Contrasting Dimensions behind the Use of Irony and Humour in Times of Crisis: Covid and the Ukrainian War

Laura Alba-Juez

Universidad Nacional de Educación a Distancia, Spain lalba@flog.uned.es

Abstract

In this article the discourse of irony and humor is explored in two sets of memes generated in times of crisis, namely the recent Covid pandemic and the ongoing Russian invasion of Ukraine. Different versions of macro memes are examined in both sets through the lens of the Inferred Contradiction Theory of irony (Alba-Juez, 2014). The main research questions were: 1) What type(s) of irony is/are exploited to make the memes humorous? 2) What type of inference is found in the inferred contradiction that is essential for the comprehension of the ironic humor in the memes? 3) What is the main function of the irony (and humor) in the memes? A qualitative discourse-pragmatic analytic method was used, together with a simple quantitative analysis of the types of irony used. The analysis shows that the humorous irony in the memes is always based in some kind of contradiction that has to be inferred at some discourse-linguistic level, displaying instances of not only propositional but also illocutionary irony, as well as other kinds of irony where the inferred contradiction is found in the subplicit information that is shared by the interlocutors, or even in the images shown. The results reveal that most of the jokes in the memes were sarcastic and thus the inferred contradiction led to the negative evaluation of some person or situation. The irony in the majority of the memes was of the conversational, negative and propositional types, and the functions fulfilled by the ironic humor were found to serve contrasting and contradictory motivations (aggressiveness towards the out-group and affiliation with the in-group), as well as that of amusing the readers.

Keywords: irony, humour, Covid and Ukrainian war memes, Inferred Contradiction Theory of irony

Streszczenie

Kontrastowość ironii i humoru w czasach kryzysu: Covid i wojna na Ukrainie

Niniejszy artykuł analizuje dyskurs ironii i humoru w oparciu o dwa rodzaje memów wytworzonych w czasach kryzysu, a dokładniej podczas pandemii Covid-19 oraz obecnej inwazji Rosji na Ukrainę. Różne wersje makromemów zostały przeanalizowane w dwóch zestawach, wyodrębnionych przez pryzmat Inferred Contradiction Theory czyli teorii wywodzącej powstanie ironii z ukrytych sprzeczności, których istnienie należy wywnioskować z

dyskursu (Alba–Juez 2014). Główne pytania badawcze dotyczyły następujących kwestii: 1) Jaki rodzaj/e ironii został/y zastosowany/e, aby uczynić memy zabawnymi? 2) Jaki rodzaj wnioskowania kryje się w ujawnionej sprzeczności, której obecność jest niezbędna dla zrozumienia ironicznego humoru memów? 3) Jaka jest główna funkcja ironii i humoru w memach? W niniejszym badaniu zastosowano jakościową metodę analizy dyskursu i pragmatyki, połączoną z prostą analizą ilościową, dotyczącą rodzajów zastosowanej ironii. Przeprowadzona analiza wskazuje, że ironia humorystyczna w memach zawsze opiera się na jakiejś sprzeczności, którą należy wywnioskować na pewnym poziomie dyskursywnojęzykowym, odnosząc się nie tylko do ironii zdania, ale także do ironii illokucyjnej oraz innych rodzajów ironii, w których wywnioskowana sprzeczność znajduje się w ukrytej informacji przekazywanej przez rozmówców lub nawet w ukazanych obrazach. Uzyskane rezultaty wskazały, że większość żartów w memach miała charakter sarkastyczny, to znaczy, że wywnioskowana sprzeczność prowadziła do negatywnej oceny danej osoby czy sytuacji. Ironię obecną w większości memów można zaklasyfikować jako konwersacyjną, negatywną i propozycjonalną, zaś funkcje humoru ironicznego służyły ukazaniu kontrastujących i przeciwstawnych motywacji (agresja wobec grup zewnętrznych i przynależność do grupy własnej), jak również rozbawieniu czytelników.

Słowa kluczowe: ironia, humor, memy o epidemii Covid i wojnie na Ukrainie, Teoria Wywnioskowanych Sprzeczności

1. Introduction

In this work I look into the discourse of irony and humor in two sets of memes generated in times of crisis, specifically the recent Covid pandemic and the ongoing Russian invasion of Ukraine. I examine them from the perspective of the Inferred Contradiction Theory of irony (Alba-Juez 2014). As will become apparent, the motivations behind the use of the memes vary, for they may be ill-affected when spreading conspiracy theories and fake news, or they may be motivated by the good will of lifting the spirits of people who are going through a crisis. In relation to this, it is also shown how the use of irony and humor can be driven by opposite forces such as aggression vs. affiliation, or by both at the same time.

