

## **SEMANTIC FRAMES AND MENTAL MODELS: A STUDY OF WAR-RELATED VOCABULARY IN UKRAINIAN MEDIA**

The Russian full-scale invasion of Ukraine in 2022 sparked not only military conflict but also an intense *media war* over how events are described. News outlets serve as key “gatekeepers” of war language, and their lexical choices can frame the conflict in divergent ways. According to framing theory, the media do not merely report facts but rather highlight certain aspects of reality, thereby guiding interpretation [3, p. 52]. War-related terms (e.g., *invasion, occupation, liberation, aggressor, freedom, unity*) carry rich cultural and emotional connotations. This study asks: What semantic frames do Ukrainian media evoke through their war vocabulary, and how might these frames influence the public's mental models of the conflict?

The study addresses this by combining Charles Fillmore’s Frame Semantics with cognitive theories of discourse comprehension. Frame Semantics posits that words evoke structured “frames” of knowledge, comprising scenarios with roles, props, and relations, grounded in human experience. For example, “*liberation*” evokes a frame of rescuing and freedom, whereas “*invasion*” evokes a frame of aggression and threat. In parallel, cognitive psychology (Johnson-Laird, 1983; van Dijk & Kintsch, 1983) suggests that readers construct mental models or situation representations of events as they process text (Johnson-Laird, 1983; van Dijk & Kintsch, 1983, p. 4). Together, these theories predict that war vocabulary will prime specific mental scenarios: a word like “*invader*” will trigger a cognitive model of enemy aggression, while “*resistance*” triggers one of grassroots defense.

Focusing on Ukrainian media is essential because it represents the perspective of the invaded, and because Ukrainian outlets explicitly attempt to shape the narrative, as evidenced by their avoidance of Soviet terms. For instance, a *Kyiv Independent* editorial harshly criticized foreign media for repeating Russia’s euphemisms, such as referring to the invasion as a “special operation” rather than “war” [7]. By analyzing such choices, we reveal how Ukrainian outlets construct a persuasive image of the war.

### **Theoretical Framework**

The framework synthesizes Frame Semantics and discourse and psychological models of comprehension. Fillmore’s Frame Semantics (1976, 1982) argues that “meaning” resides not in words alone but in the frame or schema they evoke [4, p. 111]. Words like “*occupier*” or “*hero*” activate encyclopedic knowledge (past wars, morality, law), shaping interpretation. In the media, frames are the lenses that highlight specific interpretations. As Entman (1993) notes, framing “involves selection and salience” – choosing aspects of reality and making them more prominent, thus defining problems, causes, moral judgments, and remedies [3, p. 52]. In war reporting, the chosen vocabulary serves as framing cues.

Cognitively, understanding a report involves constructing a mental model of the situation in the reader’s mind. Van Dijk and Kintsch (1983) emphasize that both the witness and the listener build a mental representation of the described events [6, p. 12]. They argue that to comprehend a story, we must “represent what it is about”. Applying this to the media: if an article describes “*Russian invaders shelling cities*,” the audience

mentally simulates that scenario, inferring roles (civilians under fire, defending soldiers). Johnson-Laird (1983) similarly posits that people apprehend the world via “inner mental replicas” of relations among events [5]. Thus, when Ukrainian media use the term “*invader*,” readers’ mental models include hostility and unlawfulness, whereas the term “*special operation*” would downplay those.

Previous research in cognitive linguistics and media studies supports this approach. Emotive and metaphorical framing have been shown to prime readers’ conceptualization of conflict [8]. Frame analysis has been used to reveal ideological slants in war discourse (e.g., Sharaf Eldin, 2020, found that Russian versus Ukrainian outlets use contrasting frames). Our study builds on this by explicitly linking frames to mental models in the Ukrainian context.

### **Methodology**

The study uses a qualitative corpus analysis of Ukrainian news coverage, supplemented by key speeches. We compiled texts from (1) Ukrainian news websites (*Kyiv Independent*, *Ukrainska Pravda*, *Radio Svoboda*, and leading TV transcripts) and (2) official statements, such as President Zelenskyy’s addresses. The time frame spans from February 2022 through 2024, covering the full-scale invasion and subsequent events. We conducted keyword searches for prominent war-related terms (in both Ukrainian and English versions), such as “*attack*,” “*invasion*,” “*occupier*,” “*liberate*,” “*partisan*,” “*terrorism*,” and “*hero*,” among others. This yielded hundreds of relevant passages.

The analytical approach is based on Critical Discourse Analysis (CDA) and frame semantics. CDA helps uncover how language reflects power and ideology by examining word choice, metaphors, and narrative roles [2, p. 58]. In practice, we coded examples of war vocabulary and identified the semantic frames each word invoked. For instance, every instance of “*invader*” was noted to see its context and implied scenario and contrasted with alternative terms used in parallel texts. Frame assignments drew on Fillmore’s original frame descriptions and culturally relevant schemas, such as the “*War*” frame and the “*Defense*” frame. We also attended to lexical bundles and collocations (e.g., “*brutal occupier*,” “*heroic defenders*”), since framing often spans multi-word units.

Because mental models are not directly observable, we infer their content by considering the frames activated. In other words, if the frame of “*occupation*” is invoked, we assume that readers are led to imagine a model involving an aggressor controlling territory, civilians under duress, and so on. This inference is supported by prior studies, which show that emotionally laden words tend to prime consistent imagery [10, p. 25]. Throughout, we cross-check our findings; for example, when analyzing *Kyiv Independent* editorials, we compare them to international media reports on the same event to identify divergences in framing.

