

**ЯЗЫКИ НАРОДОВ ЗАРУБЕЖНЫХ СТРАН (С УКАЗАНИЕМ КОНКРЕТНОГО ЯЗЫКА ИЛИ ГРУППЫ ЯЗЫКОВ) / LANGUAGES OF PEOPLES OF FOREIGN COUNTRIES (INDICATING A SPECIFIC LANGUAGE OR GROUP OF LANGUAGES)**

DOI: <https://doi.org/10.18454/RULB.2023.37.15>

**EMOJI – MEANS OF SHARING ‘COMMON KNOWLEDGE’ ABOUT EMOTIONS AND THEIR INTONATION IN DISCOURSE**

Research article

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**Abstract**

The paper aims at showing how emoji act as means of sharing ‘common/shared knowledge’ in computer-mediated communication in the multicultural community. Emoji are used as substitutes for words (adjectives and adverbs), which accompany direct oral speech in fiction and express, or describe, speakers’ emotions, or gestures in face-to-face communication and function as contextualization cues for the readers’ choice of intonation to imitate real-life discourse. The research demonstrates how respondents correlate emoji and such words in read-aloud sentences. Corpus analysis was undertaken to build the sample with such utterances words accompanying direct speech in English fiction. Further, emoji sample from Russian social media platform was built and organized into sets according to their meanings and distribution towards each other. The questionnaire was used to request the respondents to draw a parallel between the emoji and the word describing the emotional state of the speaker. The respondents involved in the research were English L2 students (native Russian speakers). The results show that respondents organize emoji into fuzzy functional sets with central and peripheral areas. The emoji in central areas have clear-cut, non-ambiguous interpretation and show greater percentage of use. Peripheral areas include emoji with overlapping meanings and lesser usage frequency. The ambiguity can result from cultural differences in interpreting the emotional state of the speaker; resolution of this ambiguity contributes to better understanding of L2 vocabulary and better reading proficiency.

**Keywords:** common/shared knowledge, emoji, emotion, frame, computer-mediated communication, prosody/intonation.

**ЭМОДЗИ – СРЕДСТВО ПЕРЕДАЧИ «ОБЩЕГО ЗНАНИЯ» О ВЫРАЖЕНИИ ЭМОЦИЙ И ИХ ИНТОНАЦИОННОМ ВЫРАЖЕНИИ В ДИСКУРСЕ**

Научная статья

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**Аннотация**

Статья рассматривает эмодзи как средство передачи «общего знания» в интернет-коммуникации в мультикультурном сообществе. Эмодзи используются как заменители слов (прилагательных и наречий) сопровождающих прямую речь в художественном тексте и описывают эмоции, жестикуляцию говорящего в момент речи; они также служат контекстуальными ключами для читателя, помогающими ему выбрать необходимую интонацию, воспроизводящую реальное вербальное взаимодействие в дискурсе. Исследование показывает, как респонденты соотносят эмодзи и слова, сопровождающие прямую речь при чтении вслух. Для создания выборки исследования был использован корпусный анализ для исследования слов, сопровождающих прямую речь в художественном тексте. В ходе исследования была создана выборка эмодзи, используемых в русскоязычной социальной сети; данная выборка была организована в группы в соответствии со значениями эмодзи и их дистрибуцией. Для проведения исследования был составлен вопросник, выполняя задания которого респонденты определяли связь между словами, обозначающими эмоциональное состояние говорящего в момент речи и эмодзи. Участвующие в исследовании респонденты являются носителями русского языка, изучающими английский язык как иностранный. Результаты показывают, что респонденты организуют эмодзи в нечеткие множества с центральными и периферийными областями. Эмодзи, входящие в центральные области, интерпретируются однозначно и характеризуются высокой частотностью использования. Эмодзи, входящие в периферийные области, могут принимать значения, близкие значениям других множеств, и характеризуются низкой частотностью. Возникающая многозначность эмодзи может быть результатом культурных различий в восприятии эмоционального состояния говорящего, исследование возможностей снятия этой многозначности способствует лучшему пониманию лексики английского языка и повышению компетенции чтения.

