University "St. Kliment Ohridski" – Bitola
Faculty of Education – Bitola
ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

THAT'S INTERNET FOR "SARCASM": SARCASM IN DIGITAL DISCOURSE

Elena Shalevska
Faculty of Education – Bitola, University "St. Kliment Ohridski" – Bitola
elena.shalevska@uklo.edu.mk

Bisera Kostadinovska-Stojchevska
Faculty of Education – Bitola, University "St. Kliment Ohridski" – Bitola
k_bisera@yahoo.com

Abstract

In the digital landscape of now, in which emojis and memes reign supreme, sarcasm is expressed in novel ways – from irregular capitalization (sUcH aS tHis), through the use of certain emojis and exaggerations, all the way to the "embrace" of quotation marks ("see"). Yet sarcasm continues to be difficult to convey online. Which is why Internet users have successfully implemented these and other ways of signaling it.

The literature review conducted for the purpose of this qualitative study reveals that many unique linguistic and non-linguistic means play a crucial role in signaling sarcasm online. By purposefully altering the standard capitalization rules, using emojis, misplaced formal language, too many punctuation marks and obvious exaggerations, users create a visual dissonance that conveys the intended sarcastic tone. Furthermore, to convey insincerity, users also use quotation marks or hashtags as an additional layer of their insincere indication.

This study's findings contribute to a deeper understanding of sarcasm's evolution in digital English.

Keywords: Sarcasm, Digital English, Online Communication, Digital Discourse

1. Introduction

In this digital age of constant text-based communication, conveying nuanced emotions poses a formidable challenge. One such intricate emotion is sarcasm. Bousfield and Clark (2007) define sarcasm as "the use of strategies which, on the surface appear to be appropriate to the situation, but are meant to be taken as meaning the opposite in terms of face management.". As such, sarcasm is a form of verbal irony that relies heavily on context in face-to-face communication. However, in the realm of digital discourse, where things like tone of voice and non-verbal cues are conspicuously absent, the apt and precise transmission of sarcasm remains a conundrum.

In the online environment which focuses heavily on concise messages, the misinterpretation of sarcasm can lead to issues in communication and, potentially, even conflicts. Hence, the ability to clearly convey and understand sarcasm online stands as a crucial skill for digital communicators. Understanding the complexity of sarcasm in the digital discourse, this paper aspires to contribute to the growing body of literature on digital communication.

2. Sarcasm and Irony: Basic Notions

Sarcasm and irony are one of the most complex linguistic phenomena. They have been the topic of research across various disciplines: linguistics, psychology and even computer science. Though similar, however, both terms have unique features and should not be used interchangeably.

Irony is a rhetorical device or figure of speech where the intended meaning of words is opposite to their literal meaning. According to Giora (1995), irony is often used to show a certain contrast between expectations and reality, and its interpretation depends heavily on the context and shared knowledge between interlocutors. Irony is, thus, considered to be broader as a concept. It encompasses various forms, including situational irony, dramatic irony, and verbal irony (Dynel, 2014).

Sarcasm, on the other hand, is considered to be form of verbal irony characterized by a mocking or contemptuous tone whose main goal is to either criticize or ridicule (Attardo, 2000). While irony can be subtle, sarcasm is generally more direct and hostile (Clift, 1999). Unlike irony, which might be used to make humorous or light-hearted remarks, sarcasm often serves as a social corrective, targeting specific individuals or groups and showing disapproval for them (Kreuz & Glucksberg, 1989). In the

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

context of online communication and internet discourse, sarcasm and, more specifically, its detection are challenging – there are no vocal cues and facial expressions to help us understand that someone is being sarcastic (Hancock, 2004).