The Covid memes belonging to the first set of memes in the corpus were used by supporters of conspiracy theories to spread distorted information about the Covid-19 pandemic through the media and social networks, and thus became a vessel for disinformation about this healthcare crisis. Memes are thought to be more effective in this regard because they contain visual information together with (sarcastic) jokes and are therefore perceived faster by the human brain than a simple text (Holm 2021). Thus, they can quickly turn from satire to an effective tool to spread misleading information, which can amplify the emotional reaction of the receiver.

The Ukrainian war memes were selected from a variety of internet memes that have circulated in the media and social networks (Twitter, Instagram, etc.), which has been

interpreted by the Ukrainians (e.g., Antoniuk 2022) as an easy and quick way to keep people engaged and informed, apart from offering some relief from the traumatic experiences of war.

Working on this corpus, I examine different versions of macro memes for both sets, and I offer my approach to verbal irony as a theoretical tool for analysis, showing how this phenomenon intertwines with humor and the evaluative and emotive functions of language and discourse. Using a qualitative discourse-pragmatic analytic method, I explore how irony (and the humor often co-occurring with it) exploits subtle clashes or contradictions that can be found not only at the proposition level, but at other linguistic and discursive levels. I also present quantitative results as to the frequency of use of the different types of irony exposed and described in the theoretical framework (Section 2).

The theoretical approach adopted is also used to unveil the functions fulfilled by the ironic humor in the memes, as well as to explain and elucidate how irony and humor can serve the above-mentioned contrasting and sometimes co-occurring purposes that exploit both the aggressive and affiliative dimensions of irony and humor (cf. Martin *et al.* 2003, Besser and Zeigler-Hill 2011), depending on different contextual and intertextual variables.

2. Theoretical background

Internet memes are cultural items (i.e., ideas, behaviors, or styles) that are spread via the Internet. Important characteristics of memes are their susceptibility to parody, their use of intertextuality and their propagation in a viral pattern. The term *Internet meme* was coined in 1993 by Mike Godwin, but the term meme was originally coined by Dawkins (1989) in an attempt to explain how aspects of culture replicate, mutate, and evolve.

The corpus studied here is a good sample of the way in which human beings can resort to irony and humor through internet-spread memes to deal with tragic situations and thereby propagate certain cultural aspects and certain opinions and emotions. On some occasions the objectives of the creator of the memes may be more respectable than others, but in any case, irony and the humor accompanying it become useful weapons to influence not only other people's views on the phenomenon in question, but also their moods. It is considered relevant, therefore, to describe and theoretically explore these two phenomena (irony and humor) as the necessary basis for our analysis.

2.1. Verbal vs. situational irony

The use and interpretation of irony is a good example of a mechanism that shows the complexity of the human mind because, among other things, it always requires the working out of some kind of inference. There are two major types of irony, namely *verbal irony*, and *situational irony*. Verbal irony is linguistic in nature and therefore the inference necessary for its elucidation is based on the language used (e.g., when a speaker thinks her interlocutor is stupid and she says *How clever of you!*). Situational irony, in contrast, is non-linguistic and depends on the situation for its comprehension (e.g., a fire station that burns down). As we shall see in the memes, both verbal and situational irony can co-occur, making the zone in between these categories a fuzzy one at times.

2.2. Theories of irony

The concept of irony is a slippery one, for it is a very complex and multifaceted phenomenon. For that reason, there have been many scholarly attempts to define and characterize it, and as Roy (1978) noted more than forty years ago, irony versus non-irony is not a binary distinction but rather a continuum. Thus, from the beginnings of philosophical and linguistic reflection, irony has been tackled as a relevant topic of research, and several theories about its essence have been set forward. In what remains of this section I will only refer to some of them, due to lack of space and because my analysis will mainly draw from the *Theory of Inferred Contradiction* (2.3.).

Classical and traditional perspectives (Socrates, Cicero, Quintilian, Johnson 1755) have approached irony as a trope, and have defined it as a figure of speech meaning the opposite of the literal meaning of the proposition uttered. All traditional approaches are proposition-based, but as some authors have argued (e.g., Colston 2017), these approaches are not totally adequate, for ironic meanings can go much beyond the opposite of the proposition.

