use social media to get emotional support, which increases their perceived social belonging (Ostic et al., 2021).

A much-debated question is whether mass media has a positive or negative impact on mental health and well-being. Recent findings suggest that social media usage is frequently associated with anxiety, loneliness, depression and social isolation, since it may serve as a barrier for face-to-face communication with others (Ostic et al., 2021). However, some studies indicate that social media develops a sense of belonging and connectedness with others (Twenge & Campbell, 2019) and decreases social isolation. The latter issue has grown in importance in light of recent pandemic time and forced distant functioning of people all over the world during the

last years (Chen & Li, 2017; Roberts & David, 2020). One of the most significant recent findings argues that positive and negative impacts on well-being and mental health co-exist. The polarity of the overall impact depends on a variety of factors. In particular, social media usage widens one's social contacts, establishes new connections with heterogeneous groups and increases social interactions between people (Kim & Kim, 2017).

This study examines social media as a platform for expressing in writing individual experiences and emotional distress related to the Russia-Ukraine war. Pennebaker and Beall (1986) argue that the act of writing about emotional experiences of stressful or traumatic events subsequently improves individual mental and physical health. Moreover, articulating one's individual thoughts, emotions, and feelings rather than narrating a pure sequence of facts and events plays a crucial role in releasing distress. Therefore, essays of the individuals whose physical and mental health improved as a result of writing are self reflective, emotionally open, and thoughtful (Pennebaker & Seagal, 1999). The therapeutic potential of writing has been recognized as well. Gawlytta et al. (2022) proposed Internet-based cognitive-behavioural writing therapy (iCBT) asking patients with PTSD to write assignments over a 5-week period. The results of this research show that post-intensive care for PTSD may be more effective when iCBT is administered. It stands to reason that social media may be an essential therapeutic setting for people experiencing continuous traumatic stress during the wartime.

Social media is clearly important as a strategic communication arena during armed conflicts. Yet there remains a paucity of evidence on how raw and immediate war experience is reflected on social media while the war is ongoing. Little is known about how the civilians articulate their own war experience and it is not clear how the usage of social media affects the processing of traumatic experience and the releasing of traumatic stress.

The aim of the current research is to enhance our understanding of how the personal experience of the Russia-Ukraine war 2022 is narrated in the social media venue. To this end, we examine the use of linguistic units and the prevalence of psychologically meaningful categories in the corpus of Ukrainian texts posted on Facebook since the beginning of the Russia-Ukraine war (24 Feb 2022) till the time of this writing (September 2022), see details below. The following research questions are relevant to the current study on sharing individual experiences of the Russia-Ukraine war in social media and its impact on mental health and psychological well-being:

RQ1: What psychologically and linguistically meaningful categories represent individual experience of the Russia-Ukraine war on social media?

RQ2: Are there any significant differences in linguistically and psychologically meaningful categories between social media narratives on war and texts written outside of the war context?

RQ3: What style of representing war experience (analytic or narrative) is predominant in social media users?

The three research questions posited above are addressed through linguistic analyses of the Ukrainian-language corpus of written narratives of war published on Facebook since the beginning of the Russia-Ukraine war, from February—September 2022. In analyzing RQ1, we zoomed in on psychological categories that we predicted to be most relevant to the expression of trauma in personal written narratives. One category of obvious relevance is emotionality of the narratives – defined in the literature either through atomic and distinct emotions (joy, sadness, disgust, anger, and fear; see Ekman & Oster, 1979; Roseman et al., 1990) or along the largely independent dimensions of valence/positivity and arousal (Osgood & Walker, 1959; Russell, 1980). We examined the affective content of the narratives by identifying words representing positive and negative emotions and quantifying their prevalence in the texts. Another psychological category of importance is for processing traumatic memory and decreasing the probability of PTSD is efficient social support. To estimate linguistic expression of this category in the war narratives we examined sets of words related to social and family relations (Pennebaker et al., 2015; Zasiiekina et al., 2019). Several other categories of relevance are introduced in detail below.