**Ключевые слова:** «общее знание», эмодзи, эмоции, фрейм, интернет-коммуникация, просодия/интонация.

**Introduction**

Emoji are the ubiquitous element in digitally/computer-mediated communication (CMC), especially the one happening in semiformal/non-formal environment, such as chats or discussion threads on social network [12, P. 108-109]. Traditionally

linguists distinguish emoji and emoticons, however, the difference between those types tends to be etymological, since emoticons are almost completely replaced by emoji in CMC [4, P. 2-3], [17, P. 46-48]. The term ‘emoji’ is used further to denote pictographs of faces defined as ‘face emoji’ [9, P. 340]. Face emoji serve many purposes: facilitate identifying the speakers’ intentions in ambiguous contexts, or when the conveyed meaning is indirect [10], express emotions [2]. Emoji and text in CMC show relations similar to those between oral speech and gestures [3], [7], [10]. These relations enhance communication; restricting research to a single modality will negatively limit the understanding of the structure and functions of both components of the message (for further reference on emoji in inter/intragroup communication, see recent reviews [18, P. 2472-2479]).

There are several points relevant to the present research.

1. CMC is characterized as communication when participants are distanced and lack information that is usually provided in face-to-face [FtF] communication. FtF communication is characterized by paralinguistic (prosodic and voice quality) features, and gestures, which can facilitate recognition of a speaker's intended meaning, expressed through the choice of intonation and facial and/or body kinetics. Face emoji (nonverbal means of carrying information) do the same when functioning as substitutes for prosodic and voice quality features and gestures. As Grosz et al. argue [9, P. 342], supported by Logi and Zappavigna [14], first-person indexicality furnishes emoji with the pragmatic function, similar to that of words accompanying direct speech in fiction, as the author of the message is the default holder of the subjective emotional meaning conveyed by a face emoji. This has been proven by neurolinguistic research: processing information carried by emoji in CMC appears to possess similar neural responses to processing information brought about by prosody and gestures in FtF communication [8, P. 935], [16, 314-315].

2. For efficient communication as ‘a joint intentional activity’, people need to share knowledge – ‘a shared conceptual world, encompassing the partners’ distinct perspectives’ – on how emotions are expressed with the help of semiotic signs: words or symbols substituting words [20, P. 16]. CMC helps people develop common knowledge by sharing the understanding of within-the-groups norms, the relevance of group decision-making, according to Vygotskian approach [13, P. 144, 157-158], [6, P.1540-1541]. So, emoji appear as means of sharing common knowledge about emotions and modalities in which this knowledge can be expressed, especially if cross-platform emoji are used, or in multicultural communication [19, P. 278-279]. In English-dominated social media communication emoji serve as means of acquiring, and further sharing, common knowledge for non-English speaking people: by using emoji, people create a shared interpersonal knowledge – a new set/subset of meanings associated with particular emoji [21, P. 7-8].

CMC represents a specific type of discourse with its own features, semiotic signs and rules of usage. This discourse results from making choices of the signs used to express meanings and taking decisions about the linear arrangement of these signs in the written digital message. Since the usage of emoji on social media increases and the meaning of emoji evolves, there is still a lot to be known about how language users identify the semantics and use emoji in ever-changing environment of CMC [5, P. 502, 505]. To bridge this gap, the paper aims to address the following questions: Research Question (RQ1) Do the respondents follow any tendencies when they draw the parallel between the words denoting the emotional state of the speaker in read-aloud sentences and emoji? Research Question (RQ2) How are these emojis organized in regard to their meanings?

### Research methods and principles

To answer RQ1 and RQ2 we conducted the three-stage experiment. The first stage involved corpus analysis of the fiction texts (N = 22) to build the sample of direct speech utterances, identify words accompanying these utterances, and calculate their relative frequency. Corpus analysis was conducted with the Sketchengine service [11]. Fiction was chosen as it represents the imitation of real-life discourse and is often used for acquiring information about social communication [17, P. 163-168]. Contextual cues are present in fiction in the form of the authors’ remarks, such as he said with a wistful note.