In the 20th century a few cognitive theories were developed, such as Sperber and Wilson's (1981) *Echoic Mention/Interpretation Theory* (claiming that all cases of irony are instances of echoic interpretation of some previous thought, idea, or utterance), Clark and Gerrig's (1984) *Pretense Theory* (claiming that the ironist is always pretending to use one proposition in order to get across its contradictory one), and Kreuz and Glucksberg's (1989) *Echoic Reminder Theory* (claiming that ironic expressions always remind the listener of some previous thought, comment, expectation, or hope).

Grice's (1975, 1978) *Theory of Implicature* was the basis for several approaches to verbal irony, the explanation being that the ironic speaker normally flouts the Maxim of Quality (but can also flout any of the three other Maxims of the Cooperative Principle) by being overtly insincere, thus making the listener work out an implicature after rejecting the literal meaning of the utterance in question. Within the neo-Gricean approach, some attempts have been made to modify the Gricean view of irony, such as Dynel (2017), who argues it should encompass *verisimilar irony*, i.e. "irony rooted in truthful statements, which communicate what the speaker believes to be true" (2017: 5).

Attardo's (2000) *Theory of Irony as Relevant Inappropriateness* is worth mentioning as one of the best-known in the 21st century. Attardo claims that "irony is essentially an inappropriate utterance which is nonetheless relevant to the context" (2000: 31), which indeed shows a true aspect of verbal irony, as the other above-mentioned theories have tried to do, although most of them do not cover all possible occurrences of the phenomenon. My intention with the *Theory of Inferred Contradiction* was to embrace as many occurrences of its manifestation as possible, as I will succinctly show in 2.3.

2.3. Irony as inferred contradiction

In Alba-Juez (2014) I revisited and further developed my original theoretical approach to irony (Alba-Juez [1996] 2001), which I apply in this work for the identification and analysis of irony in the memes. My point of departure is that verbal irony is a pragmatic phenomenon, where elements such as context, meaning nn, speech acts, understatement, implicature, and all kinds of inference are crucial for its use and comprehension. Grice's notion of implicature provided linguistic analysts with an explicit account of how it is possible to mean more than is actually said. However, there's more to irony than just conversational implicature; the inferences leading to an ironic interpretation cover a wider spectrum, going from syllogisms through entailments, explicatures, implicitures (Bertucelli Papi 2000), or presuppositions, to inferences about subplicit meanings (the latter generally having to do with the attitudes perceived). In short and essentially, one of the key characteristics of verbal irony is that it plays with implicit meanings.

The other crucial feature of irony is contradiction: in all cases of the phenomenon, we find a contradiction at some discourse-linguistic level. It is not, however, an overt contradiction expressed openly, but a covert contradiction that has to be inferred. This is why I believe that the essence of irony, i.e., the feature that defines and describes it and covers all its possible occurrences, is **inferred contradiction**. The fact that I have chosen to focus on the receiver of

157

the irony by using the term *inferred* does not mean that attention is not given to the intentions of the speaker; in fact, we are here dealing with implicit meanings (i.e., meanings intended and implied by the speaker), but intentions are not always understood or detected by interlocutors, and therefore it was thought more appropriate to look at the phenomenon of irony from the perspective that is agreed by the interlocutors (i.e., the meaning that was implied and also successfully inferred by the receiver).

Compare (1) with (2):

- (1) You are clever and you are stupid.
- (2) How clever of you! (when the interlocutor has done something stupid)

In (1) we see an example of an open, directly expressed contradiction, which is not interpreted as attempted irony on the part of the speaker. The utterance in (2), however, given the appropriate context in which the interlocutor has done something the speaker considers stupid, will normally be interpreted as ironic. This is a prototypical case of verbal irony in which the contradiction is found at the level of the proposition, and therefore obeys the following simple formula:

X is Y = X is not Y

However, the inferred contradiction inherent to verbal irony is not always found at the level of the proposition. In (3), for instance, we see a contradiction at the level of the speech act, in a situation where the speaker is reproachful about her son's behavior when he made her feel embarrassed:

(3) Congratulations on your behavior this morning!

Here we find an apparently expressive act (congratulating) that is in fact functioning as directive act of reprimand and/or reproach. The intended meaning here is not to congratulate but to imply in a reproachful manner that the boy's behavior left much to be desired. So, we are here facing a case of illocutionary irony where there is a contradiction between the form and the function of the speech act involved, whose formula is the following.