Some of the features of sarcasm and irony, however, overlap. Thus, it is sometimes difficult to distinguish between the two, Some researchers argue that sarcasm should be viewed as a subset of irony (Wilson & Sperber, 2012), while others advocate for treating them as separate constructs given their different pragmatic functions and effects in communication (Burgers et al., 2012). Burgers et al. (2012) suggest that sarcasm tends to involve a "victim" – someone targeted by the mockery. Irony, according to the authors, does not necessarily have such a target and can function more broadly.

Regardless of the way we choose to define it, both irony and sarcasm are difficult to detect in internet discourse. And if humans struggle to detect them, it is no surprise that NLP (Natural language processing) systems and AI (Artificial Intelligence) models struggle with the computational detection of sarcasm and irony. Research in this area has focused on developing algorithms capable of identifying sarcastic content by analyzing lexical, syntactic, and contextual cues (Joshi et al., 2017). And in this regard, the distinction between sarcasm and irony is important because it affects the design and performance of 1) sentiment analysis models and 2) the accuracy of automated systems in understanding human language (Ghosh & Veale, 2016).

This makes sarcasm and irony an ever-interesting thing to research, both in online and in offline contexts.

3. Broader research context: Linguistic and non-linguistic means of conveying sarcasm

Sarcasm, as the focus of this paper, typically relies on many linguistic and non-linguistic cues to convey meaning. Linguistically, sarcasm is conveyed through different elements, including lexical choices, syntactic structures, and discourse markers. Lexical choices typically involve words or phrases that are overly positive or negative, creating a stark contrast between the literal meaning and the intended sarcastic interpretation (Camp, 2012). For instance, exaggeration or hyperbole is a common tactic, where a speaker may use extreme language to indicate sarcasm (Colston, 1997). Studies have shown that sarcasm frequently employs intensifiers like "so" or "really," or superlatives like "best" or "worst," which help signal an ironic reversal of meaning (Gibbs, 2000).

Syntactically, certain structures can serve as markers of sarcasm. For example, rhetorical questions, conditional clauses, and parallelism can all be used to signal a sarcastic tone (Bryant & Fox Tree, 2005). Rhetorical questions, for one, seem to be widely used, as they imply an answer that is contrary to the literal question, thus signaling the speaker's true intent (Dynel, 2014). But sarcasm doesn't only rely on them. People trying to convey sarcasm also use specific discourse markers, such as "yeah, right" or "as if," which can be a very direct cue for the listener (Dews & Winner, 1999).

Though important, the linguistic means of conveying sarcasm are often not enough. Therefore, there are many non-linguistic means of conveying it, especially in face-to-face communication. For example, prosodic features such as intonation, pitch, stress, and tempo can all signal sarcasm. Research has shown that sarcastic speech often involves a specific tonal pattern, such as a lower pitch, slower tempo, or exaggerated stress on certain words (Cheang & Pell, 2008). Bryant and Fox Tree (2002) found that listeners could reliably identify sarcasm even in "low-pass filtered" speech, where the lexical content is hidden but prosodic cues are kept/shown.

Facial expressions and body language also contribute. Studies in pragmatics suggest that sarcasm is often accompanied by a "knowing smile," raised eyebrows, or eye-rolling, which show the speaker's true intent (Attardo et al., 2003). These cues are critical in contexts where sarcasm might otherwise be vague and hard to detect. Rockwell (2000) emphasizes that the absence of these cues in text-based communication, such as emails or social media posts, can lead to misunderstandings. Thus, he emphasizes the need for explicit sarcasm markers like emojis or punctuation (e.g., "/s" or "!"). Understandably, the lack of non-linguistic cues in digital discourse is an ongoing challenge for sarcasm detection. And as there are no facial expressions, body language, or prosody online, sarcasm must rely on linguistic markers and additional contextual knowledge (González-Ibáñez et al., 2011). Some researchers have also studied the use of emojis or GIFs and their role in imitating non-verbal cues online (Tian et al., 2016). Understanding them is becoming increasingly relevant, especially for the

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

development of more sophisticated sentiment analysis tools and sarcasm detection algorithms in NLP (Joshi et al., 2017).