The second stage included building a sample of emoji used on Russian platform VKontakte (<https://vk.com>). This platform is used for informal and semiformal communication by Russian-speaking community. At this stage of experiment, we organized the emoji into sets based on the model suggested by P. Lövheim [15, P. 342]. These sets are used in the third stage.

The third stage was held online using Google form questionnaire. The questionnaire included a limited number of multiple-choice tasks: “Choose the most appropriate emoji for each given speaker”. Every task contained a sentence from a sample of utterances made on the first stage of the experiment and five answer choices in the form of emoji. Four of the answers belong to the same set of emoji. The fifth answer was an odd-out emoji taken from a different set of emoji. It was done to check the hypothesis that the respondents recognize the semantics of the set the chosen emoji belongs to and can distinguish between emoji coming from sets with different semantics. The participants were recruited via VKontakte post. We report data from 36 participants (28 females and 8 males). All participants are native Russian speakers, L2 students ranging from 18 to 20 years. The procedure took place online. The participants saw each task on a separate screen and could select only one answer choice. Participants completed the experiment at their own pace.

### Main results

At the first stage of the experiment, the corpus analysis showed that authors use different means of describing the speakers’ emotional state. They are: (1) use of speech causation verbs/verbs describing speech production, such as said, shouted, ordered; (2) use of adverbs and adjectives separately/or accompanying speech causation verbs. We made the sample with said – a neutral verb describing speech production, accompanied by separate adverbs describing the emotional state of the speaker (197 utterances). The sample was limited to two-word combinations like said happily, to avoid phrases that would complicate the interpretation of the utterances by the participants, like in said, his voice brisk and kind.

At the second stage of the experiment, the sample of emoji was organized into sets in accordance with the ‘Lövheim cube’ [15, P. 342]. Eight sets of emotions were distinguished: shame, sadness, fear, anger, disgust, surprise, happiness, excitement. Traditionally four basic emotions are distinguished, but our data showed that such emotions as ‘disgust’, ‘surprise’ and ‘excitement’ represented independent sets overlapping with other emotion sets, thus creating fuzzy sets. ‘Disgust’ emoji set

overlapped with ‘anger’ emoji set through a number of emoji meaning ‘offence’; ‘surprise’ emoji set appeared adjacent to that of ‘happiness’ though ‘excitement’ and ‘joy’ emoji, and to ‘sadness’ emoji set through ‘disappointment’ emoji.

At the third stage of the experiment, the results of the online survey are as follows: The responses show a specific pattern: (1) The ‘odd out’ emoji received the lowest percentage of answers in all responses, ranging from 0% to 10%. (2) The four answer options taken from the same emotion set show the gradation of responses from 70% to 5%. (3) Most frequently used emoji are the ones with most typical meaning in the emoji set, like ‘angry’ emoji; most rarely used emoji are the ones with more specific meaning, like ‘furious’ emoji. (4) In utterances with semantically close words, expressing emotions, the gradation of responses shows similar trends, ranging from most frequent typical emoji to less frequent specific emoji.

### Discussion

RQ1. Do the respondents follow any tendencies when they draw the parallel between the words denoting the emotional state of the speaker in read-aloud sentences and emoji? The answer is ‘yes, they do’. The findings show that the respondents successfully identify the dominant emoji in the set. The ‘odd out’ emoji received the lowest percentage of answers in all tasks of the questionnaire. The respondents demonstrate the ability to identify emoji belonging to different sets, when the ‘odd out’ face emoji was an incongruent contextualization cue. At the same time, the ‘odd out’ emoji still can be chosen as the answer option. Thus, in the sentence “Look, while Jane was away, we watched an Agatha Christie play on television,” said HARRIET eagerly” 5.6% respondents used emoji ‘clown face’. The thesaurus of the word ‘eagerly’ includes such semantically connected contextualization cues as ‘ardor’, ‘enthusiasm’ and ‘impatience’. This ambiguity may have been caused by individual speech experience by L2 students. We find that this ambiguity mainly concerns emoji sets overlapping with other sets. Contextualization cues like ‘placidly’, ‘stolidly’ show lesser percentage of the answers, than contextualization cues that can be unambiguously identified as positive or negative. Accordingly, positive ‘sweetly’ or ‘mildly’ contextualization cues show more than 50% of the same choice of the participants. Negative contextualization cues, such as ‘desperately’ or ‘angrily’ show very close results – around 36%.