Type X speech act = Type Y speech act

The inferred contradiction can also be at the discourse-pragmatic level of the politeness strategy, or just the expectations of the interlocutors. Consider (4) and (5):

- (4) Thank you for being so considerate! (A man to his brother when the brother has obviously been inconsiderate)
- (5) Our friends are always there when they need us! (Jokingly, when they have asked their friends for help and have not received it)

In (4), apart from the contradiction of speech acts (the man is apparently thanking his brother when in fact he intends to be reproachful), we find a contradiction of politeness strategies. The utterance has the form of an on record positive politeness strategy (Brown and Levinson 1987) when it is actually functioning as an off record strategy (Be ironic).

In (5) we find a contradiction of expectations, for the beginning of the utterance suggests that the subordinate clause used should be "when we need them", and in contrast, the speaker has said "when they need us", which changes the picture completely and thereby turns the idiomatic expression into a non-idiomatic and ironic one, whose meaning is contrary to the expectations that people normally have from friends in a situation when they were needed.

As will be shown in the analysis presented in Section 4, in the case of memes, whose meaning depends not only on the words used but the images accompanying them, sometimes the source of the contradiction is the incongruity created by an image that is not in agreement with the words. An example of this is Meme 12 in Section 4.2. below, where the image shows a woman giving the middle finger "F*ck you" sign to the Russian troops, but the words accompanying it say: "Ukrainian woman welcomes Russian troops".

Notice that, as I have clarified in previous work (Alba-Juez 2014), inferred contradiction should not be taken as a synonym of indirect negation, for an indirect negation does not necessarily have to be ironic.

Considering all of the above, it is clear that the inferences leading to an ironic interpretation may be of different kinds, and based on this fact we find three main types of irony (cf. Alba-Juez [1996] 2001):

1) **Conversational irony**: the irony that is worked out by means of a conversational implicature, i.e., the one triggered by the flouting of any of the four Gricean Maxims (Quality, Quantity, Manner, or Relation).

- 2) **Conventional irony**: the irony worked out by means of "short-circuited" implicature" (Morgan 1978), which has therefore been conventionalized.
- 3) **Non-implicature irony**: the irony that is worked out by means of inferences other than conversational or conventional implicatures, such as explicatures or subplicit inferences, the latter normally being related to the interlocutors' attitudes (cf. Bertucelli Papi 2000).

Irony has indeed a lot to do with attitudes, evaluation, and emotion. I now turn to this.

2.4. Irony, emotion, and evaluation

If irony is viewed from the point of view of the attitudes and evaluations implied by the ironist, we may speak of three different kinds (Alba-Juez [1996] 2001):

- (a) **Negative irony or sarcasm**: the irony in the form of praise that is nevertheless intended to criticize and therefore shows a critical or negative attitude towards the hearer, a third party, or the speaker herself. Example (2) above is a prototypical example of this kind of irony. This is by far the most frequent type of irony (cf. Alba-Juez and Attardo 2014), in which there is normally an implied negative evaluation of someone or something. In the corpus examined for this work, 94% of the ironic memes found were of the negative or sarcastic type (see Table 1 in Section 4.3.).
- (b) **Positive irony**: the kind of irony also known as *asteism*, where we find criticism or an apparent negative attitude which is in fact intended to praise or show a positive attitude and evaluation of somebody or something. E.g., A mother who, after reading her daughter's report-card full of straight As, says jokingly: *Your grades really worry me!*, obviously implying that they don't worry her at all and that she is proud of her daughter.
- (c) **Neutral irony**: the kind of irony that is not focused on attitude, but on one of the other main functions of irony, which is to amuse. So here there is no intention to praise or to criticize, but to simply be humorous based on an implied incongruity or contradiction of some sort. E.g., A speaker who at the end of her talk says *Sorry*, *my speech was too long because I did not have the time to make it shorter*, obviously trying to elicit her audience's laughter.

