

EMOTIONAL FRAMING AS A CONTEXT FOR THE PERCEPTION OF SOCIAL NORM VIOLATION

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Эмоциональный фрейминг как контекст нарушения социальных норм

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Abstract

Social norms play a crucial role in shaping human social interactions and behaviors. They are the unwritten rules that dictate what is considered acceptable within a community, influencing how individuals act and respond to one another. Humans possess a remarkable ability to create, uphold, and enforce these normative standards, yet the strength and adherence to these norms can vary significantly across different cultures and societies. Emotional stimuli have been shown to trigger stronger neural responses in individuals, highlighting the importance of emotional arousal and valence in the perception and processing of social norms. This study aims to explore how perceived violations of social norms are affected by the emotional intensity of the information presented. By manipulating the emotional content of various sentences —

Резюме

Социальные взаимодействия людей регулируются социальными нормами, которые представляют собой неформальные правила, определяющие приемлемое поведение в обществе. Эти нормы формируются в процессе социального взаимодействия и отражают культурные ценности и ожидания. Люди обладают уникальной способностью создавать, поддерживать и навязывать другим стандарты нормы, однако сила этих норм может значительно различаться в зависимости от культурных и социальных контекстов. Эмоциональные стимулы оказывают значительное влияние на восприятие социальных норм, вызывая более сильные нейронные реакции в мозге. Это подчеркивает важность эмоциональной валентности и возбудимости при обработке информации о социальных нормах. В данном исследовании мы рассматриваем, как восприятие нарушений социальных норм зависит от эмоциональной нагрузки представленной информации. Для этого мы варьировали эмоциональное содержание предложений,

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categorizing them as highly emotional, less emotional, or neutral control conditions—we found that participants were more likely to deem situations unacceptable when violations of social norms were articulated in a more emotionally charged manner. This suggests that emotional framing can amplify the perceived severity of norm violations. Our research successfully replicates findings from previous studies conducted on samples from China and the United States, extending these insights to a Russian context. This cross-cultural examination underscores the universal influence of emotional intensity on social norm perception while also acknowledging the unique cultural factors that may shape individual responses to normative breaches. Understanding these dynamics can enhance our comprehension of social behavior and inform interventions aimed at promoting positive social change.

Keywords: emotional words, evoked response potentials, framing, norm violation perception.

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разделив их на три категории: высокоэмоциональные, низкоэмоциональные и контрольные условия. Результаты показали, что участники воспринимали ситуации как более неприемлемые, если нарушения социальных норм были выражены с использованием более эмоционально насыщенных формулировок. Это говорит о том, что эмоциональная окраска может усиливать восприятие серьезности нарушений. Наше исследование успешно реплицирует результаты, полученные на выборках из Китая и США, и подтверждает универсальность влияния эмоциональной нагрузки на восприятие социальных норм в российском контексте. Эти выводы могут быть полезны для понимания динамики социальных взаимодействий и разработки стратегий для улучшения общественных отношений. Понимание того, как эмоции влияют на восприятие норм, может помочь создать более гармоничное общество, где уважение к социальным стандартам будет основой для взаимодействия между людьми.

Ключевые слова: эмоциональные слова, вызванные потенциалы, фрейминг, восприятие нарушения норм.

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Social norms play a crucial role in human social interaction, and breaches of these norms are assessed, in part, based on the actor's intention. Social norms refer to the social regulations that are enforced by the social group or the society (Norenzayan et al., 2016; Bas-Hoogendam et al., 2017). Therefore, it is plausible that humans should have a neurophysiological mechanism to rapidly identify norm violations and penalize those who commit them, in order to establish and maintain social order. Furthermore, while the existence of social norms is widespread, the intensity of social norms significantly varies among different human communities.

Various cognitive studies have identified neurobiological correlates of norm violations. Bas-Hoogendam and colleagues (2017) demonstrated that the Social Norm Processing Task (SNPT-R) is an effective tool to study behavioral and brain mechanisms of processing of perceived norm violations. Arousal and valence of the messages conveying normative information may play an important role in the norm enforcement decisions. From a behavioral standpoint, positive and negative words often result in faster reaction times and a higher accuracy compared to neutral words. Additionally, previous studies have demonstrated that emotional words can trigger emotional priming (Brouillet & Syssau, 2005; Carroll & Young, 2005) and perhaps modulate responses to norm violations. Stevenson and colleagues (2007) also found that there are specific patterns of emotional responses that predict perceived valence, arousal, and dominance for negative and positive phrases.

