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Vitriolic Journalism and Affective Bias: A Computational Sentiment Analysis of Serbia's *Informer*

Abstract

This study examines the emotional tenor of Serbian tabloid journalism through a computational analysis of political columns authored by Dragan J. Vučićević, the editor of *Informer*, a newspaper broadly recognised for its partisan alignment with Serbia's ruling party. Drawing on sentiment analysis using VADER and RoBERTa, the research investigates the prevalence and intensity of negative affect as a vehicle of political bias and discursive hostility. The combined methodological approach leverages lexicon-based and transformer-based tools to measure sentiment polarity and model confidence, producing a comparative account of emotional aggression in contemporary media discourse. The results reveal consistent extreme negativity across the corpus, with variability in rhetorical intensity detected by deep learning. Situating the findings within scholarship on affective partisanship, propaganda, and

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Received: 16.03.2026. Verified: 28.03.2026. Accepted: 13.04.2026.

Funding information: Nankai University. **Conflicts of interest:** None. **Ethical considerations:** The Author assures of no violations of publication ethics and takes full responsibility for the content of the publication. **The percentage share of the Author in the preparation of the work is:** 100%. **Declaration regarding the use of GAI tools:** Sources were looked for via AI tool SciSpace. The text was edited for style, clarity, and grammar via Gemini.

tabloidisation, the article contributes to methodological innovation in journalism studies and offers a data-driven perspective on the performative role of sentiment in democratic backsliding.

Keywords: affective partisanship, tabloid journalism, sentiment analysis, RoBERTa, Serbian media, *Informer*

Jadowite dziennikarstwo i stronnictwo afektywna: analiza sentymentu obliczeniowego serbskiego *Informera*

Streszczenie

Artykuł analizuje emocjonalny wydźwięk serbskiego dziennikarstwa tabloidowego poprzez analizę obliczeniową felietonów politycznych autorstwa Dragana J. Vučićevicia, redaktora *Informera*, gazety powszechnie znanej ze swojego politycznego powiązania z serbską partią rządzącą. Opierając się na analizie sentymentu z wykorzystaniem VADER i RoBERTa, przeanalizowano rozpowszechnienie i intensywność negatywnych afektów jako nośnika uprzedzeń politycznych i wrogości dyskursywnej. Połączone podejście metodologiczne wykorzystuje narzędzia oparte na leksykonie i transformatorze do pomiaru polaryzacji sentymentów i pewności modelu, tworząc porównawczy obraz agresji emocjonalnej we współczesnym dyskursie medialnym. Wyniki ujawniają spójną, skrajną negatywność w całym korpusie, przy zmienności intensywności retorycznej wykrytej przez uczenie głębokie. Umieszczając wyniki w kontekście badań nad partyjnością afektywną, propagandą i tabloidyzacją, artykuł przyczynia się do innowacji metodologicznych w badaniach nad dziennikarstwem i oferuje opartą na danych perspektywę performatywnej roli sentymentu w regresji demokratycznej.

Słowa kluczowe: partyjność afektywna, dziennikarstwo tabloidowe, analiza sentymentu, RoBERTa, serbskie media, *Informer*

1. Introduction

The Serbian media ecosystem, particularly in the aftermath of democratic retrenchment and state capture, presents a paradigmatic case of informational distortion facilitated by the partisan control of public discourse. Since the early 2010s, under the increasingly autocratic leadership of President Aleksandar Vučić, the boundaries between propaganda, journalism, and political performance have grown indistinct, as “Serbia’s media scene is characterised by soft censorship, where governmental actions influence the media, but not through legal or para-legal bans, direct censorship of media contents, or physical assaults of media professionals” (Kisić, 2015: 64). Among the most influential players in this media apparatus is the tabloid *Informer*, a daily publication that has risen to prominence through a fusion of sensationalism, loyalty to the ruling Serbian Progressive Party (SNS), and virulent hostility towards the political opposition (Jovanović, 2018a, 2021). As numerous media watchdogs and international observers have noted, *Informer* is emblematic of a broader structural transformation in Serbia’s media landscape, one in which affect (not deliberation, as it should be normatively), becomes the dominant mode of political communication (Freedom House, 2022; Reporters Without Borders, 2025).

At the heart of *Informer*’s editorial project is Dragan J. Vučićević, the newspaper’s long-time editor and one of the most polarising figures in Serbian journalism. Frequently appearing on pro-government television and social media, Vučićević deploys a distinctive rhetorical style marked by overt emotionality, moral absolutism, and a repetitive invocation of existential threats allegedly posed by opposition actors, Western influences, civil society, or anybody seen as a threat to the regime. His editorials rarely aim to persuade through evidence or argumentation; rather, they operate performatively, enacting loyalty to power while constructing adversaries as morally illegitimate. This aligns with what Wodak has termed the “politics of fear,” a discursive strategy whereby political legitimacy is derived through the constant production of enemies (Wodak, 2015).

Despite the abundance of critical discourse analyses and normative assessments of the Serbian tabloid culture, there remains a conspicuous absence of an empirical, computational investigation into the affective operations of such journalism. This omission is significant. Theories of media partisanship and propaganda have increasingly emphasised the centrality of emotional registers (such as fear, anger, disgust) as constitutive of political persuasion (Hochschild, 2018; Marwick, Lewis, 2017). Yet while the *qualitative* contours of this affective bias have been richly described, their quantitative intensity, distribution, and stylistic variance remain under-explored, particularly in transitional democracies where media freedom is structurally compromised.

The present study responds to this gap by applying a sentiment analysis framework to a curated corpus of editorials written by Vučićević in *Informer*, each of which engages with the Serbian opposition or broader political crises. Using two computational tools (VADER, a rule-based sentiment analyser sensitive to lexical intensity and punctuation, and RoBERTa, a transformer-based deep learning model capable of contextual nuance), the analysis seeks to assess the emotional polarity and rhetorical aggression present in these texts. The dual-model approach enables a comparison between surface-level lexical features and deeper, model-inferred sentiment patterns, offering a more textured understanding of media hostility as a linguistic and affective phenomenon. This methodologically integrative lens allows for a quantitative mapping of discursive negativity, moving beyond mere thematic coding to the modelling of affect itself. It offers a way to reframe long-standing concerns in journalism studies (from bias to polarisation to propaganda) as problems with the *affective style*. Moreover, by situating the analysis within the Serbian context, the article contributes to the literature on hybrid media systems (Hallin, Mancini, 2004; Voltmer, 2013), where formal democratic institutions coexist with informal networks of control, and where the media operate simultaneously as watchdogs and instruments of political warfare. Three research questions guide this analysis:

RQ1: What are the dominant emotional tones in *Informer*'s political columns, and how consistently are they deployed?