As is apparent, emotion and evaluation are very much related and intertwined, although they are not exactly the same phenomenon. As will be shown, the two sets of memes that form part

of the corpus scrutinized in this study contain examples of irony that exploits inferences about the evaluations and emotions expressed or intended to elicit in the readers.¹

2.5. Irony and humor

Humor and irony often work together and complement each other, although they can also operate independently. There are cases of irony that are not humorous or perceived as such (especially by the irony victim/s), and vice-versa, there are cases of humorous discourse that are not ironic. Sarcastic negative comments will most surely not be perceived as humorous by the person/s being attacked by them. They may be humorous to a third party who allies with the ironist in the criticism of the victim, thereby enhancing rapport by excluding others. All this shows that the same ironic utterance may be perceived as humorous or not, depending on who the interlocutor is. In this line of thought, Norrick (1994: 409) points out that conversational joking is associated with aggression but also with rapport, and with disrupting conversation but also with intensifying cohesion.

Many other linguistic and psychological studies have scrutinized the convergence of irony and humor. Nash (1985), for instance, views irony as an indisputably major stylistic resort within humor, given that even some aggressive forms of joking reframe the interaction as play, as is the case with customary joking relationships. Freud (1905: 139) defines joking as an activity which aims at deriving pleasure from mental processes, whether intellectual or otherwise, and sarcastic jokes are included within what Freud denominates "tendentious jokes". He considers irony to be one of the refinements of civilization, associated with cleverness or intelligence, which has come as a replacement for human brutal activity, now forbidden by law.

The use of irony, thus, reflects the ironist's witty inventiveness, and as such it is a useful weapon to influence other people's stance or emotions, as is the case with the ironic-humorous memes that compose the corpus of this study. In addition, the humor and irony in the memes attends to different dimensions² and may therefore fulfil an affiliative function (for members of the in-group) or an aggressive function (directed at members of the out-group), thereby resorting to alterity strategies³.

The difference between affiliative and aggressive humor should not be taken as a dichotomy where pertaining to one category excludes the possibility of pertaining to the other, for as

¹ See Alba-Juez and Thompson (2014) for the characterization of evaluation followed in this work, and Alba-Juez and Mackenzie (2019a) for that of emotion in discourse.

² See the four dimensions of humor by Besser and Zeigler-Hill (2011) in an adaptation of Martin *et al.* (2003).

³ For a more detailed explanation of the phenomenon of alterity or otherness, see Alba-Juez (2021).

Žákovská *et al.* (2023, in press) have argued, and as I shall show is the case with most of the Covid and Ukraine memes, this distinction is not a clear-cut one: the affiliative function is present in both sets of memes with respect to the people who support the ideas defended in them, and the aggressive function is present in many of them at the same time, but directed towards the people who do not believe in the same ideas or those who are perceived as the enemies. Studies such as Maíz-Arévalo and Yus-Ramos (forthcoming) show that the most recurrent dimension of humor in Covid memes is the affiliative one. In our Covid corpus, however, the dimension that prevails is the aggressive one, as they are all examples of fake news or conspiracy theories. This is apparent in Meme 1, where the conspiracy theory about Bill Gates microchipping humanity through the Covid vaccines is sarcastically presented.



Meme 1: Conspiracy theory about Bill Gates inserting microchips in the Covid vaccines.

As anticipated, even though the aggressive dimension is the one that seems to prevail in the Covid memes supporting fake news or conspiracy theories, they can always be seen as affiliative with respect to the people who choose to believe this kind of news and misinformation. There is a third dimension and function of irony and humor contemplated in Alba-Juez ([1996] 2001), namely, the obvious amusement function that is inherent to humor and is also widely fulfilled by ironic discourse. All these functions and dimensions will be explored in Section 4.

3. Methodology

The corpus used for the analysis of irony and humor in times of crisis consists of 100 memes⁴ that were spread in the media and social networks on the explosion of two important crises of our time: the Covid pandemic (50 memes) and the Ukrainian war (50 memes). Most of the memes' texts were originally written in English, and those who were in other languages always

⁴ The internet sources of these memes are listed at the end of this article.

had a translation into English attached to them. In these cases, the coding of the memes as ironic or non-ironic was always made based on the English version.

As Attardo (2023) explains, most memes on the internet belong to a given type of 'macro-meme'. For instance, regarding the Covid pandemic crisis, different versions of the 'Bill Gates macro meme' circulated on the Internet, and with respect to the Ukrainian war crisis, different versions of the 'Saint Javelin macro meme' have circulated and been exploited in an ironic way. For the sake of organization, in this work the memes were first divided and labeled according to the macro meme to which they belonged and were then analyzed considering the research questions initially posed.