4. Methods

To investigate sarcasm in the digital discourse, the study adopts a qualitative research design (Janusheva, 2022), focusing on papers detailing both linguistic and non-linguistic elements of sarcasm and how they work together to convey such meaning. The study is descriptive in nature (Kumar, 2014) and the corpus of this study consists of papers that include the keywords:

1. Sarcasm on the Internet;
2. Sarcasm in Digital discourse;
3. Digital Sarcasm
4. Digital Irony
5. Social Media Sarcasm
6. #sarcasm

Other criteria for the review protocol include:
Language: English – only papers written in English are considered;
Type of study: both qualitative and quantitative;
Exclusion criteria: studies not peer-reviewed are not considered.

The two databases of Google Scholar and ResearchGate are thus searched. Some examples found during the research are also included.

Though the study aims to provide a comprehensive overview of the available studies of sarcasm online, it is still inherently limited by the rapidly evolving nature of digital communication and digital English, in general. This could mean that this study's findings may have a limited "shelf-life" as new expressive means online emerge almost daily. As for its ethical integrity, the study strictly adheres to the ethical guidelines regarding research.

This study is based on the research question "What are the existing theories, methods, and findings on the use of sarcasm in online communication?"

5. Systematic overview: Sarcasm in Digital Discourse

Sarcasm relies heavily on context and both verbal and non-verbal clues. And although device-mediated communication cannot fully encompass them all, users have still found various ways to convey sarcasm online. Gordon (2022) analyzes how sarcasm is marked in text-based digital discourse, primarily on social media posts and in messaging apps. He identifies three main ways of marking sarcasm in such communication: explicit (using hashtags or tone indicators), suggested (using emojis or contrasting contexts), and ambiguous (using formatting or broad contexts). Thompson and Filik (2016) elaborate on the use of emojis to mark sarcasm in the online communication realm, claiming that certain emojis (also referred to as "emoticons") can help clarify the sarcastic intention of the speaker. The authors found that, in that period, the winking face emoji and sticking out one's tongue emoji, were mostly used to make up for the lack of nonverbal cues in online communication. Kostadinovska-Stojchevska & Shalevska (2018: 160), in a study exploring the socio-linguistic features of memes, mention that certain emojis (such as the slightly smiling face emoji), were used to denote sarcasm even in their primal form of punctuation marks only (:-)). In the most comprehensive study of digital English to date, McCulloch (2019) notes the extra language elements sometimes used when conveying sarcasm online, such as the use of elements from programming languages (like in: <sarcasm>I fail to see the problem with this</sarcasm>), the use of hashtags (as in #sarcasm), as well as the use of the ~sarcasm tilde symbol, and its alteration, the sparkles emoji (✨). The author notes that in online discourse, users even used whole sentences as sarcastic remarks, as in "Thanks, Sherlock!" as a response to a very apparent, simple deduction.

As for the verbal clues, like the use of exaggerations, and non-literal language (including hyperbole and non-veridicality), Bamman & Smith, (2021: 575) state that linguistic markers that mark sarcasm, often involve the use of interjections, intensifiers, and lexical indicators. Mikhailova (2020) further explores the graphic markers of irony and sarcasm in computer-mediated communication,

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

stating that sarcasm in the online realm marks linguistic creativity and the ability to break communicational barriers.

Outside of social media posts and messaging apps, Chubaryan & Danielyan (2022) analyze the use of sarcasm in English media and news articles, focusing on the linguistic and pragmatic features of sarcastic utterances. Adopting a multimodal discourse analysis approach (focusing not only on the verbal, but also on the visual, auditory, and gestural modes of communication), this study identifies four distinct types of sarcasm: verbal irony, rhetorical questions, hyperbole, and understatement. As for why such sarcasm was used, the authors highlight the functions and effects of sarcasm in media, such as expressing criticism, humor, or solidarity, as well as, influencing the audience's attitudes and opinions. Recognizing this, Frenda (2018) proposes a research project to investigate the role of sarcasm in hate speech online. She argues that sarcasm is a creative linguistic device that can be used to disguise or enhance aggressive messages, making them more difficult to detect and counteract. She also points out that as of now, sarcasm and hate speech detection is lacking and the current methods and resources cannot accurately detect sarcasm.