RQ2: How do different sentiment models (VADER and RoBERTa) characterise the intensity, clarity, and type of the affective bias present?

RQ3: What can the patterns revealed by computational sentiment metrics tell us about the structure and performativity of journalistic hostility in politically controlled media?

By engaging these questions, the article aims to contribute empirical evidence to the study of partisan journalism and to advance a methodological template for integrating computational tools into the interpretive traditions of journalism studies. The central claim is that sentiment analysis, when used critically and in tandem with discourse-theoretical insight, can illuminate the emotional architecture of propaganda. This holds particular value in media systems such as that of Serbia, where democratic institutions persist in form but are increasingly hollowed out in substance. In what follows, the article reviews relevant scholarship on affective partisanship, tabloid political discourse, and computational methods in journalism analysis. It then presents the data corpus and analytic framework before turning to the results of the sentiment scoring and their interpretation in the light of the broader theoretical literature. The concluding section reflects on the implications of the findings for the study of journalistic affect, authoritarian media, and the methodological future of political communication research.

2. Literature review

2.1. Political journalism and propaganda in transitional media systems

The configuration of media systems in Southeastern Europe, particularly in post-socialist democracies such as Serbia, has been shaped by the overlapping processes of political instability, institutional weakness, and elite-driven media capture. As outlined in comparative frameworks of media development (Hallin, Mancini, 2004), transitional regimes often retain democratic formalities while enabling informal mechanisms of control, especially over communication infrastructure. In Serbia, these dynamics are pronounced: state-aligned media outlets regularly receive favourable access to advertising, licences, and official narratives, consolidating the government's influence over public discourse. Among the most visible tools of this influence are party-loyal tabloids such as *Informer*, which play a strategic role in constructing the regime's symbolic enemies. These outlets may reflect political alignment, but they primarily act as performative propaganda, a mode of communication in which journalistic contents become an affective extension of state messaging (see: Oddo, 2022; Patrona, 2022). This aligns with the phenomenon of "media clientelism," where journalistic norms are subordinated to elite interests (Peruško et al., 2020). The tactics employed are consistent with what Bennett and Livingston describe as the emergence of a "disinformation order," where certain media actors are structurally integrated into power networks and function to delegitimise opposition through repetition, vilification, and spectacle (Bennett, Livingston, 2018).

This type of tabloid journalism, situated within a post-authoritarian media ecology, frames its enemies through moral dualisms, relying on emotional tropes that evoke betrayal, national humiliation, and cultural decay. As empirical studies of Southeast European newsrooms suggest, such framings operate as survival strategies within constrained media markets (Jakubowicz, Sükösd, 2008). The result is a discursive regime where the journalistic field becomes an extension of party conflict, and affect (particularly anger, disgust, and outrage) functions as the dominant mode of political narration.

2.2. Affect, emotion, and polarisation in journalism

Affect has become increasingly central to the study of journalism in polarised societies. Departing from normative models that privilege rationality, contemporary scholarship has foregrounded the emotive and performative nature of journalism, particularly in populist and post-truth environments. As Waisbord (2018) argued, populist communication thrives on emotional resonance, wherein the journalist's authority emerges from moral identification with the people. This shift enables

journalism to function less as a neutral arbiter and more as an ideological participant, often mobilising affect to reinforce in-group/out-group boundaries.

In the context of partisan media ecosystems, negative partisanship (defined by hostility towards political out-groups) has been shown to be a potent mobilising force (Iyengar et al., 2019). Tabloid journalism – with its emphasis on personalisation, caricature, and enemy construction – is especially conducive to this affective logic. The Serbian case is illustrative: columns written by figures such as Dragan J. Vučićević frequently frame opposition actors as existential threats, drawing on a rhetorical repertoire saturated with moral condemnation and alarmist hyperbole. This emotional style is a discursive strategy that reconfigures journalistic norms. Chouliaraki and Stolic (2017) refer to such practices as “emotional bordering,” wherein journalistic narratives map affective divisions between self and other, citizen and traitor. These affective boundaries, while rhetorically constructed, produce real consequences for democratic deliberation by narrowing the spectrum of acceptable speech and delegitimising dissent.

2.3. Sentiment analysis in journalism studies

Computational sentiment analysis has emerged as a valuable method for measuring affective patterns in journalistic discourse, particularly at scale. Among the most widely used tools is VADER (Valence Aware Dictionary and sEntiment Reasoner), which employs a lexicon-based model tailored to social media and news-like language (Hutto, Gilbert, 2014). VADER captures sentiment through weighted polarity scores, and it is particularly adept at identifying intensifiers, punctuation-based emphasis, and degree modifiers. However, its reliance on surface-level features makes it vulnerable to false positives in contexts of irony or cultural nuance.

By contrast, transformer-based models such as RoBERTa offer a more nuanced approach to sentiment classification, leveraging contextual embeddings and pre-training on large textual corpora (Liu et al., 2019). These models have been shown to outperform lexicon-based tools in multiple domains, including political news. For example, Chauhan and colleagues (2024) employed both VADER and RoBERTa to detect political bias in Indian news media, revealing consistent affective skew towards dominant parties. Similarly, recent evaluations comparing sentiment tools found that RoBERTa achieved significantly higher classification accuracy, especially in emotionally-ambiguous texts (Chinedu et al., 2023).

Within journalism studies, the use of sentiment analysis has allowed researchers to map tone shifts over time, assess partisan asymmetries, and identify the emotional architecture of propaganda. Yet, methodological gaps remain. As van Atteveldt and Peng emphasised, “computational methods do not replace the existing methodological approaches, but rather complement it. Computational methods are an expansion and enhancement of the existing methodological toolbox, while

traditional methods can also contribute to the development, calibration, and validation of computational methods” (Van Atteveldt, Peng, 2018: 82). This hybrid approach, combining computational detection with qualitative contextualisation, is particularly vital in transitional media environments, where sentiment may be culturally-encoded, strategically ambiguous, or stylised for rhetorical effect.

This study adopts such a hybrid methodology. By integrating both VADER and RoBERTa in the analysis of Serbian political columns, it aims to offer a comparative understanding of how affective bias manifests in partisan tabloid journalism. Moreover, by interpreting discrepancies between model outputs, the analysis explores how negative sentiment is expressed and how it is registered differently depending on computational assumptions about language and emotion.