Psycholinguistic characterization of a corpus of writing proposed in RQ1 requires a comparator, i.e., a reference corpus of written texts. In this study, the target corpus of Facebook testimonies of war are compared to a corpus of Ukrainian literary texts written outside of the war context, see below for details. RQ2 then constitutes a statistical comparison of the prevalence that select psychological and linguistic categories have in the target vs reference corpus.

A final linguistic factor that we consider as RQ3 is the style of writing, known to be indicative of the successful or unsuccessful processing of trauma, see below. Two major styles are distinguished in the literature, i.e., the analytic and the narrative styles, see definitions below. The former style is considered to be indicative of active reappraisal of the traumatic event and may lead to desirable traumatic stress release (Pennebaker & Seagal, 1999). RQ3 is then concerned with determining the prevalent writing style in the target corpus of the Facebook war narratives, compared to the literary reference corpus.

In what follows, we present the corpus and the analyses and draw conclusions on the “real-time” psychological impact of the wartime on the well-being of war witnesses and survivors.

## **Method**

### **Participants and Materials**

This study uses two corpora – a target corpus of 316 written testimonies collected from witnesses of the Russia-Ukraine war in February—September 2022 and a reference corpus of 100 Ukrainian literary prosaic texts. In the Facebook corpus, written testimonies in Ukrainian related the personal experiences of the

writers (and in some case, their families) with the ongoing war, occupation and flight. The testimonies are supplemented with English translations and, in some cases, with video and photo materials: This study solely analyzes texts written in Ukrainian. The testimonies were submitted via the Facebook group *Writings from the War* (publicly available at <https://www.facebook.com/WritingsFromTheWar>) initiated and administered by Dr. Alex Averbukh (University of Alberta). A total of 316 individuals voluntarily submitted their testimonials: The data are openly accessible in public domain. The Facebook corpus consists of 316 written texts presenting monologues or dialogues, with a total of 62,196 word tokens. Meta-data (e.g., age, place of residence before and during the war) are available for some of the participants: We do not make use of the meta-data.

The literary reference corpus was compiled as the material of a DSc thesis (Zasiiekin, 2020) and is based on Ukrainian literary prose written by native Ukrainian writers (Zasiiekin et al., 2022). The corpus incorporates 100 prosaic texts from the 19th–21st centuries of 20,000 words each, totaling 2,000,000 word tokens. Due to their balanced incorporation of narration, description, and dialogue segments, they represent a comparable corpus of texts with the Facebook texts. The scarce availability of the war topic in the literary corpus makes it a ‘norm’, a reference corpus against which the corpus of Facebook texts is contrasted.

## Procedure

We analyze war narratives in social media and literary texts using the Ukrainian version of the Linguistic Inquiry and Word Count software – LIWC 2015 (Pennebaker et al., 2015). LIWC is a widely used tool for computerized text analysis. Its basis is a set of curated word lists associated with semantic categories relevant for characterization of psychological states and linguistic preferences of the text writer. The LIWC classifies words in the input texts according with its pre-defined categories, including positive and negative emotions, motivation, thinking styles and social relationships. In total, the LIWC defines 125 categories based approximately on 6,400 words (Pennebaker et al., 2015).

In line with the notion that “[t]he words we use in daily life reflect who we are and the social relationships we are in” (Tausczik & Pennebaker, 2010, p. 25), we make use of select LIWC semantic categories to quantify and highlight the individual experience of the Russia-Ukraine war. The key to the analyses of traumatic experience is the frequency count of words belonging to linguistically and/or psychologically relevant categories (RQ1) in comparison to a reference corpus that does not reflect experiences of war (RQ2).