### **Key Findings**

The analysis revealed several salient framing patterns in Ukrainian media war discourse. The following examples illustrate how vocabulary choices instantiate different frames and implied mental models:

**“Special military operation” vs “full-scale invasion.”** This contrast emerged clearly. Dozens of international outlets initially used Russia’s euphemism “*special operation*”, but Ukrainian media explicitly rejected this. As one editorial noted, calling it an “invasion” or “war” (and not “*operation*”) is the “*correct*” factual frame. The frame of “*invasion*” foregrounds illegitimacy and aggression, suggesting a model in which Ukraine is assaulted without cause. In contrast, “*special operation*” would imply a limited, justified

military action. Ukrainian outlets trained readers' mental models to focus on the first frame by consistently using terms like "*invade*," "*aggressor*," and "*occupier*." This insistence shapes a model of Ukraine defending itself against an unprovoked enemy [7].

**"Occupier" vs "liberator."** Ukrainian leaders (e.g., President Zelenskyy) frequently label Russian forces as "*the occupier*." For instance, at the UN General Assembly, Zelenskyy urged that "*the occupier must return to their land*" [1]. The noun "occupier" activates a frame of territorial wrongdoing and foreign domination and invites a mental model of exploited Ukrainian communities. Conversely, Ukrainian forces are framed as "*liberators*." In media reports on recaptured towns, phrases like "*liberated by [city name] defenders*" appeared regularly. The juxtaposition of *occupier* versus *liberator* starkly frames two opposing models: one of subjugation and the other of heroic freedom fighting. This polarity is emotionally potent and has been noted by analysts. Zhabotynska and Brynko (2022) describe how the emotive lexicon "facilitates priming and entrenchment of the intended biased image in the reader's mind" [8].

**Moral and emotional vocabularies.** War coverage also employed vocabulary from moral and religious domains. Phrases like "*holy war*", "*martyr*", "*heavenly hundred*" (a reference to 2014 Maidan victims) appeared in some narratives. Such terms evoke frames of sacred struggle and sacrifice, as Shildrick (2023) notes; for other conflicts, framing war as a cosmic battle of Good versus Evil can be powerful. In Ukrainian media, this trope surfaced especially in nationalist and church-affiliated outlets, reinforcing a mental model of existential defense. On the other hand, Russian-aligned texts sometimes employed historical or religious frames (e.g., "*protectors of Orthodox values*"), again illustrating the variation in frame choice.

**Conflict vs. crisis vs. full-scale war.** Early on, some outlets, including foreign press, used neutral terms like "*conflict*" or "*crisis*." Ukrainian media almost uniformly rejected such understatement. An editorial in *The Kyiv Independent* explicitly argued that labeling it a mere "crisis" or "separatism" dilutes reality [7]. This framing (crisis vs. war) corresponds to different mental models: a "crisis" suggests diplomacy and civil strife, whereas "war" implies open warfare and national mobilization. By insisting on "war", Ukrainian media aligned audiences' mental models with the urgency of total defense.

## Discussion

The results can be understood by combining frame semantics with discourse-comprehension models. The consistent use of charged terms means that specific semantic frames are activated in readers' minds. For instance, the "Occupation" frame includes elements like an *invading army*, *plundered civilians*, and *national territory*. When Ukrainian media repeatedly use "*occupier*" and "*restore territorial integrity*," they cue precisely that frame. According to mental-model theory, readers then construct an internal simulation of the war, imagining a situation in which specific individuals possess the properties or relations indicated by the text [6, p. 44]. Thus, the audience's mental model will depict Russians as violators and Ukrainians as resisting, aligning with the intended narrative.

This interplay of language and cognition aligns with Entman's insight that frames operate at multiple levels (speaker, text, audience) to make some ideas salient [3, p. 55]. Here, the "problem definition" and "moral evaluation" functions of frames are prominent: Ukrainian media define the situation as an unjust invasion, condemn aggressors, and valorize defenders. Empirical work on cognitive framing supports this: emotive language in war coverage increases accessibility of particular schemas [8].

The study also illustrates how different frames can conflict with one another. Russian sources (and some social media) have portrayed the war in their frames (e.g., “*liberation*” of Russian-speaking populations, labeling Ukrainians as “*extremists*”). The Ukrainian press deliberately avoids those frames to prevent readers from adopting them. Instead, they reinforce frames consistent with a defensive mental model. In summary, the data support the claim that frame semantics and mental models together explain the media's influence on cognition: by choosing words, media shape the “mental simulation” that audience members build of the war [6], [3].

### Conclusion

In an era of mediatized conflict, language choice is a front in warfare. This study demonstrates that Ukrainian media employ frame-rich war vocabulary to solidify the public's mental model of events. Grounded in Fillmore's theory, we see that words carry entire scripts: describing Russian forces as “*occupiers*” immediately situates them within an aggression frame, whereas “*peacekeepers*” or “*portrayal-as something-else*” would suggest very different scenarios. By our analysis, Ukrainian outlets overwhelmingly favor frames of illegitimate aggression (invasion/occupation), heroism (liberation/resistance), and moral clarity (fight for freedom), while avoiding passive or sympathetic labels for the enemy. These frames prime audiences to mentally construct the conflict as a justified defense against evil.

Theoretically, this case study illustrates the usefulness of combining frame semantics with cognitive discourse models: frames do not merely categorize words but actively shape how listeners imagine situations. Practically, the findings underscore the role of language in maintaining public morale and consensus during war. Future research could extend this work by quantitative corpus analysis or audience studies (e.g., testing how exposure to different terms affects perception). Nonetheless, the current analysis highlights a clear conclusion: the semantic framing of vocabulary in Ukrainian media is a deliberate cognitive strategy that constructs a mental model of the war aligned with Ukrainian national interests.

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