3. Data and methodology

This study interrogates the emotional structure of political journalism as instantiated in opinion columns published in *Informer*, authored by Dragan J. Vučićević. The focus of this section is on the composition of the textual corpus, the computational tools used to extract affective signals, the specific procedural steps taken in processing and scoring the texts, and the interpretive strategy deployed in synthesising the outputs of different sentiment models with broader theories of discourse and power.

3.1. Corpus

We have set foot on the road wanting to analyse *all* columns by D.J. Vučićević that could be found on the *Informer*, yet only ten were found. All the texts were published in 2025. They range in length from roughly 300 to 500 words, and each engages, explicitly or implicitly, with the opposition parties in Serbia or with sociopolitical controversies involving governance. Authorship attribution is unambiguous: Vučićević's name appears on all editorials as the lead author, ensuring a monologic voice across the corpus, however small. The selection of these columns is justified as a purposive sampling strategy; they represent *Informer*'s editorial voice that seldom changes (Jovanović, 2018a, 2018b, 2021), offering a homogeneous yet rhetorically rich set of texts for sentiment analysis. In sampling terms, the corpus still captures the intensity and consistency of affective framing typical of partisan tabloids. This approach parallels typologies of case selection in political communication research where *informationrich cases* are prioritised (Seawright, Gerring, 2008), beside the fact that what is not posted online cannot be analysed. The corpus, however we choose to approach it, reflects a consistent strategic orientation, namely the delegation of political conflict into emotive and adversarial rhetoric.

3.2. Sentiment analysis tools

The study deploys two contrasting sentiment analysis models: VADER, a rule-based lexicon sentiment analyser, and RoBERTa, a transformer-based pre-trained deep learning model. VADER was developed to assess sentiment in short texts and social media data by quantifying the polarity and intensity of words and symbols (Hutto, Gilbert, 2014). It uses a lexicon of sentiment-laden terms (e.g. “betrayal,” “disgusting,” “heroic”) and applies heuristics for punctuation, capitalisation, and degree modifiers, producing a set of scores including *positive*, *negative*, *neutral*, and a normalised *compound* value that ranges from -1 (extremely negative) to $+1$ (extremely positive).

In contrast, the RoBERTa model used here (the *cardiffnlp/twitter-roberta-base-sentiment* variant) is a deep neural network trained on a large corpus of tweets and optimised for sentiment classification tasks. This model is grounded in the RoBERTa architecture, itself an enhanced version of the original BERT (Bidirectional Encoder Representations from Transformers) that removes next sentence prediction and increases training data and dynamic masking (Liu et al., 2019). RoBERTa leverages contextual embeddings, making it possible to capture sentiment nuances that deviate from explicit lexical markers or combinatory heuristics. The model returns three labels (*negative*, *neutral*, and *positive*) with associated confidence scores for each input text segment. By juxtaposing a heuristic lexicon tool with a deep contextual model, this study explores how different computational assumptions influence the detection of affective features in media texts. Such methodological duality has been shown in related research to reveal divergences between surface-level lexical negativity and deeper contextual sentiment patterns, thereby enriching interpretive claims (Erwe, Wang, 2024).

3.3. Processing and scoring

Preprocessing establishes a consistent foundation for sentiment scoring. All columns were read into the Python environment as UTF8 encoded strings, preserving diacritical marks where possible in order to maintain lexical integrity. Basic cleanup involved the removal of extraneous whitespace and the standardisation of quotation marks. Because the RoBERTa model imposes a token limit (usually 512 tokens per input, i.e. no issues with shorter texts), texts were truncated to the first 512 tokens for classification, which is a standard practice in transformer-based sentiment analysis when handling long form input (Hugging Face model documentation, 2024). VADER scoring, by contrast, operates on the entire text without a hard input size limit. The analytical pipeline consisted of the following procedural steps:

```

# Example conceptual pipeline description
from nltk.sentiment.vader import SentimentIntensityAnalyzer
from transformers import pipeline
# Initialize models
vader = SentimentIntensityAnalyzer()
roberta_pipeline = pipeline("sentiment-analysis", model=model,
tokenizer=tokenizer)
for filename, content in texts.items():
    # VADER
    vader_scores = vader.polarity_scores(content)
    # RoBERTa
    truncated = content[:512]
    roberta_result = roberta_pipeline(truncated)[0]
    # Store scores

```

The recorded variables include the VADER *compound* score, which reflects overall polarity intensity, and the RoBERTa *label* and *confidence* scores, which contextualise model certainty in classification. The combination of these metrics allows for an assessment of affective valence and of the *strength* and *visibility* of emotional framing.

3.4. Interpretation strategy

Sentiment outputs are interpreted through both cross-model comparison and qualitative linkage to the discourse theory. A cross-model comparison examines whether consistently negative VADER outputs correspond to high confidence in negative RoBERTa classification. Discrepancies (such as cases where VADER registers extreme negativity but RoBERTa confidence is moderate) are flagged for a closer qualitative reading to unpack rhetorical devices such as irony or contextual semantic shading.

To connect computational metrics with social meaning, the analysis draws on theoretical frameworks in the discourse theory and critical discourse analysis. While this study does not perform full Laclau and Mouffe's articulation analysis, their insights regarding the articulation of social antagonisms are instructive; dominant political discourses structure meaning through the alignment of disparate signifiers into a hegemonic narrative (Jorgensen, Phillips, 2002; Laclau, Mouffe, 2014). Similarly, van Dijk's (2013) work on discourse and power foregrounds how textual structures reproduce social hierarchies and ideological interests, particularly in political news and opinion texts. Therefore, quantitative sentiment patterns are read alongside these frameworks to discern how affective polarity contributes to narrative positioning, enemy construction, and ideological closure.

This interpretive strategy situates computational evidence within broader media theory, allowing the study to make claims about *how* and *to what extent* sentiment functions as a rhetorical device in partisan journalism. Unlike purely qualitative approaches, the computational output provides an empirical scaffold; unlike purely quantitative research, the theoretical integration ensures that sentiment scores do not remain decontextualised abstractions.

4. Findings

4.1. VADER results

The application of VADER to the corpus of Vučićević's editorials yields an unequivocal pattern: all ten texts produce strongly negative compound sentiment scores, with no instances of neutrality or polarity balance. In fact, seven of the ten columns cluster at or below -0.998 , which places them at the extreme end of the sentiment spectrum. Such uniformity cannot be ascribed to incidental word choice; rather, it reflects a structurally-embedded discourse of antagonism, which is a point substantiated by the compound polarity distribution visible in the following figure.