In a seminal study, Mu and colleagues (2015) manipulated written descriptions of different actions to signal either severe violations of norms, mild violations, or no violations at all. The results showed that the N400 component was sensitive to the levels of norm violation, with stronger amplitudes observed in response to strong norm violations compared to weak norm violations. Therefore, building upon prior research, we have decided to replicate first Mu and colleagues (2015) behavioral findings from Chinese and US samples on a Russian sample. Our study investigated whether the behavioral response (the degree of the appropriateness of an action) evoked by norm violations is modulated by the way the information is conveyed: using highly emotional versus less emotional words.

Methods

Experimental paradigm

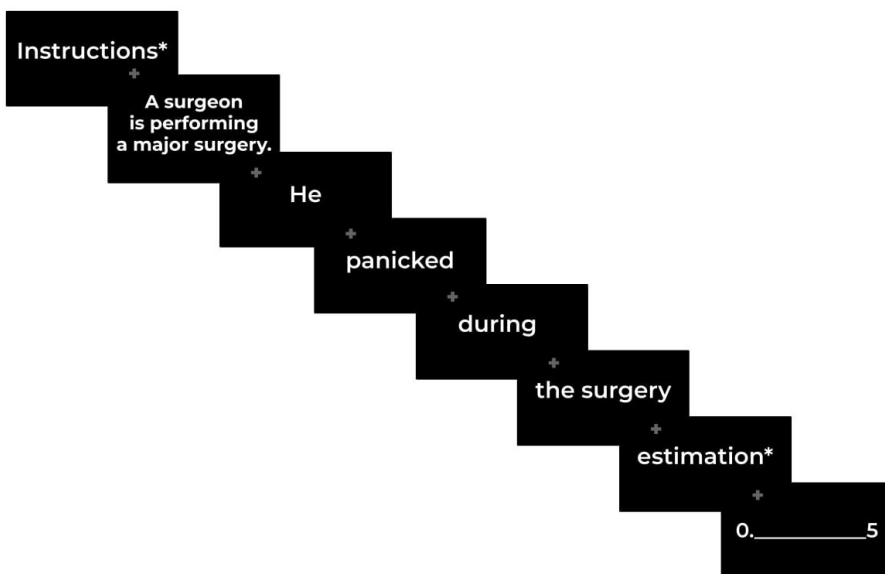
For the selection of verbal stimuli, we used the Russian-language database "Emotional coloring of nouns: ENRuN database" (Lyusin & Sysoeva, 2017). During the online pretest, 10 independent raters evaluated a preselected set of words. The raters were exposed to pairs of words and indicated which word described an action with a higher emotional impact or evoked stronger emotions. In this study, we chose 150 words that were selected by more than 50% of raters as highly emotional ($n = 50$), less emotional ($n = 50$) or neutral ($n = 50$) that didn't signal a violation of norms (see Supplementary materials: <https://psy-journal.hse.ru/data/2025/03/12/1955648888/Supplementary%20materials.pdf>). Next, using the selected words, we constructed sentences describing different lev-

els of normative behaviors. The final list of stimuli presented to the participants included 50 control sentences (without the references to norm violation), 11 sentences from the “less emotional” group of stimuli with the description of behaviors closer to the normative standard (HN in the Table 1), 38 sentences from the “less emotional” group of stimuli with the description of norm-violating behaviors (LN in the Table 1), 5 sentences from the “more emotional” group of stimuli with the description of behaviors closer to the normative standard, and 46 sentences from the “more emotional” group of stimuli with the description of norm-violating behaviors. The scope of this study was to investigate the influence of emotional manipulation (more or less emotional) on various norm violations (with the varying degrees of appropriateness), not including the additional factor of severity of norm violation.

Finally, we modified the paradigm of Mu and colleagues (2015). We included the highly emotional, less emotional or neutral words to the same phrases, for example, “Amanda is in the museum. She is dancing” that signals a clear deviation from the social norm; “Amanda is engaging in a tango lesson. She is dancing” that signals no deviation from the social norm; “Amanda is on the platform. She’s dancing” that signals a slight deviation from the social norm. Participants were exposed to 150 phrases (highly emotional, conveying a norm violation, less emotional, conveying a norm violation, or neutral, not conveying a norm violation) in a randomized order (as shown in Figure 1). The participants were instructed to rate how much they believed the depicted action/behavior was compliant to the social norm using a 6-point Likert scale: if the situation was depicted as fully acceptable (0) or

Figure 1

A sample trial of the experimental paradigm (originally presented in Russian)



fully unacceptable (5). This measurement allowed us to calculate the levels of the acceptability of the behavior that was depicted in each sentence.