Sarcasm detection in online communication has also been thoroughly researched. In fact, a multitude of researchers have developed various computational models and datasets to successfully detect sarcasm online. Their detection models often rely on multimodal information, combining verbal and non-verbal cues, as well as contextual information, to improve sarcasm detection accuracy (Castro et al., 2019). For instance, Ptáček et al. (2014) focus on multilingual (English/Czech) sarcasm detection, especially on Twitter threads. Using a machine learning approach, they use a self-made corpus of 7,000 manually labeled tweets in Czech and compare it with an English corpus of 100,000 tweets, in which the hashtag #sarcasm is used as an indicator of sarcasm. They have found that the language-independent approach significantly outperforms adapted state-of-the-art methods in English (F-measure 0.947) and also represents a strong baseline for further research in Czech (F-measure 0.582). In a similar manner, Dimovska et al. (2018) also aim to detect irony and sarcasm in microblogging posts, by using a corpus of 3834 diverse tweets from the SemEval2018 challenge. The study's findings reveal that text preprocessing has minimal impact on the detection results, while word and sub-word frequencies emerge as the most effective characteristics for identifying irony in tweets.

All in all, the studies mentioned above provide valuable insights into the complexities of sarcasm in the digital discourse and its detection.

5.1. Other Linguistic Markers Observed

During the research for this paper, the authors encountered several notable examples of sarcasm markers in online discourse – examples they felt were important to include.

5.1.1. Irregular Capitalization

Some examples of random, irregular capitalization of alternating capital letters (also referred to as "sticky caps"), "SuCh aS tHiS", were identified as a prominent sarcasm marker. Typically, one would repeat a person's statement, using alternating caps, to mock them and thus, convey sarcasm, as in:

[1] @SpongebobMockMe:
Friend: "I don't wanna drink tonight."
Me: "i DoN't WaNnA dRiNk ToNiGhT..."

This form of irregular capitalization (often used alongside the meme/picture 1 from: New York Times - Sponge Bob Meme) is used to convey a mocking tone. This capitalization was popularized by the so-called Sponge Bob meme in 2017. In this popular meme, the main character of the cartoon – Sponge Bob Squarepants stands in a funny manner. The image was/is accompanied by text in alternating caps, imitating and mocking what the other person/character has said. Although this meme popularized this practice, the notion of using alternating capital letters to impair word identification dates from the 70's. Coltheart and Roger (1974) in an experiment, found that the alternating-case condition significantly influences readability even when the character size is the same for all of the characters used.

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

Figure 1. Sponge Bob Meme

5.1.2. Use of Overly Formal Language

This marker, observed during the research, serves as a form of verbal irony. It involves the use of language that is more formal, sophisticated, or verbose than is typically expected in a given context. By using words typically reserved for the formal register in a casual context, the speaker can express disapproval or mockery and can sarcastically emphasize the absurdity of something or someone. This is also often seen in parody, where the exaggeration of formality becomes a tool for satire. The elevation in language style can seem out of place, making it evident to readers or listeners that the speaker is intending to be humorous or sardonic, as in:

[2] @grassinthesnake:
I am profoundly impressed by your grasp of facts, logical arguments and the English language.
A tweet to rank with such greats as "I want my mummy " "Trump is great" and "who used the last piece of toilet paper now I'll have to use my fingers"

5.1.3. Over- or Understatements

An overstatement is an exaggerated expression that shows something as being beyond reasonable limits. When used sarcastically, the exaggeration is so extreme that it becomes obvious the speaker does not truly mean what they are saying. Contrary to that, an understatement is a deliberate minimization of a situation's significance. So, it downplays something obvious or dramatic to highlight its absurdity, as in:

[3]@IrishRebel1965:
Nothing to see here folks, just Mikey and his mates getting excited at the thought of their fantasies of mass m*rder coming true

5.1.4. Fixed phrases

Fixed phrases like "No shit, Sherlock" come with an established, culturally understood meaning that conveys sarcasm or mockery. These phrases are often used in response to a statement that is overly obvious or unnecessary.