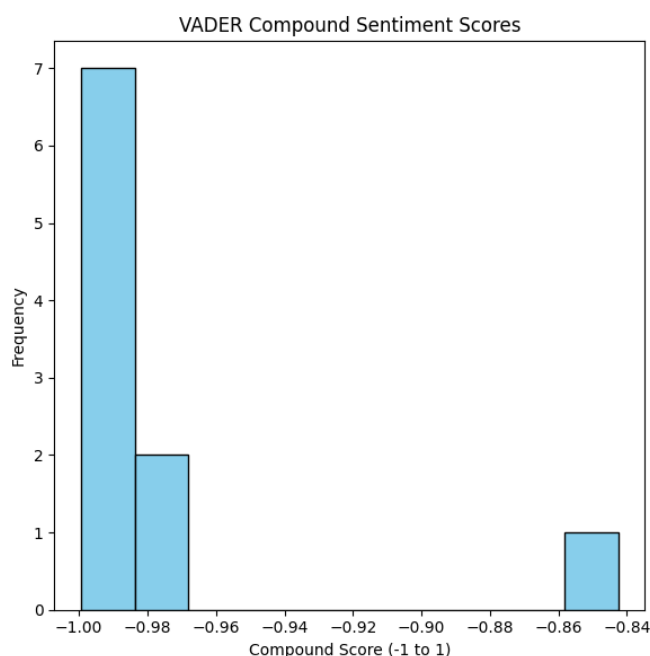


Figure 1. VADER compound sentiment scores

VADER operates on a lexicon- and rules-based framework calibrated for short social media texts, but its architecture retains analytic power when applied to political commentary due to its sensitivity to intensity-modifying heuristics such as capitalisation, punctuation, and degree modifiers (Hutto, Gilbert, 2014). In the case of *Informer*, it detects a persistently loaded lexicon, replete with words bearing high negative valence. This is evident in the analysis of texts such as “*Dijana Hrka i zlikovci*”, which yields a compound score of -0.9994 , driven by frequent lexical co-occurrences of criminality, deviance, and betrayal. While VADER’s performance in longer-form political texts must be cautiously interpreted (particularly given its lower contextual nuance), the model remains a reliable barometer of lexical polarity (and, in our cases, texts are by no means long). As shown in previous applications of VADER to political and media discourse, the tool excels in identifying overt antagonism and affective extremity (Chauhan et al., 2024). It is precisely this overt negativity that defines Vučićević’s style. The editorial voice relies on amplification, deploying affect as a political instrument, with frequent recourse to vilifying metaphors, dichotomous enemy construction, and hyperbolic national trauma.

It is crucial to recognise that the VADER results are operationalised forms of an editorial strategy. As explored in studies on partisan media framing (Iyengar et al., 2019), affective polarisation is often a consequence of bias as much as a deliberate communicative form that structures reader identification. In transitional media systems, where tabloid journalism overlaps with party messaging, this intensity becomes performative rather than merely expressive.

4.2. RoBERTa results

RoBERTa, a contextual transformer-based model, corroborates VADER’s diagnosis of negativity across the corpus but adds crucial nuance through its probabilistic scoring. All the ten texts are classified under *LABEL_o* (negative), yet the confidence levels range significantly, i.e. from 0.474 in “*Vidovdan*” to 0.954 in “*Vucibatine i mrsomudi*” (sic! A representative example of vitriol). This distribution is visualised in the following figure:

Whereas VADER processes word valence in isolation, RoBERTa evaluates sentiment by embedding each token within a bidirectionally-contextual matrix. This allows the model to recognise sarcasm, euphemism, and framing patterns that evade surface-level lexicon filters. For instance, a phrase such as “*građani po Eker*”, which contains ambiguous political insinuation cloaked in bureaucratic irony, may be difficult to parse with rules-based tools, but is registered by RoBERTa with moderate confidence (0.569), indicating partial contextual alignment with known negative sentiment vectors. This differentiation mirrors prior research that contrasts RoBERTa’s transformer-based classification with traditional sentiment scoring. Studies have found that while both models tend to converge

in high-intensity cases, RoBERTa often captures irony and mixed sentiment more effectively, particularly in politicised or ideologically-loaded texts (Erwe, Wang, 2024). Moreover, confidence values function here as indirect indicators of rhetorical strategy: high confidence scores suggest lexical transparency and adversarial directness, while mid-level scores may suggest layered speech acts, hedging, or narrative displacement.

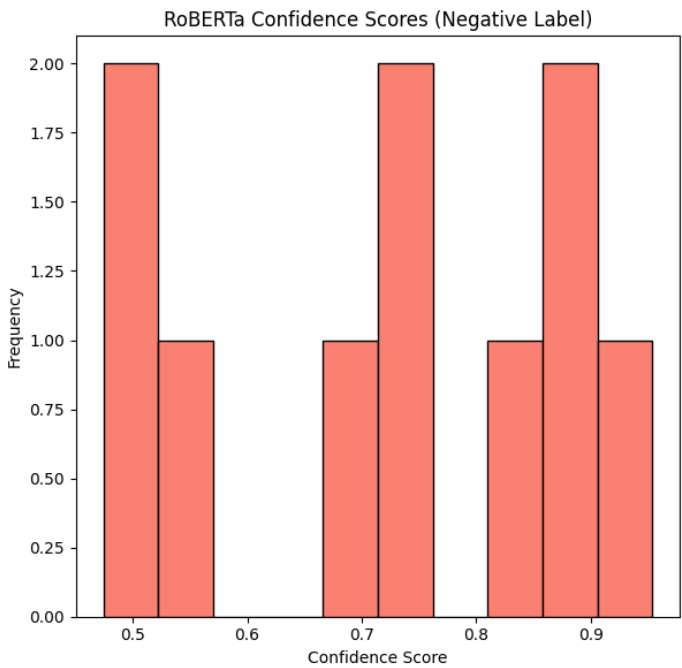


Figure 2. RoBERTa confidence scores (negative)

This interpretive advantage becomes particularly salient in the context of affective populism, where emotional discourse operates simultaneously at explicit and implicit levels. Vučićević’s columns, while strident in tone, also incorporate rhetorical variability, from accusation and sarcasm to mythopoetic narration. RoBERTa’s fluctuating confidence captures this performative oscillation. It reveals a stylistic continuum: on the one hand, invective-laden jeremiads (“*Čarli Kirk*”, 0.89); on the other, quasi-moralist lamentations (“*Vidovdan*”, 0.47). More importantly, model-based analysis aligns with broader studies in sentiment-informed media bias detection. In comparative media studies using both VADER and RoBERTa, sentiment outputs have been found to diagnose polarity and to reflect editorial intentionality, especially in the contexts of political communication in partisan systems (Chauhan et al., 2024). The Serbian case (where political control over

media is exercised both structurally and affectively) provides fertile ground for such computational diagnostics.