An additional aspect of linguistic structure considered here is the writing style of the war testimonies. Specifically, we make use of a Categorical-Dynamic Index (CDI) – one of reliable markers of the text author’s narrative or analytic style (Jordan & Pennebaker, 2017; Taraban et al., 2022). The index consists of two independent quantities, derived from language use. The Categorical index draws on the observation that the more the authors use articles and prepositions, the more explicit

is their abstract thinking and cognitive complexity. Higher values of the Categorical index are diagnostic of the analytical writing style. In Jordan & Pennebaker's (2017) formula, based on the English language, articles (which serve as noun modifiers) and prepositions are word categories associated with a space-related story. As the Ukrainian language has no category of articles, for the purposes of our analysis we replaced it by adjectives that also serve as modifiers of nouns:

$$\text{Categorical} = (\text{articles} + \text{prep})/2 \quad (1)$$

Modified for Ukrainian:

$$\text{Categorical} = (\text{adj} + \text{prep})/2 \quad (1a)$$

The formula defining the Dynamic index for English incorporates personal and indefinite pronouns, auxiliary verbs, conjunctions, adverbs and terms of negation. We modified the formula by deleting auxiliary verbs, since the Ukrainian language does not have such verb forms:

$$\text{Dynamic} = (\text{ppron} + \text{ipron} + \text{auxverb} + \text{conj} + \text{adverb} + \text{negate})/6 \quad (2)$$

Modified for Ukrainian:

$$\text{Dynamic} = (\text{ppron} + \text{ipron} + \text{conj} + \text{adverb} + \text{negate})/5 \quad (2a)$$

Higher values of the Dynamic index are typically associated with the narrative style of writing.

Statistical analyses compared the Writings from the War corpus and the reference literary corpus in terms of percentages of words belonging to specific linguistic and psychological categories, as well as indices of the writing style defined in (1a) and (2a). All analyses were conducted in SPSS version 26.0.

## Results and Discussion

Statistical analyses identified psychologically and linguistically meaningful categories that particularly strongly represented individual experiences of the Russia-Ukraine war on social media (see Table 1). These were the categories that demonstrated statistically significant (at the 5% level) differences in the percent of words from those categories found in Facebook narratives on war versus literary texts. The LIWC-processed numbers in Table 1 represent the mean percent of total words in the respective narratives that fall into a specific linguistic or psychological category. Below we discuss the semantics of those categories and their relevance for the psychological characterization of witnesses and survivors of the Russia-Ukraine war, in line with RQ1 and RQ2 posited in the Introduction.

Table 1

*Mean Percents, Standard Deviations and t-test Outcomes for Linguistic and Psychological Meaningful Categories of All War Narratives on Facebook (n = 316) and Literary Texts (n = 100)*

Variables	War narratives (n=316)		Literary texts (n=100)		t	p
	Mean (SD)	Min- Max	Mean (SD)	Min- Max		
We	.72 (.96)	.00 6.12	.22 (.21)	0.01 1.40	5.119	< .001
Social	3.97 (3.14)	.00 33.33	3.12 (.56)	1.73 4.80	2.663	.008
Family	1.02 (2.31)	.00 33.33	.42 (.18)	.14 1.06	2.612	.009
Female	.59 (1.11)	.00 7.69	.56 (.31)	2.04 .11	.225	.882
Male	.01 (.06)	.00 0.53	.07 (.11)	.00 .98	-6.547	< .001
Cogproc	6.35 (4.13)	.00 25.00	7.89 (1.36)	5.15 13.43	-3.675	< .001
Affiliation	1.14 (2.16)	.00 33.33	.52 (.24)	.21 1.71	2.861	.004
Focuspresent	1.39 (1.71)	.00 18.00	.98 (.33)	.39 2.12	2.379	.018
Posemo	.84 (2.12)	.00 33.33	.64 (.15)	.33 1.03	.947	.344
Negemo	.58 (1.41)	.00 20.00	.55 (.16)	.22 1.62	.226	.821

Three categories connected to social relations were more prevalent in the Facebook corpus than in the literary corpus. One such category “We” as a marker of internal agency (Zasiiekina et al., 2019) represents a collective response shared between people. Two additional categories – “Social” and “Family” – are the most common linguistic markers of social relations and thus their frequent use confirm authors’ tendency to group together in the face of a threat. Jointly, these results demonstrate a greater reliance on social ties at the level of a person, family and society, during the war compared to the peacetime. A highly related finding is a greater prevalence of category “Affiliation” in the Facebook vs literary corpus. Affiliation is found under the LIWC super-category of “Drives”, together with achievement and power as two additional basic human needs (McClelland, 1961).