A sentence example is shown in the Figure 1: “A surgeon is performing a major surgery. He panicked during the surgery”. In each trial/sentence, words were presented sequentially one by one, as shown in the figure. Participants were instructed to evaluate each sentence using 6-point Likert scale (0 to 5) and indicate if the situation was ethically acceptable or not.

Each trial consisted of the following stages: fixation cross (200 ms), a presentation of the sentence word by word (1000 ms), pause (500 ms), rating screen (800 ms maximum to receive the response from the participant), pause (600 ms). While in total the experiment had 150 trials, the total duration of the experiment was approximately 15 minutes. During the experiment EEG was recorded during the reading and response phases.

Participants

We invited 41 individuals between the ages of 18 and 27 (mean age 22.63; females = 22), who had completed their undergraduate degrees, had normal or corrected-to-normal eyesight, and were free of neurological or psychiatric conditions. Each participant provided a signed consent. The study received approval from the Committee on Interuniversity Surveys and Ethical Assessment of Empirical Research (HSE University), in compliance with the Declaration of Helsinki. The participants consisted exclusively of individuals who were native Russian speakers and were recruited through email communication. The data were collected between September and December 2022.

Statistical analysis

The perceived levels of the acceptability of the behavior that was depicted in three experimental conditions were analyzed using Repeated-Measures ANOVA (IBM SPSS Statistics 25.0 program) with the factor Level of Emotional Expression (Highly Emotional, Less Emotional, Neutral/Control). We also used post hoc tests with the Bonferroni correction for multiple comparisons. The data visualization was performed with Python 3.0, seaborn library.

Results

Behavioral results

We performed a one-way Repeated-Measures ANOVA with the factor Level of Emotional Expression (Highly Emotional, Less Emotional, Control) showed a significant effect on the perceived levels of the acceptability of the behavior: $F(2, 80) = 1873.40$, $p < .001$, partial eta-squared = .979. The results were significant after Bonferroni correction for multiple comparisons (see Table 1 for the pairwise comparisons). The phrases with highly emotional language differed significantly and were evaluated

as much more unacceptable and received the highest scores (mean = 4.03, SD = 0.48, mean difference = 0.376, standard error = .025, $p < .001$) than the phrases with a less emotional language (mean = 3.66, SD = 0.51). The phrases in the control/neutral conditions received the lowest rating (mean = 0.35, SD = 0.28) and differed from the sentences with a highly emotional language (mean difference = -3.680, standard error = .081, $p < .001$) and a less emotional language (mean difference = -3.304, standard error = .077, $p < .001$). Figure 2 depicts the data distribution.

In addition to the main analysis, we have performed of comparison between reaction to highly normative and less normative statements (LN, HN in Supplementary materials) with the different levels of emotional expression (Highly Emotional, Less Emotional). We have balanced the number of stimuli, keeping five stimuli for the HN groups and 38 stimuli for LM groups. Repeated-

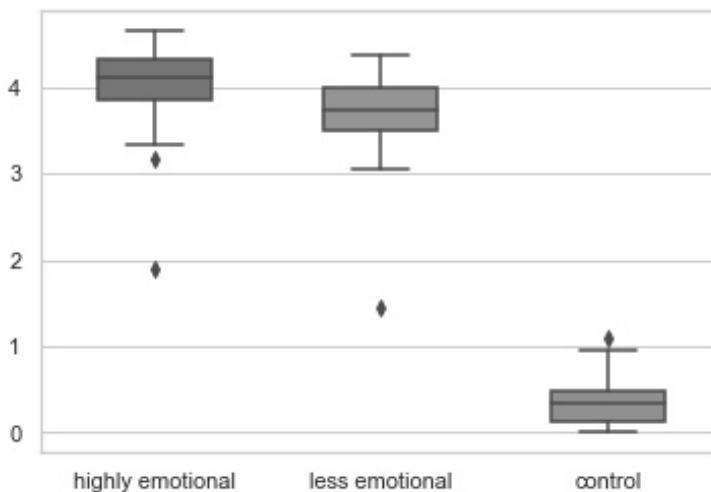
Table 1

Bonferroni Post-Hoc Analysis for Pairwise Comparisons

Factor		Mean difference	Standard error	p
Highly emotional	Less emotional	0.376	.025	< .001
	Control	3.680	.081	< .001
Less emotional	Highly emotional	-0.376	.025	< .001
	Control	3.304	.077	< .001
Control	Highly emotional	-3.680	.081	< .001
	Less emotional	-3.304	.077	< .001