In other words, RoBERTa reinforces the pattern of negativity detected by VADER but enriches our understanding by revealing the degrees of affective clarity. The range of confidence values does not challenge the uniformity of polarity, yet it illuminates the rhetorical texture of populist journalism. As a result, sentiment classification becomes a proxy for the communicative labour of hostility.

4.3. A cross-model comparison

Despite relying on fundamentally different computational architectures, VADER and RoBERTa return congruent conclusions regarding the polarity of the ten editorial texts: all are uniformly negative. However, a closer comparative reading of their outputs reveals divergence in intensity measurement and a theoretically instructive tension between surface-level sentiment scoring and contextual inference.

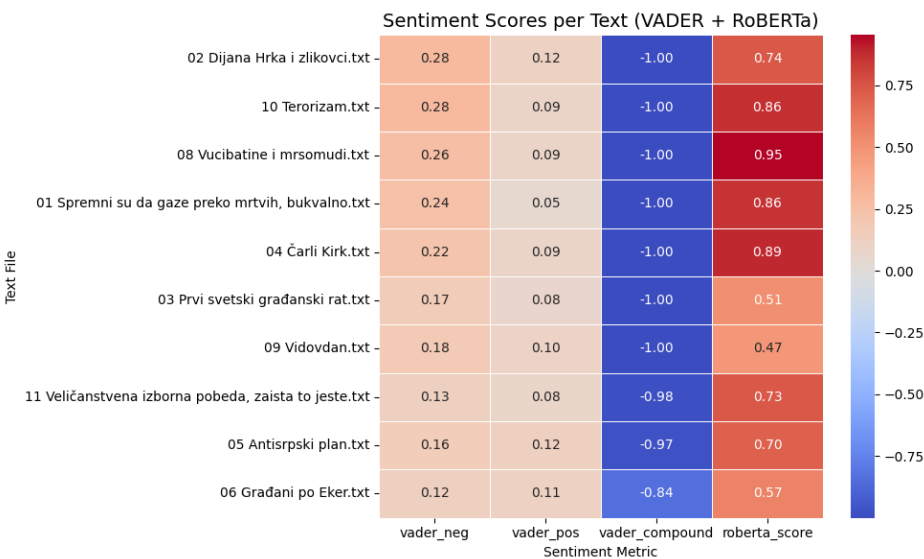


Figure 3. Sentiment scores heat map

As shown in Figure 3, VADER assigns compound scores at or below -0.97 in ten of the ten cases. This extreme compression at the negative pole leaves little room for gradation, which is consistent with the model's reliance on fixed lexical associations. In contrast, RoBERTa's confidence scores span from 0.474 ("Vidovdan") to 0.954 ("Vucibatine i mrsomudi"), offering a broader expressive bandwidth for sentiment certainty. The contrast is particularly revealing when

comparing “*Vidovdan*” (VADER: -0.9952 ; RoBERTa: 0.474) and “*Dijana Hrka i zlikovci*” (VADER: -0.9994 ; RoBERTa: 0.739), both of which VADER scores as maximally negative but which differ by over 25% in RoBERTa’s confidence.

These results substantiate prior findings in comparative sentiment model studies. RoBERTa has been shown to register polarity more subtly than lexicon-based tools, especially when dealing with media texts where sentiment may be encoded via metaphor, innuendo, or narrative stance rather than through isolated affective lexemes (Erwe, Wang, 2024). In studies of Indian print media bias, Chauhan and colleagues (2024) noted that RoBERTa captured ideological negativity not apparent in VADER, particularly in conservative publications that employed formal rhetoric rather than invective.

Moreover, the divergence in score intensities reveals differing theories of affect encoded in each model. VADER assumes affect to be lexical and compositional, and thus sensitive to cumulative polarity. RoBERTa, however, treats affect as relational and embedded in semantic structure. This theoretical difference matters: Vučićević’s editorials often toggle between overt condemnation and veiled sarcasm, and only a contextual model can capture such rhetorical dynamism. Therefore, cross-model analysis increases reliability and operationalises stylistic complexity, which is a methodological gain rarely achieved in single-model sentiment studies.

4.4. The interpretation of outliers

Among the texts, five stand out for exhibiting the largest divergence between VADER’s compound score and RoBERTa’s confidence: “*Vidovdan*”, “*Prvi svetski građanski rat*”, “*Građani po Eker*”, “*Antisrpski plan*”, and “*Dijana Hrka i zlikovci*”. Each case illuminates distinct textual strategies that challenge simplistic models of negativity.

“*Vidovdan*”, for instance, presents a lexical terrain saturated with national myth, religious symbolism, and sacralised memory. VADER reads this discursive field as strongly negative (-0.9952), interpreting invocations of loss, martyrdom, and betrayal as affectively hostile. RoBERTa, however, returns a confidence score of only 0.474 , suggesting interpretive ambivalence. This gap reflects the complexity of the rhetoric of mourning: while lexically intense, the text may function more as melancholic reflection than polemic attack. As such, the affective labour performed is elegiac, not necessarily antagonistic, and it is a distinction that RoBERTa is better equipped to register due to its contextual sensitivity.

In contrast, “*Prvi svetski građanski rat*” combines metaphor with direct accusation, producing a VADER score of -0.9961 and a RoBERTa confidence of 0.514 . Here, the rhetorical form is mimetic of war reportage, evoking chaos and betrayal through historical analogy. The moderate confidence may stem from ambiguous grammatical constructions, such as conditional framing or subjunctive speculation, which dilute clear affective attribution.

“*Građani po Eker*”, while producing the highest VADER compound score among the less negative (−0.8426), registers a mid-tier RoBERTa score (0.565). This again suggests a stylistic register shift: the text draws on bureaucratic speech and pseudo-legal jargon, creating emotional detachment even while critiquing political adversaries. RoBERTa’s model appears attuned to such register markers, reducing its confidence accordingly.

These divergences emphasise the importance of combining sentiment models in journalism analysis. Outliers should not be seen as analytical failures, as they represent opportunities to study semiotic nuance, ideological camouflage, and rhetorical layering, all of which are the key features of tabloid populism. As Bhatia (2015) argues in his study of populist media discourse, political affect is rarely direct but often encoded through “semantic deferral”, i.e. a technique in which polemic is routed through narrative form.