The predominant role of Affiliation in Facebook narratives is in line with the stronger impact of the “We” and “Social” categories that amplify the effect of “togetherness”.

Other noteworthy findings included a small percent of words from the “Male” categories in Facebook vs literary corpus: No statistical difference was found in percents of words from the “Female” category. We speculate that this finding is related to the notion that the influence of mass violence and political oppression affects mainly women, due to their being “the cultural and biological repository of the nation” (Naimark, 2001, p. 83). An additional finding was that markers of cognitive processing were less frequent in social media narratives compared to literary texts.

As for time reference, the participants tended to be aware of and involved in the current events demonstrated by the significantly higher percent of markers of present time – LIWC category ‘Focuspresent’. Taken together, the results show authenticity is associated with more personal and honest communications.

According to our objectives, we also examined the affective content of the narratives by identifying words representing positive (“Posemo”) and negative (“Negemo”) emotions. Somewhat counterintuitively, neither category revealed a significant difference between the target and the reference corpus (see Table 1). This suggests that the expected prevalence of negative emotions due to experiencing an ongoing war does not propagate to the written expression of those experiences. Either language is an inefficient vehicle for this specific expression, or writers use effective coping strategies that offset or reduce the negative emotions.

An additional question (RQ3) that we ask is what style of representing war experience (analytic/narrative) is predominant in social media users. Table 2 summarizes the comparative statistical analysis of style in social media versus literary texts. Specifically, it reports comparisons of two indices: Categorical (more prevalent in the analytical style) and Dynamic (more prevalent in the narrative style).

Table 2  
*Mean Percents (Standard Deviation in Parenthesis) for Categorical and Dynamic Indices, by Corpus*

<b>Categorical- Dynamic Indices</b>	<b>Facebook corpus n=316</b>	<b>Literary corpus n=100</b>	<b>t</b>	<b>p</b>
Categorical	5.80 (6.75)	5.35 (.48)	.674	.501
Dynamic	3.34 (2.47)	3.85 (.63)	-2.059	.040*

$p < .05$ . All tests are two-tailed.

The differences between Categorical Index values in both corpora were not significant ( $p = .501$ ). However, in their value of the Dynamic index ( $p = .040$ ),

literary texts significantly exceeded Facebook texts. Because the Dynamic index is less prevalent in the war narratives, it confirms the fact that the style of representing war experience is less narrative and more analytic in social media users. Using an analytic style in their writings from the war reveals authors' higher cognitive processing of their painful experience. Psychologically, this can be treated as a positive feature: as argued by Pennebaker et al. (2000), story-tellers neutralize their traumatic experience by relieving it through verbal expression. We tentatively conclude that the Facebook authors focus more on cognitive reappraisal of the tragic events, which can lead to a reduction or elimination of their trauma and stress.

## Conclusions

The present research aimed to examine how the personal experience of the Russia-Ukraine war 2022 is narrated in the social media venue. Although the affective content of the Facebook narratives was relevant, it gained no statistical significance in these texts when compared with literary texts. However, with social categories like "Family", "Social", "We", and "Affiliation" being prominent in the Facebook vs literary corpus, the social support and "togetherness" factor proved to be vital in the war narratives. The difference between linguistically and psychologically meaningful categories in social media narratives on war and literary texts was also seen in the stronger focus on present time by the Facebook contributors, relative to literary texts. Finally, the style of their writing – more analytic and less narrative – defined through the Categorical-Dynamic Indices tended to reflect the Facebook authors' active reprocessing of the wartime events that altogether might have a positive impact on leveling-out their mental health and psychological well-being. We hope the present exploration of the narratives of the Russia-Ukraine war will guide future research into the structure and content of the war narratives. We expect this research to point to both the nature and extent of experienced trauma as well as coping and healing strategies that witnesses and survivors of war employ.