Figure 2

Boxplot of the Data Distribution for Highly Emotional, Less Emotional and Control Conditions



Note. The box shows the quartiles of the dataset while the whiskers extend to show the rest of the distribution, except for points that are determined to be “outliers”.

measures ANOVA showed that the difference of the levels of the acceptability of the behavior with regard to a group was significant ($F(4, 164) = 532.413, p < .001$), with all the comparisons passing the Bonferroni correction for multiple comparisons at the level of $p < .001$, except for the comparison between Less Emotional and Low Normative and Highly Emotional and High Normative ($p=0.036$ passing Bonferroni correction). The behavior was rated as the most acceptable in the control group ($M \pm SD = 0.34 \pm 0.27$), while the behavior was rated as the most unacceptable in the Highly Emotional and Low Normative group ($M \pm SD = 4.07 \pm 0.47$). The levels of acceptability for the Less Emotional and High Normative group were higher than control ($M \pm SD = 2.60 \pm 0.7$), as well as for the Less Emotional and Low Normative group (higher than control, $M \pm SD = 3.94 \pm 0.53$). The stimuli from the Highly Emotional and High Normative group ($M \pm SD = 3.63 \pm 0.84$) were rated as more acceptable in comparison to Highly Emotional and Low Normative group, while the manipulation of the levels of emotional expression led to a higher rating of the Highly Emotional and High Normative group with comparison to the Less Emotional and High Normative group.

Discussion

Our behavioral data have shown that norm violations presented using a highly emotional language were deemed more unacceptable compared to norm violations presented with a less emotional language. Our findings align with the previous studies that examined the impact of framing on emotional responses to social norm violations (Gross & D'Ambrosio, 2004). We also replicated the behavioral results from Mu et al. (2015), showing for the first time on a Russian sample that social norm violations are influenced by manipulation of the way the information is conveyed.

It has been shown in our and previous studies that that individuals' emotional responses to norm violations are heavily influenced by moral foundations, which are shaped by cultural and social contexts (Haidt & Graham, 2007). Different moral foundations (e.g., care/harm, fairness/cheating) can be emphasized through framing, thus altering emotional responses. The emotional intensity of responses to norm violations is further influenced by whether a violation is framed positively or negatively. Negative framing tends to elicit stronger emotional responses compared to positive framing (Nabi, 2003). Studies by Cialdini et al. (1990) also indicate that framing a norm violation in terms of injunctive norms (emphasizing moral imperatives) elicits stronger emotional responses and a higher likelihood of corrective behavior than framing in terms of descriptive norms. Taken together, future studies may aim to disentangle the role of emotional manipulation with highly emotional and less emotional way of delivering the information in different types of framing norms, such as injunctive/moral and descriptive norms, which was out of the scope of this study. By highlighting different aspects of norm violations, framing can either amplify or attenuate emotional responses, influencing subsequent behavior.

Previous studies suggest that the various types of emotions, such as anger, disgust, and moral outrage, can be triggered by perceived violations of social norms

(Carlsmith et al., 2002; Darley & Pittman, 2003; Lotz et al., 2011; Salerno & Peter-Hagene, 2013; Hartsough et al., 2020). Future research could utilize emotion-tracking methods to identify emotions (e.g. facial expressions, vegetative reactions, etc.) of participants in order to distinguish the emotional responses triggered by the perceived norm violations. This would provide further awareness of emotions that are triggered by verbal descriptions of norms violations, particularly when a highly emotional language is used. Understanding these dynamics offers valuable insights for policymakers, media professionals, and organizations in managing public responses to norm violations. Future studies should continue to explore the nuances of framing effects across diverse cultural and social contexts to enhance our understanding of this complex phenomenon.

Conclusion

The primary aim of our study was to investigate whether the perception of social norm violations is modulated by the emotional intensity of the verbal description of norm violations. The behavioral results have successfully replicated the previous findings, for the first time on a Russian sample. Specifically, partici-

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