The memes were examined manually in search of their exhibiting ironic- humorous potential, gaged by the presence of some form of inferred contradiction as the central property of all irony. For the sake of inter-coder reliability, the memes in both sets of corpora were given to two anonymous speakers of English as L1, who were asked to identify those which they considered to be ironic. Their classification of the memes and the distinction made of them into ironic and non-ironic coincided in 98% of the cases with that of this researcher. The memes that were found to be humorous but not ironic were discarded, and therefore the memes eventually used for the analysis were only those in which irony was found to be the source of humor.

The analysis performed was of the qualitative kind, focused especially on the use of irony and humor as a means to spread (mis)information about the two crises. A brief quantitative analysis of the different types of irony used in the memes was also made in relation to the main research questions, which were the following:

- 1) What type(s) of irony is/are exploited to make the memes humorous?
- 2) What type of inference is found in the inferred contradiction that is essential for the comprehension of the ironic humor in the memes?
- 3) What is the main function of the irony (and humor) in the memes?

4. Corpus analysis

As noted in Section 2, memes are considered an important part of Internet culture, and as such, they rely heavily on intertextuality. They appear in a range of contexts, such as marketing, economics, finance, politics, social movements, religion, and healthcare. They are thought to be effective tools to spread information because they are usually based on well known, recognizable pictures, and for this reason, among other things, they have become a developed research area within linguistics and discourse analysis.

With the addition of a sarcastic joke, a meme can quickly become an effective tool to instill certain emotions on its readers, with pieces of information that may be misleading or not, depending on the case and circumstances in which it is published. As anticipated in Sections 1 and 2.5., the memes examined in this study may have an aggressive or an affiliative dimension, or they may fulfil both functions simultaneously (attacking the outgroup and affiliating with the in-group), at the same time they also fulfil the function of amusing their recipients. Ironic humor is used indistinctively to achieve these ends in the forms and types that will be scrutinized in the analysis that follows.

4.1. The Covid memes

Regarding the Covid memes, it is important to note that the rise of mis/disinformation about the pandemic, and especially about the safety and effectiveness of the vaccines, was fueled by the deep penetration of social media (Nguyen and Catalan-Matamoros 2022). The actors behind this disinformation took advantage of the fact that people are emotional beings, and as such, they not always contrast the information they receive with reliable sources. Given the fact that the information on social networks and the internet not always needs to undergo editorial curation or scientific check, it was not uncommon to find at the time a chaotic mixture of scientific, pseudo-scientific, and non-scientific views, resulting in a considerable amount of fake news and conspiracy theories about everything having to do with the Covid-19 pandemic, and especially, with the vaccines.

As is common with the reception of fake news, some people tend to be caught in the confirmation bias fallacy (cf. Alba-Juez and Mackenzie 2019b), by means of which they develop an exclusive network of contents and connections with people having similar or equal beliefs and attitudes, and therefore they only read the information that confirms their biases, irrespective of its truthfulness. Indeed, some studies (e.g., Mitra *et al.* 2016; Schmidt *et al.* 2018) on the treatment of vaccines in the social media showed that social media not only recruit anti-vaccine people but also fortify their beliefs over time, and that selective exposure leads to polarization of pro- and anti-vaccine groups.

The misinformation and 'infoxication' found in the Covid memes revolve mainly around conspiracy theories having to do with the vaccines, but within these, we find different subtypes of macro memes, such as the 'Feel good/great meme' or the 'Bill Gates meme', among others.

4.1.1. The "Feel good" macro meme

Consider Memes 2 and 3, both instances of the "Feel good/great" meme, where a contradiction is inferred from the clash between the images and the words supposedly uttered by the men in the pictures:



Memes 2 and 3: Sarcastic "feel good" joke about the effects of the Covid vaccine.

Here the contradiction is inferred from the proposition uttered (in Meme 2) or supposedly uttered (in Meme 3) by the people in the picture, who are obviously not feeling great or good after the injection, given their deformed and ill-looking appearance. The irony is thus of the negative/sarcastic type and is worked out by means of a conversational implicature (as a result of the flouting of the Quality Maxim), evoking and very possibly instilling in the readers negative emotions of fear, anxiety, or mistrust in science and medicine. The dimension and function exploited in these memes, therefore, is the aggressive one, attacking science and the Covid vaccine creators and researchers.