## Acknowledgements

Thanks are due to Emilie Altman for proof-reading the previous draft of this paper.

## References

- Bartoletti, R. (2011). Memory and social media: New forms of remembering and forgetting. In B. Pirani, Ed. *Learning from Memory: Body, Memory and Technology in a Globalizing World*. (pp. 82-111). Cambridge Scholars Publishing, Newcastle UK.
- Brown, G., and Michinov, N. (2019). Measuring latent ties on Facebook: a novel approach to studying their prevalence and relationship with bridging social capital. *Technology in Society*, 59, 101176. <https://doi.org/10.1016/j.techsoc.2019.101176>



- Charlson, F., van Ommeren, M., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019). New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. *The Lancet*, 394(10194), 240-248. [https://doi.org/10.1016/S0140-6736\(19\)30934-1](https://doi.org/10.1016/S0140-6736(19)30934-1)
- Ekman, P., & Oster, H. (1979). Facial expressions of emotion. *Annual Review of Psychology*, 30(1), 527–554. <https://doi.org/10.1146/annurev.ps.30.020179.002523>
- Gawlytta, R., Kesselmeier, M., Scherag, A., Niemeyer, H., Böttche, M., Knaevelsrud, C., & Rosendahl, J. (2022). Internet-based cognitive-behavioural writing therapy for reducing post-traumatic stress after severe sepsis in patients and their spouses (REPAIR): results of a randomised-controlled trial. *BMJ Open*, 12(3), e050305. <https://doi.org/10.1136/bmjopen-2016-014363>
- Jordan, K. N., & Pennebaker, J. W. (2017). The exception or the rule: Using words to assess analytic thinking, Donald Trump, and the American presidency. *Translational Issues in Psychological Science*, 3(3), 312-316. <https://doi.org/10.1037/tps0000125>
- Karam, E., & Ghosn, M. B. (2003). Psychosocial consequences of war among civilian populations. *Current Opinion in Psychiatry*, 16(4), 413-419. <https://doi.org/10.1097/00001504-200307000-00007>
- Kellezi, B., & Reicher, S. (2014). The double insult: Explaining gender differences in the psychological consequences of war. *Peace and Conflict: Journal of Peace Psychology*, 20(4), 491. <http://dx.doi.org/10.1037/pac0000043>
- Kim, B., and Kim, Y. (2017). College students' social media use and communication network heterogeneity: implications for social capital and subjective well-being. *Computers in Human Behavior*, 73, 620–628. <https://doi.org/10.1016/j.chb.2017.03.033>
- Kira, I. A., Templin, T., Lewandowski, L., Ramaswamy, V., Ozkan, B., & Mohanesh, J. (2008). The physical and mental health effects of Iraq war media exposure on Iraqi refugees. *Journal of Muslim Mental Health*, 3(2), 193-215. <https://doi.org/10.1080/15564900802487592>
- Murthy, R. S., & Lakshminarayana, R. (2006). Mental health consequences of war: a brief review of research findings. *World Psychiatry*, 5(1), 25.
- Naimark, N. (2001). *Fires of Hatred: Ethnic Cleansing in Twentieth-Century Europe*. Cambridge and London: Harvard University Press, 2001.
- Osgood, C. E., & Walker, E. G. (1959). Motivation and language behavior: A content analysis of suicide notes. *The Journal of Abnormal and Social Psychology*, 59(1), 58. <https://doi.org/10.1037/h0047078>
- Ostic, D., Qalati, S. A., Barbosa, B., Shah, S. M. M., Galvan Vela, E., Herzallah, A. M., & Liu, F. (2021). Effects of social media use on psychological well-being: a mediated model. *Frontiers in Psychology*, 2381. <https://doi.org/10.3389/fpsyg.2021.678766>
- Pennebaker, J. W., & Beall, S. K. (1986). Confronting a traumatic event: toward an understanding of inhibition and disease. *Journal of Abnormal Psychology*, 95(3), 274. <https://doi.org/10.1037/0021-843X.95.3.274>
- Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX: University of Texas at Austin.
- Pennebaker, J. W., & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology*, 55(10), 1243-1254. [https://doi.org/10.1002/\(sici\)1097-4679\(199910\)55:10%3C1243::aid-jclp6%3E3.0.co;2-n](https://doi.org/10.1002/(sici)1097-4679(199910)55:10%3C1243::aid-jclp6%3E3.0.co;2-n)
- Prier, J. (2020). Commanding the trend: Social media as information warfare. In *Information warfare in the age of cyber conflict* (pp. 88-113). Routledge.

- Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology*, *59*(5), 899. <https://doi.org/10.1037/0022-3514.59.5.899>
- Roberts, J. A., & David, M. E. (2020). The social media party: Fear of missing out (FoMO), social media intensity, connection, and well-being. *International Journal of Human-Computer Interaction*, *36*(4), 386-392. <https://doi.org/10.1080/10447318.2019.1646517>
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, *39*(6), 1161. <https://doi.org/10.1037/h0077714>
- Rzeszutek, M., Lis-Turlejska, M., Krajewska, A., Zawadzka, A., Lewandowski, M., & Szumiał, S. (2020). Long-term psychological consequences of World War II trauma among Polish survivors: A mixed-methods study on the role of social acknowledgment. *Frontiers in Psychology*, *11*, 210. <https://doi.org/10.3389/fpsyg.2020.00210>
- Singer, P. W., & Brooking, E. T. (2018). *LikeWar: The weaponization of social media*. Eamon Dolan Books.
- Taraban, R., Saraff, S., Zasiiekin, S., Biswal, R. (2022). A psycholinguistic analysis of inter-ethnic views of ethics. *East European Journal of Psycholinguistics*, *9*(1), 265–278. <https://doi.org/10.29038/eejpl.2022.9.1.tar>
- Tefertiller, A. C., Maxwell, L. C., and Morris, D. L. (2020). Social media goes to the movies: fear of missing out, social capital, and social motivations of cinema attendance. *Mass Communication and Society*, *23*, 378–399. <https://doi.org/10.1080/15205436.2019.1653468>
- Twenge, J. M., & Campbell, W. K. (2019). Media use is linked to lower psychological well-being: Evidence from three datasets. *Psychiatric Quarterly*, *90*(2), 311-331. <https://doi.org/10.1007/s11126-019-09630-7>
- Zasiiekin, S. (2020). Psycholinguistic Regularities of Reproducing Literary Texts in Translation (Based on the English and Ukrainian Languages). Unpublished DSc thesis. Kharkiv: V. N. Karazin National University of Kharkiv.
- Zasiiekin, S., Kuperman, V., Hlova, I., Zasiiekina, L. (2022). War Stories in Social Media: Personal Experience of Russia-Ukraine War. Mendeley Data, V2. <http://doi.org/10.17632/cjhd9hvdd8.1>
- Zasiiekina, L., Kennison, S., Zasiiekin, S., & Khvorost, K. (2019). Psycholinguistic markers of autobiographical and traumatic memory. *East European Journal of Psycholinguistics*, *6*(2), 119-133. <https://doi.org/10.29038/eejpl.2019.6.2.zas>
- Zeitzoff, T. (2017). How social media is changing conflict. *Journal of Conflict Resolution*, *61*(9), 1970-1991. <https://doi.org/10.1177/0022002717721392>