This brings us to RQ2. How are these emojis organized in regard to their meanings? We find that some emoji appear to be universal across CMC platforms. Such emoji cause little difficulty in interpretation. Other emoji appear to be more platform-specific, less established in their semantics and are more likely to be misused by people with different backgrounds [19, P. 277]. Another feature of the distribution of the emoji according to the contextualization cues is that positive meanings are more efficiently identified by the participants. This appears to be a universal cognitive mechanism, independent of cross-platform and cross-cultural differences. The percentage of the unanimous answers is significantly higher – above 60%, whereas negative meanings show less unanimous usage of emoji: the answers distribute almost equally among four answer options belonging to the same set. It shows that frames including semiotic units with positive semantics represent some strategic points and are more established in the human cognitive systems [4, P. 56, 63, 66]. Our findings show that emoji as semiotic units behave in compliance with the principle of cognition: verbal and non-verbal semantic codes interrelate, the latter substituting the first to facilitate information processing. Thus, Russian-speaking L2 English students showed some variety in interpreting contextualization cues through additional units from the thesaurus of the said contextualization cues.

Being aware that we will not be able to examine all related findings in this study exhaustively, we confine our focus to the literature referenced here and the specific experiment design and criteria used in the search process. This study has two limitations. (1) Our work was inspired by only one type of graphicons that are popular in CMC – namely, emoticons, evolved into emoji. And, it is our future research interest to continue beyond the present search range of disciplinary areas. (2) The sample of utterances built on the first stage of the experiment contains canonical imperative utterances [1, P. 10]. This limitation is caused by the illocutionary force which facilitates identification of the ‘tone’ of such utterances. It was also considered relevant in regard to pragmatics of the utterances and contextual cues in them.

### Conclusion

The findings of the presented study prove that emoji in CMC can act as means of sharing common knowledge about emotions and prosodic ways of expressing and describing them. The experimental three-step procedure shows that emoji are characterized by specific organization (fuzzy sets). They do not fully coincide with verbal contextualization cues, they are platform-specific and culturally conditioned. Still, their organization follows the cognitive information processing rules, which provide for the understandability in CMC. The cultural differences and platform-specific character contribute to the variability and evolution of emoji as means of communication, making the acquisition of common knowledge possible.

### Конфликт интересов

Не указан.

### Рецензия

Все статьи проходят рецензирование. Но рецензент или автор статьи предпочли не публиковать рецензию к этой статье в открытом доступе. Рецензия может быть предоставлена компетентным органам по запросу.

### Conflict of Interest

None declared.

### Review

All articles are peer-reviewed. But the reviewer or the author of the article chose not to publish a review of this article in the public domain. The review can be provided to the competent authorities upon request.

### Список литературы на английском языке / References in English

1. Aikhenvald A.Y. Imperatives and commands: a cross-linguistic view . / A.Y. Aikhenvald // *Commands: A Cross-Linguistic Typology*; — Oxford: Oxford University Press, 2020. — p. 1-45.
2. Aldunate N. Mood Detection in Ambiguous Messages: The Interaction Between Text and Emoticons. / N. Aldunate, M. Villena-González, F. Rojas-Thomas et al. // *Frontiers in psychology*. — 2018. — 9. — p. 423.