4.1.2. The Bill Gates macro meme

Meme 1 above is an example of this type of meme, through which the growth and diffusion of conspiracy theories was stimulated. By means of it, Bill Gates was used as the target of the irony, as someone who supposedly aimed to control or depopulate humankind by microchipping the Covid vaccines. This type of meme aims at triggering inferences leading to the thought that the virus was created artificially, thereby generating a feeling of distrust. But the irony here is not at the level of the proposition and is not triggered by conversational implicature, because, as is depicted by the creators of the meme, Bill Gate's intention is not supposed to imply that the people should not trust him, but to lie, which is very different. Thus, we are here facing a case of non-implicature irony, where the inference is subplicit (Bertucelli Papi 2000) and not intended by the (supposed) speaker but worked out by the readers based on the linguistic,

graphic, and contextual information given in the meme. The shared beliefs (not only through memes, but also through other forms such as articles and videos in different media and social networks) of the anti-vaccine conspirators are part of the contextual and intertextual information here, considering the above-mentioned information bias tendency within people who are prone to believe these theories without checking the scientific facts. Meme 4 is another example of the Bill Gates type of meme:



Meme 4: Bill Gates conspiracy theory type meme

The humor and irony of this meme lie in the inferred contradiction created by the supposed confidence of the writer in very dangerous things such as having a cocktail with Bill Cosby (an American Comedian who was accused of sexually assaulting numerous women after drugging them by putting sedative-hypnotic substances in their drinks) or drinking tap water in Flint, Michigan (where water was found to contain high levels of lead), more than in the supposed microchipped vaccine from Bill Gates. It is not directly said that the writer does not trust in Bill Gates' (supposed) vaccine; this has to be inferred by means of implicature (flouting the Relevance Maxim), but at the same time the whole speculation is based on the non-proven fact that Bill Gates had some kind of intervention in the Covid vaccine.

In all varieties of the Bill Gates meme there is instillation of a feeling of fear and distrust for the Covid vaccine (on the grounds that is has been microchipped by this influential man) and at the same time a feeling of rapport and camaraderie among the members of the in-group supporting the conspiracy theory. Thus, again we find a combination of both the aggressive and the affiliative functions of irony and humor.

4.1.3. The Putin macro meme

The Russian vaccine Sputnik V had a negative reception and response by some people in Europe and the US, and therefore some memes with the image of Russian President Vladimir Putin ironically depicted as a 'savior' or 'hero' circulated in an attempt to warn the world that Russia was ready to use the vaccine as a political tool to manipulate countries. Two versions of this macro meme are Memes 5 and 6:



Memes 5 and 6: Two similar versions of the Putin/Russian vaccine meme

Parody and sarcasm are exploited in these memes, picturing Putin as a "savior" in a sarcastic way, for they in fact pose a critique of the supposedly manipulative actions of Russia, as well as of the countries that decided to buy the product. The ironic contradiction here comes from the images' inferred narrative and the intertextual, contextual, and cultural knowledge or beliefs of the readers, for there is no language or text accompanying the images, but the message is that Putin is no savior at all. The function is evidently the aggressive one, directed at the Russian vaccine and Putin's government.

4.1.4. The 'Big pharmaceuticals' macro meme

Another of the targets of the Covid memes were the big pharmaceuticals, as depicted by Meme 7, where there is a contradiction between what the pharmaceuticals say (*Trust us*) and the percentage of risk (100%) for the people taking the vaccines, which is in contrast with the (financial) risk taken by these companies (0%).



Meme 7: Example of the 'Big pharma' meme

The type of irony used in this meme is of the negative kind (sarcasm), and it belongs to the non-implicature type, for the inference the reader has to make to get the message is not a conversational or conventional implicature, but a subplicit inference. Indeed, the spirit of the meme shows that there is no intention on the part of the big pharmaceuticals to flout the Maxim of Quality to imply that they shouldn't be trusted; what they are doing here is violate⁵ the Maxim and therefore it is only the image and the supposed facts showed with percentages what drives the reader to infer that they are not to be trusted and that they are therefore, lying. Once more, here the prevailing function and dimension of irony and humor is the aggressive one.

4.1.5. The holocaust macro meme

Some of the memes depict the vaccines and their creators as the cause of a new upcoming human holocaust, as can be observed in Meme 8. Here all the Covid vaccines are presented as a fatal threat and a measure to depopulate humankind. The memes are normally strengthened by the intimidating image of war or historically known tragedies, such as the Nazi holocaust.



Meme 8: Example of the 'holocaust meme'.

⁵ For the difference between flouting and violating a Maxim, see Thomas (1995).