## Sources

- Writings from the War. <https://www.facebook.com/WritingsFromTheWar>
- Zasiiekin, S. (2022), Literary texts Ukrainian 100. Mendeley Data, V1. <https://doi.org/10.17632/9brrpc8zy8.1>

## CALENDAR

### PSYCHOLINGUISTIC RESEARCH EVENTS

#### *Architectures and Mechanisms for Language Processing 29 – AMLaP 29*

**Host institution:** Basque Center on Cognition, Brain and Language

**Deadline for submitting abstracts:** April 15, 2023

**Location:** Donostia-San Sebastián, Spain

**Start Date:** 31st August, 2023

**Contact:** Antje Stoehr

**E-mail:** [info@bcbl.eu](mailto:info@bcbl.eu)

**URL:** <https://www.bcbl.eu/events/amlap/en/>

#### *16th Conference on Syntax, Phonology and Language Analysis – SinFonIJA 16*

**Host institution:** Masaryk University in Brno, Czech Republic

**Deadline for submitting abstracts:** 31st March, 2023

**Location:** Brno, Czech Republic

**Start Date:** 21st September, 2023

**Contact:** Marcin Wągiel

**E-mail:** [marcin.wagiel@phil.muni.cz](mailto:marcin.wagiel@phil.muni.cz)

**URL:** <https://sites.google.com/view/sinfonija16/>

#### *XVI International Symposium of Psycholinguistics – XVI-ISP2023*

**Host institution:** University of the Basque Country

**Deadline for submitting abstracts:** 15th February, 2023

**Location:** Vitoria-Gasteiz, Spain

**Start Date:** 31st May, 2023

**Contact:** Mikel Santesteban

**E-mail:** [mikel.santesteban@ehu.eus](mailto:mikel.santesteban@ehu.eus)

**URL:** <https://www.ehu.eus/web/isp2023>

#### *Fifth International Communication Styles Conference: Communication in Times of Permacrisis*

**Host institution:** Tertium Society

**Deadline for submitting papers:** January 30, 2023

**Location:** Krakow, Poland

**Start Date:** 24th April, 2023

**Contact:** Wladyslaw Chlopicki

**E-mail:** [w.chlopicki@uj.edu.pl](mailto:w.chlopicki@uj.edu.pl)

**URL:** <https://tertium.edu.pl/en/konferencje-nadchodzace/>

#### *Conference on Multilingualism – COM*

**Host institution:** Aix-Marseille Université, France

**Deadline for submitting abstracts:** March 1, 2023

**Location:** Aix-en-Provence, France

**Start Date:** 12th June, 2023

**Contact:** Nadera Bureau

**E-mail:** [cheryl.frenck-mestre@univ-amu.fr](mailto:cheryl.frenck-mestre@univ-amu.fr)

**URL:** <https://multilingualism.sciencesconf.org/resource/page/id/9>

Наукове видання  
Scholarly edition

**EAST EUROPEAN JOURNAL  
OF  
PSYCHOLINGUISTICS**

**Східноєвропейський журнал психолінгвістики**

Volume 9

Number 2

*Special Issue “Language and War”*

Том 9

Число 2

*Спеціальний випуск «Мова й війна»*

*Technical editor I. Zakharchuk*  
*Технічний редактор І. Захарчук*

Registered by the Ministry of Justice of Ukraine 14/12/2020,  
Certificate # 24651-14591ПР

Зареєстровано в Міністерстві юстиції України,  
сертифікат КВ #24651-14591ПР від 14 грудня 2020 року

Підписано до друку 29.12.2022 р. Формат 60×84<sup>1</sup>/<sub>16</sub>. Обсяг 10,0 ум. друк. арк., 9,78 обл.-вид. арк. Наклад 100 прим. Зам. 25-А. Редакція, видавець і виготовлювач – Волинський національний університет імені Лесі Українки (43025, Луцьк, просп. Волі, 13). Свідоцтво Держ. комітету телебачення та радіомовлення України ДК № 4513 від 28.03.2013 р.