The most conceptually revealing case may be “*Dijana Hrka i zlikovci*”, where both models detect strong negativity, but with RoBERTa’s confidence score (0.739) significantly lower than the VADER compound (−0.9994). The column makes extensive use of allegorical accusation and moral typology (e.g. “traitors,” “monsters”), but roots these in quasi-fictional rhetoric. Here, RoBERTa seems to partially withhold full affective certainty, reflecting the performative theatricality of the text. This rhetorical layer is consistent with van Dijk’s (1995) schema for elite populist discourse, wherein hyperbole and insinuation replace evidentiary reasoning to mobilise affective allegiance.

Thus, the interpretation of outliers strengthens the robustness of model triangulation and reaffirms the centrality of stylistic analysis in understanding how sentiment functions within journalistic polemic. In this regard, computational outputs should not be seen as ends in themselves, as they are entry points into the hermeneutics of affective expression in transitional media systems.

5. Discussion

The sentiment patterns identified in this study (uniformly extreme negativity with nuanced variation in affective intensity) can only be properly understood when situated in the broader structural and institutional context of the Serbian media system. The media environment in Serbia has undergone profound transformation over the past decade, shaped by a hybrid political order that combines formal electoral competition with informal mechanisms of control over public communication. Scholars have described this context as characterised by pervasive media capture, where outlets aligned with political elites function less as autonomous journalistic institutions and more as instruments of partisan persuasion (Ceron et al., 2019; Waisbord, 2018). Within this milieu, the tabloid *Informer* occupies

a central role, blending sensationalist format with explicit political alignment towards the ruling Serbian Progressive Party (SNS) and its leadership.

Academic research on *Informer* and its discursive practices substantiates the intuition, evident in the sentiment scores, that negativity and hostility are core components of the newspaper's editorial logic. In a discourse analysis of *Informer* headlines spanning 2012–2018, Jovanović demonstrates that the newspaper systematically frames the incumbent political leader as heroic while representing opponents as morally illegitimate and existentially threatening (Jovanović, 2018a). This pattern of “discursive deception” resonates with the extreme negative sentiment detected by both VADER and RoBERTa in the present corpus. Whereas earlier work focused on headlines, this study's computational analysis extends the argument into the emotional grammar of full columns, showing that negativity saturates even long-form commentary.

The observed consistent negativity should be understood as part of a strategic communicative regime. As Štětka and Mihelj conceptualised the “illiberal public sphere,” media outlets in societies experiencing democratic retrenchment become agents in a communicative ecosystem antagonistic to liberal democratic norms (Štětka, Mihelj, 2024). In Serbia, this ecosystem is characterised by the ascendancy of politically-aligned outlets that promote a cult of victimhood, moral panic, and external threat. *Informer*'s rhetorical practices (the vilification of the opposition, the invocation of conspiratorial threats, and steady reinforcement of political antagonism) align with this illiberal public sphere. Thus, the sentiment results mirror a broader systemic shift in the role of political media, i.e. from an informational gatekeeper to an affective mediator of partisan narratives.

The intensity and uniformity of negative scores across columns suggests that affective partisanship extends beyond episodic reporting into stylistic norm. The affective polarisation theory posits that hostility towards political outgroups has become a dominant driver of media engagement and political identity (Iyengar et al., 2019). In Western contexts, this has been linked to audience fragmentation and echo chambers; in Serbia's tabloid sphere, the mechanisms manifest through strategic amplification of fear, anger, and moral condemnation. The extreme negative polarity detected by VADER reflects lexical saturation with negative valence, which is a pattern that aligns with content analyses showing frequent use of emotionally-loaded descriptors and metaphors in partisan tabloids, especially in *Informer* (Jovanović, 2018a, 2021). Such lexical strategies serve both to delegitimise adversaries and to activate affective responses among readers, reinforcing institutional loyalty and distrust towards oppositional voices.

However, the divergence observed in RoBERTa confidence scores offers deeper insight into how *Informer* calibrates negativity across different rhetorical modes. Transformer-based models such as RoBERTa are sensitive to context and can differentiate between overt adversarial language and more nuanced or allusive

negativity. The variability in confidence (ranging from approximately 0.47 to 0.95) suggests that while all columns align with negative affect, the explicitness of hostility varies. Some texts deploy direct invective and confrontational framing that elicit high confidence scores, whereas others weave negativity through metaphor, irony, or historical allusion, leading to lower confidence. This variation parallels the finding from computational media studies that transformer models capture subtler emotional cues in a politicised text better than lexicon-based tools alone. The presence of stylistic variation within a uniformly negative landscape stresses an important theoretical implication, namely that affective journalism in transitional media systems may operate on multiple registers. When antagonism is explicit and direct, both VADER and RoBERTa register high negativity and confidence; but when hostility is embedded in rhetorical strategies such as historical analogy or bureaucratic sarcasm, only contextual models such as RoBERTa detect it with nuance. This pattern underscores the benefit of a hybrid computational approach, which can differentiate between lexical provocations and contextually-mediated affect. Such methodological triangulation aligns with calls in communication research to combine computational precision with interpretive depth, recognising that sentiment metrics are not substitutes for contextual analysis, instead being tools for identifying structural patterns (Van Atteveldt, Peng, 2018).

Further contextual grounding comes from understanding *Informer's* role in the broader media ecology. Compared with legacy outlets such as *Politika*, which operates within more traditional journalistic norms, tabloid newspapers such as *Informer* and *Alo!* are more aggressively partisan and sensationalist, contributing to the erosion of deliberative public discourse. Monitoring reports consistently identify these tabloids as vehicles of pro-government messaging and disinformation campaigns, often targeting independent journalists and civil society actors (Rendulić, 2023). In the context of the 2025 anticorruption protests, for example, students in Belgrade publicly protested outside *Informer's* broadcast operations, accusing it of propagating defamatory narratives and conspiracy claims, which is a dynamic captured in significant news coverage. Such events underline how the affective strategies identified in textual sentiment are part of a contested communicative environment where media credibility and political legitimacy are actively contested.

The affective discourse identified here has broader implications for democratic processes. Research on media systems has shown that when opposition voices are persistently framed as illegitimate or dangerous, public trust in independent institutions erodes and polarisation intensifies. By saturating political commentary with negative affect, *Informer* participates in a cycle that blurs the boundary between information and partisan advocacy, ultimately weakening the deliberative foundations of a democratic public sphere. This aligns with the illiberal public sphere framework, which posits that communicative environments

dominated by antagonistic media undermine pluralistic discourse and facilitate authoritarian consolidation.