3. Cohn N. The grammar of emoji? Constraints on communicative pictorial sequencing. / N. Cohn, J. Engelen, J. Schilperoord // *Cognitive research: principles and implications*. — 2019. — 4 (1). — p. 33.
4. Danesi M. The Semiotics of Emoji. *The Rise of Visual Language in the Age of the Internet* / M. Danesi — London: Bloomsbury Academic, 2016. — 192 p.
5. Dürscheid C. Emojis Are Everywhere. How Emojis Conquer New Contexts . / C. Dürscheid // *Proceedings of Grapholinguistics in the 21st Century Grapholinguistics and Its Application*; — Issue 4. — Brest: Fluxus Editions, 2020. — p. 501-512.
6. Erle T.M. Emojis as social information in digital communication. / T.M. Erle, K. Schmid, S.H. Goslar et al. // *Emotion*. — 2022. — 22 (7). — p. 1529-1543.
7. Fischer B. Emoji as Affective Symbols: Affective Judgments of Emoji, Emoticons, and Human Faces Varying in Emotional Content. / B. Fischer, C. Herbert // *Frontiers in psychology*. — 2021. — 12.
8. Gantiva C. Cortical processing of human and emoji faces: An ERP analysis. / C. Gantiva, M. Sotaquirá, A. Araujo et al. // *Behaviour & Information Technology*. — 2020. — 39 (8). — p. 935-943.
9. Grosz P. Discourse anaphoricity and first-person indexicality in emoji resolution. / P. Grosz, E. Kaiser, F. Pierini // *Proceedings of Sinn und Bedeutung*. — 2021. — 25. — p. 340-357.
10. Holtgraves T. Emoji can facilitate recognition of conveyed indirect meaning. / T. Holtgraves, C. Robinson // *PloS One*. — 2020. — 15.
11. Kilgarriff A. The Sketch Engine: ten years on. / A. Kilgarriff, V. Baisa, J. Bušta et al. // *Lexicography*. — 2014. — 1 (1). — p. 7-36.
12. Lau Y.P. The Interplay Between Emojis and Linguistic Text. / Y.P. Lau, Y.M. Lee // *Chinese Lexical Semantics: Lecture Notes in Computer Science*; — Issue 12278. — New York : Springer, 2021. — p. 108-117.
13. Leman P.J. Communication in Children's and Adolescents' Social Groups. / P.J. Leman, H. Tenenbaum // *The Wiley-Blackwell Handbook of Group Processes in Children and Adolescents*; — London: Wiley-Blackwell, 2017. — p. 144-164.
14. Logi L. A social semiotic perspective on emoji: How emoji and language interact to make meaning in digital messages. / L. Logi, M. Zappavigna // *New Media & Society*. — 2021. — 1.
15. Lövheim H.A. Three-dimensional Model for Emotions and Monoamine Neurotransmitters. / H.A. Lövheim // *Medical Hypotheses*. — 2012. — 78 (2). — p. 341-348.
16. Peuravaara K. Emotional Nuances: Critical Reflections on Emoji Methods. / K. Peuravaara // *Scandinavian Journal of Disability Research*. — 2021. — 23 (1). — p. 305-316.
17. Seargeant P. *The Emoji Revolution: How Technology is Shaping the Future of Communication* / P. Seargeant — Cambridge: Cambridge University Press, 2019. — 238 p.
18. Tang Y. Emoticon, Emoji, and Sticker Use in Computer-Mediated Communication: A Review of Theories and Research Findings. / Y. Tang, K. Hew // *International Journal of Communication*. — 2019. — 13. — p. 2457-2483.
19. Togans L.J. Digitally saving face: An experimental investigation of cross-cultural differences in the use of emoticons and emoji. / L.J. Togans, T. Holtgraves, G. Kwon et al. // *Journal of Pragmatics*. — 2021. — 186. — p. 277-288.
20. Tomasello M. *Becoming Human : A Theory of Ontogeny* / M. Tomasello — Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2019. — 380 p.
21. Wiseman S. Repurposing Emoji for Personalised Communication: Why [pizza slice] means “I love you”. / S. Wiseman, S.J.J. Gould // *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*; — New York: .Association for Computing Machinery, 2018. — p. 1-10.