As a response to a tweet that stated "Corruption review finds 'red flags' in more than 130 Covid contracts ", user (@DanielRigal1) replied by sarcastically saying: No sh*t Sherlock, therefore using this fixed phrase to convey mockery and sarcasm.

5.1.5 The hashtag #sarcasm

The hashtag #sarcasm is often appended to a post or comment to make it clear that the preceding statement should not be taken literally. This explicit signal helps prevent confusion or misinterpretation.

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

Some people criticize the use of #sarcasm because it removes the nuance and cleverness that often accompanies well-crafted sarcasm. Part of the humor or wit in sarcasm lies in its subtlety and the audience's ability to "get it" without needing an explicit label. Using #sarcasm can be seen as "spelling it out" too much, making the sarcasm feel less sophisticated. This is best seen in:

[5] @GraceMothering

I think it's weird when men dance. Men shouldn't be coordinated. Coordination is effeminate. #sarcasm *cause some of y'all are so gullible.*

5. Closing Remarks

Conveying sarcasm online is a challenging task and a task that would not be possible without some overt markers found by many researchers. These markers, as per the literature review, act as substitutes for the non-verbal cues and help reduce ambiguity in digital English. Multiple authors' findings suggest that there's more to explore and understand in the ever-changing landscape of online linguistic expression. Sarcasm is not easy to convey nor pick up so the main advice would be: When in doubt, maybe don't overdo it?/s

References

Attardo, S. (2000). Irony as relevant inappropriateness. Journal of Pragmatics, 32(6), 793-826.

Attardo, S., Eisterhold, J., Hay, J., & Poggi, I. (2003). Multimodal markers of irony and sarcasm. Humor, 16(2).

Bamman, D., & Smith, N. A. (2021). Contextualized sarcasm detection on Twitter. Proceedings of the International AAAI Conference on Web and Social Media, 9(1), 574-577. DOI: https://doi.org/10.1609/icwsm.v9i1.14655

Bousfield, D., & Clark, B. (2007). Never a truer word said in jest: A pragmastylistic analysis of impoliteness as banter in Henry IV, Part I. Contemporary Stylistics, 195–208.

Bryant, G. A., & Fox Tree, J. E. (2002). Recognizing verbal irony in spontaneous speech. Metaphor and Symbol, 17(2).

Bryant, G. A., & Fox Tree, J. E. (2005). Is there an ironic tone of voice? Language and Speech, 48(3), 257–277. DOI: https://doi.org/10.1177/00238309050480030101

Burgers, C., van Mulken, M., & Schellens, P. J. (2012). Verbal irony: Differences in usage across written genres. Journal of Language and Social Psychology, 31(3), 290-310.

Camp, E. (2012). Sarcasm, pretense, and the semantics/pragmatics distinction. Noûs, 46(4).

Castro, S., Hazarika, D., et al. (2019). Towards multimodal sarcasm detection (an obviously perfect paper). Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics. DOI: https://doi.org/10.18653/v1/p19-1455

Cheang, H. S., & Pell, M. D. (2008). The sound of sarcasm. Speech Communication, 50(5), 366-381.

Chubaryan, A., & Danielyan, H. (2022). A multimodal discourse analysis of sarcasm in English media and news articles. Armenian Folia Anglistika: International Journal of English Studies, 18(2), 59-71. DOI: https://doi.org/10.46991/AFA/2022.18.2.059

Clift, R. (1999). Irony in conversation. Language in Society, 28(4), 523-553.