The present study's findings thus extend the existing qualitative work on *Informer* by empirically demonstrating the structural negativity of its editorial output and shedding some light on the stylistic complexity with which hostility is deployed. Rather than assuming affective hostility to be an artefact of isolated articles, the sentiment analysis systematically shows it to be an embedded feature of the newspaper's rhetorical architecture. By integrating lexicon-based and transformer-based models, the study contributes a rigorous methodological template for future research in hybrid media contexts. It also underscores the importance of computational analysis in supplementing interpretive discourse studies, especially in regions where media freedom and pluralism are under pressure.

The intensity and consistency of negative sentiment in *Informer's* political columns reflects both the ideological entrenchment of the outlet within an illiberal communicative regime and the broader challenges facing journalism in transitional democracies. From the theoretical standpoint, this reinforces the idea that affect, far from being an incidental characteristic of political journalism, is a central mechanism by which biased media shape public understanding and contestation (Pantti, 2010; Wahl-Jorgensen, 2019). Methodologically, the study demonstrates the value of combining multiple sentiment models to capture both overt and covert dimensions of affective media bias.

6. Conclusion

The foregoing analysis has demonstrated that the political commentary published in Serbia's tabloid *Informer*, as authored by its editor Dragan J. Vučićević, exhibits an extraordinarily consistent affective register: namely, one of extreme and calculated negativity. Across ten columns drawn from recent political coverage, two independently structured sentiment analysis models (VADER and RoBERTa) produced convergent evidence of deep rhetorical hostility. This hostility is endemic to the editorial form and function of *Informer*. Whether measured via VADER's compound lexicon-based metric or RoBERTa's contextual transformer-based classification, the emotional tone of the texts adheres to a pattern of antagonistic polarisation, aligning political opponents with danger, betrayal, and treachery.

This study represents, to the best of our knowledge, the first computational sentiment audit of Serbian tabloid journalism using publicly validated models and full-text editorial data. In making this claim, it is essential to emphasise methodological novelty and to underscore the analytical import of applying such tools to politically instrumentalised media in transitional democracies. While there exists a considerable body of work on Western media bias using computational

tools, much of the Global South and East remains analytically underserved. Serbia, situated at the crossroads of European integration and democratic regression, presents a paradigmatic case of media illiberalism, whose study demands both empirical precision and theoretical sensitivity.

The dual-model framework developed here exemplifies the value of methodological pluralism in affective media research. Lexicon-based tools such as VADER offer interpretable, reproducible outputs with clear affective thresholds, which are particularly effective in identifying explicit antagonism. Yet, their limitations in detecting rhetorical complexity necessitate supplementation with transformer models such as RoBERTa, which offer greater contextual granularity and sensitivity to genre, irony, and figurative speech. The combined application triangulates sentiment more robustly and surfaces divergences that point to stylistic registers of hostility, thus rendering the computational pipeline a tool for rhetorical analysis.

Moreover, the findings offer fresh insight into the affective economies of tabloid journalism in the Balkan region. Drawing on the theories of media populism and discourse analysis, one can observe that negativity in *Informer* is a political strategy, i.e. a means of shaping epistemic boundaries and delimiting the space of legitimate opposition. That this strategy manifests so uniformly across a range of columns speaks to the consolidation of a communicative form whose aim is polarisation. Within the illiberal media ecosystem described by Štětka (2024), sentiment becomes a weaponised modality, performing a ritual of delegitimation rather than an exercise in editorial judgment.

Several directions for future research now emerge. First, the potential application of multilingual and multimodal sentiment models (including XLM-RoBERTa or multilingual BERT variants such as the recent BERTić for the Serbian language) could extend the scope of analysis to other Serbian-language media, including television broadcasts, social media commentary, and hybrid digital-native platforms. Given the presence of nationalist tabloid contents across the Western Balkans, comparative sentiment audits across Croatian, Bosnian, and Montenegrin tabloids could reveal regional affective alignments and divergences. Next, future work could aim to scale this analysis both longitudinally and quantitatively. A timeline-based sentiment audit of *Informer*'s editorials across election cycles or crisis events could yield valuable insights into the temporal choreography of hostility. Are affective intensities modulated during electoral campaigns? Do peaks in negative sentiment align with external geopolitical events? These are questions that demand a diachronic model of sentiment evolution, grounded in both textual data and political chronology. Finally, integrating sentiment analysis with audience reception data would deepen our understanding of the real-world impact of affective journalism. Does exposure to high-negative sentiment correlate with political disengagement, cynicism, or radicalisation among readers?

Methodologically, this could involve pairing sentiment-scored contents with digital trace data, survey instruments, or experimental designs that assess audience interpretation and emotional uptake.

Future iterations of this research might incorporate discourse-theoretic models more explicitly. The analytical categories developed by Wodak or van Dijk offer useful scaffolding for interpreting sentiment scores as indicators of discursive positionings (van Dijk, 2013; Wodak, Meyer, 2015). For instance, the affective extremity observed in this corpus may be symptomatic of a populist style in which the friend–enemy distinction is operationalised semantically and emotionally, transforming political journalism into a mode of moral combat.

This study provides a computationally-grounded, rhetorically attuned, and theoretically-informed account of affective bias in Serbian tabloid journalism. It exposes the affective labour performed by *Informer*'s political columns and situates that labour within the evolving structures of illiberal media regimes. By combining sentiment modelling with contextual interpretation, the study contributes both methodologically and conceptually to the field of journalism studies. It invites scholars to take emotion as a signal encoded and consequential.

Bibliography

- Bennett, W.L., Livingston, S. 2018. The Disinformation Order: Disruptive Communication and the Decline of Democratic Institutions. *European Journal of Communication* 33(2), pp. 122–39. <https://doi.org/10.1177/0267323118760317>
- Bhatia, A. 2015. *Discursive Illusions in Public Discourse*. Routledge. <https://doi.org/10.4324/9781315776903>
- Ceron, A., Splendore, S., Hanitzsch, T., Thurman, N. 2019. Journalists and Editors: Political Proximity as Determinant of Career and Autonomy. *The International Journal of Press/Politics* 24(4), pp. 487–507. <https://doi.org/10.1177/1940161219862489>
- Chauhan, S., Verma, S., Pandey, A., Srivastava, A., Malik, P., Garg, N., Singh, A.K. 2024. Media Bias Monitor: Quantifying Biases of Indian Print Media. In: *2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1–7). <https://doi.org/10.1109/ICCCNT61001.2024.10724364>
- Chinedu, E.Q., Asogwa, E.C., Sunday, B.T., Onyeizu, N.M., Obulezi, J.O. 2023. Unraveling Emotions: Contemporary Approaches in Sentiment Analysis. *Journal of Sensor Networks and Data Communications* 3(1), pp. 223–230. <https://doi.org/10.33140/JSNDC.03.01.14>