Colston, H. L. (1997). Salting a wound or sugaring a pill: The pragmatic functions of ironic criticism. Discourse Processes, 23(1), 25-45.

Dews, S., & Winner, E. (1999). Obligatory processing of the literal meaning of ironic utterances: Further evidence. Metaphor and Symbol, 14(3).

Dimovska, J., Angelovska, M., et al. (2018). Sarcasm and irony detection in English tweets. Proceedings of the 10th International Conference, ICT Innovations 2018, Ohrid, Macedonia.

Dynel, M. (2014). Isn't it ironic? Defining the scope of humorous irony. Humor: International Journal of Humor Research, 27(4), 619-639.

Ghosh, D., & Veale, T. (2016). Fracking sarcasm using neural network models. Proceedings of the 7th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis, 161-169.

Giora, R. (1995). On irony and negation. Discourse Processes, 19(2), 239-264.

González-Ibáñez, R., Muresan, S., & Wacholder, N. (2011). Identifying sarcasm in Twitter: A closer look. Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies.

Gordon, B. G. (2022). Yay…, □, and #Sarcasm: Exploring how sarcasm is marked in text-based CMC. University Honors Theses. Paper 1236. DOI: https://doi.org/10.15760/honors.1267

ISSN: 1857- 8888
DOI: 10.20544/teacher.28.12

Hancock, J. T. (2004). Verbal irony use in face-to-face and computer-mediated conversations. Journal of Language and Social Psychology, 23(4), 447-463.

Janusheva, V. (2022). Kvalitativnite istražuvanja vo naukata za jazikot. Bitola: Pedagoski fakultet.

Joshi, A., Sharma, V., & Bhattacharyya, P. (2017). Harnessing context incongruity for sarcasm detection. Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics, 986-996.

Kostadinovska-Stojchevska, B., & Shalevska, E. (2018). Internet memes and their sociolinguistic features. European Journal of Literature, Language and Linguistics Studies, 2(4). Retrieved from: https://zenodo.org/record/1492894

Kreuz, R. J., & Glucksberg, S. (1989). How to be sarcastic: The echoic reminder theory of verbal irony. Journal of Experimental Psychology: General, 118(4), 374-386.

McCulloch, G. (2019). Because internet: Understanding the new rules of language. Riverhead Books (Penguin, US).

Mikhailova, P. (2020). Graphic markers of irony and sarcasm in written texts. Proceedings: Speech and Computer: 22nd International Conference, SPECOM 2020, St. Petersburg, Russia, 346–356. DOI: https://doi.org/10.1007/978-3-030-60276-5_34

Ptáček, T., et al. (2014). Sarcasm detection on Czech and English Twitter. Proceedings of COLING 2014, the 25th International Conference on Computational Linguistics: Technical Papers, 213–223.

Rockwell, P. (2000). Lower, slower, louder: Vocal cues of sarcasm. Journal of Psycholinguistic Research, 29(5).

Thompson, D., & Filik, R. (2016). Sarcasm in written communication: Emoticons are efficient markers of intention. Journal of Computer-Mediated Communication, 21(2), 105-120. DOI: https://doi.org/10.1111/jcc4.12156

Wilson, D., & Sperber, D. (2012). Explaining irony. In Meaning and relevance (pp. 123-145). Cambridge University Press.

Excerpts/Examples:

[1] @SpongebobMockMe. 2017. https://twitter.com/SpongebobMockMe/status/870853397012000768
[2] @grassinthesnake. 2022. https://twitter.com/grassinthesnake/status/1564323564177821696
[3] @IrishRebel1965. 2024. https://x.com/IrishRebel1965/status/1833221916796326219
[4] @DanielRigal1. 2024. Daniel Rigal □□ on X: "No shit, Sherlock." / X
[5] @GraceMothering. 2024. https://x.com/GraceMothering/status/1832448347237707916