- Chouliaraki, L., Stolic, T. 2017. Rethinking Media Responsibility in the Refugee 'Crisis': A Visual Typology of European News. *Media, Culture & Society* 39(8), pp. 1162–1177. <https://doi.org/10.1177/0163443717726163>
- Erwe, L., Wang, X. 2024. *Comparison of VADER and Pre-Trained RoBERTa: A Sentiment Analysis Application*. <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=9145112&fileId=9145119>
- Freedom House. 2022. Serbia. *Freedom House*. <https://freedomhouse.org/country/serbia/nations-transit/2022>
- Hallin, D.C., Mancini, P. 2004. *Comparing Media Systems: Three Models of Media and Politics*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511790867>
- Hochschild, A.R. 2018. *Strangers in Their Own Land: Anger and Mourning on the American Right*. The New Press. <https://doi.org/10.2307/jj.26193340>
- Hutto, C., Gilbert, E. 2014. Vader: A Parsimonious Rule-Based Model for Sentiment Analysis of Social Media Text. *Proceedings of the International AAAI Conference on Web and Social Media* 8(1), pp. 216–225.
- Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., Westwood, S.J. 2019. The Origins and Consequences of Affective Polarization in the United States. *Annual Review of Political Science* 22(1), pp. 129–146. <https://doi.org/10.1146/annurev-polisci-051117-073034>
- Jakubowicz, K., Sükösd, M. 2008. *Finding the Right Place on the Map: Central and Eastern European Media Change in a Global Perspective*. Intellect Books.
- Jorgensen, M.W., Phillips, L. 2002. *Discourse Analysis as Theory and Method*. Sage.
- Jovanović, S.M. 2018a. Headlines as Fake News: Discursive Deception in Serbia's Daily *Informer* (2012–2018). *Central and Eastern European Review* 12(1), pp. 1–22. <https://doi.org/10.2478/caeer-2019-0001>
- Jovanović, S.M. 2018b. 'You're Simply the Best': Communicating Power and Victimhood in Support of President Aleksandar Vučić in the Serbian Dailies *Alo!* and *Informer*. *Journal of Media Research – Revista de Studii Media* 11(31), pp. 22–42. <https://doi.org/10.24193/jmr.31.2>
- Jovanović, S.M. 2021. Headlines against Democracy: Operational Code Analysis of the Serbian Daily *Informer's* Headlines in Relation to the Anti-Government Protests' First Phase (2018–2019). *Journal of Media Research – Revista de Studii Media* 14(41), pp. 23–41. <https://doi.org/10.24193/jmr.41.2>
- Kisić, I. 2015. The Media and Politics: The Case of Serbia. *Southeastern Europe* 39(1), pp. 62–96. <https://doi.org/10.1163/18763332-03901004>
- Laclau, E., Mouffe, Ch. 2014. *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. Verso books.
- Liu, Y., Ott, M., Goyal, N., Du, J., Joshi, M., Chen, D., Levy, O., Lewis, M., Zettlemoyer, L., Stoyanov, V. 2019. Roberta: A Robustly Optimized Bert Pretraining Approach. *arXiv Preprint arXiv:1907.11692*.

- Marwick, A., Lewis, R. 2017. *Media Manipulation and Disinformation Online*. New York: Data & Society Research Institute. <https://doi.org/10.69985/QPAF6919>
- Oddo, J. 2022. Propaganda. In: *The Routledge Handbook of Language and Persuasion*. Routledge. <https://doi.org/10.4324/9780367823658-29>
- Pantti, M. 2010. The Value of Emotion: An Examination of Television Journalists' Notions on Emotionality. *European Journal of Communication* 25(2), pp. 168–181. <https://doi.org/10.1177/0267323110363653>
- Patrona, M. 2022. Snapshots from an Information War: Propaganda, Intertextuality, and Audience Design in the Russia–Ukraine Conflict. *Violence: An International Journal* 3(2), pp. 253–280. <https://doi.org/10.1177/26330024231162636>
- Peruško, Z., Vozab, D., Čuvalo, A. 2020. *Comparing Post-Socialist Media Systems: The Case of Southeast Europe*. Routledge. <https://doi.org/10.4324/9780367226787>
- Rendulic, T. 2023. Media Coverage of Recent Anti-lockdown and Anti-regime Protests in Serbia: The Curious Case of Srbin.info. MA Thesis, University of Graz.
- Reporters Without Borders. 2025. Serbia. <https://rsf.org/en/country/serbia>
- Seawright, J., Gerring, J. 2008. Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly* 61(2), pp. 294–308. <https://doi.org/10.1177/1065912907313077>
- Štětka, V., Mihelj, S. 2024. The Rise of the Illiberal Public Sphere. In: *The Illiberal Public Sphere: Media in Polarized Societies*. Springer. <https://doi.org/10.1007/978-3-031-54489-7>
- Van Atteveldt, W., Peng, T.-Q. 2018. When Communication Meets Computation: Opportunities, Challenges, and Pitfalls in Computational Communication Science. *Communication Methods and Measures* 12(2–3), pp. 81–92. <https://doi.org/10.1080/19312458.2018.1458084>
- Van Dijk, T.A. 1995. Elites, Racism and the Press. *Zeitschrift für Literaturwissenschaft und Linguistik* 25(1), pp. 86–115.
- Van Dijk, T.A. 2013. Ideology and Discourse. In: M. Freeden, M. Stears (eds.), *The Oxford Handbook of Political Ideologies* (pp. 175–196). <https://doi.org/10.1093/oxfordhb/9780199585977.013.007>
- Voltmer, K. 2013. *The Media in Transitional Democracies*. John Wiley & Sons.
- Wahl-Jorgensen, K. 2019. *Emotions, Media and Politics*. John Wiley & Sons.
- Waisbord, S. 2018. The Elective Affinity between Post-Truth Communication and Populist Politics. *Communication Research and Practice* 4(1), pp. 17–34. <https://doi.org/10.1080/22041451.2018.1428928>
- Wodak, R. 2015. *The Politics of Fear: What Right-Wing Populist Discourses Mean*. Sage. <https://doi.org/10.4135/9781446270073>
- Wodak, R., Meyer, M. 2015. *Methods of Critical Discourse Studies*. Sage. <https://doi.org/10.4135/9781036235192>

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