In this meme, the ironic contradiction is found at the level of the speech act, for the words attached to the image of Hitler 'welcome' the reader to have the vaccine... if they want to die (literally, if they are 'tired of life'). Thus, and given the negative emotional connotations attached to the prospect of dying, the message cannot be taken as a welcome speech act, but as a negative criticism of the pro-vaccine people in general, changing the apparent positive and inviting speech act of welcoming into a very negative one of warning about a dangerous threat for humanity. As with Memes 1 and 7, the inference to be worked out for deciphering the ironic meaning is not an implicature, but a subplicit inference triggered by the rest of the text, the image, and the cultural information shared by the people involved. It is another case of non-implicature irony in its aggressive dimension.

4.2. The Ukrainian war memes

The Ukrainian war memes that form part of our corpus were taken from social media created by ordinary Ukrainians or Twitter accounts like *Ukrainian Memes Forces*, *NAFO*, and *Saint Javelin*. All of them are examples of what Wiggins (2016) has called "directionally Ukrainian memes", which he defines as memes that "are explicitly pro-Ukraine, pro-United States/European Union, anti-Putin/Kremlin, and/or anti-Russia" (2016: 459). In these memes, humor was and is still being used to vent the anger of the Ukrainian people since the start of Russia's full-scale invasion on February 24, 2022, and as such, they have become a part of modern folklore, helping Ukrainians express what they feel in simple figurative language. As Antoniuk (2022) explains, they aim at offering some relief from the traumatic experiences of the war, as well as to keep people engaged and informed. Christian Borys, the creator of the popular Sain Javelin meme (an Orthodox Madonna clad in green and cradling a Javelin antitank missile), in an interview by Alexander Query (2022) for *The Kyiv Independent*, states that Russia's war has changed the way Ukrainians joke, and the memes are now a way to express their anger and biting sense of humor in a funny way.

The topics and jokes in the memes revolve around the defeats of Russian soldiers, the absurdity of Russian propaganda, or the daily life of Ukrainians amid power outages, air raid sirens and missile attacks, among other things. As was the case with the Covid memes, in the Ukrainian war memes we find examples and repetitions of several macro-memes, some of which will be presented in the following sections.

4.2.1. Emotions in the memes: the NATO macro meme

The Ukrainian memes usually express the emotions and different moods of the Ukrainians or people involved in the conflict. Normally the memes about Russia convey anger, those about the Ukrainian government and the military convey gratitude, and those about the war and the threat of a nuclear attack come from and instill fear. Meme 9, which belongs to the NATO macro meme, is an example of this fact, where the emotions of the Russians are depicted from the perspective of the Ukrainians, somehow showing pain but turning a blind eye when the Baltic states joined NATO in 2004 and Finland did the same in 2023, but displaying great rage and anger when Ukraine only expressed their wish to join NATO. Here we find an inferred contradiction in the images depicting Russian's emotions for Ukraine and those for the other countries, which is aggressively presented to spot the Ukrainian's perceived injustice coming from the Russian government. The irony here arises from the interplay between the words and the images, which shows that it cannot be comprehended and inferred only from the words written, but also from the images accompanying the words and their interplay.



Meme 9: Russian emotions as reactions to Ukraine's wish to join NATO.

The prevailing function of the meme is the aggressive one, in a harsh criticism of the injustice perceived as coming from Russia. We're dealing here again with non-implicature irony, where the inferences about the attitudes and emotions come from the subplicit meanings shared by the people involved.

4.2.2. The Saint Javelin macro meme

Saint Javelin is an Internet meme and fictional character depicted in a religious icon style as a saint-like figure cradling an American weapon (an FGM-148) used in the Russian invasion of Ukraine.



Meme 10: The Saint Javelin meme

In the different versions of this macro meme, her robes are usually dark green resembling the combat uniforms, or blue and yellow as the Ukrainian flag, and as such it has become a widely recognized symbol of the Ukrainian resistance. The image of Saint javelin constitutes an example of situational irony, containing an intrinsic, inferred contradiction, for it is a Virgin who, instead of carrying Jesus in her arms, is cradling an anti-tank weapon. So, the humor is based on the ironic interpretation of the juxtaposition of Mary, mother of Jesus, and a killing weapon⁶. However, and ironically, it has a positive meaning to all Ukrainians and in all its occurrences it is intended to foster an affiliative feeling among Ukrainians, as a symbol of their unity against the Russians. Thus, in this respect, this can be said to constitute a case of positive irony.

4.2.3. The "Russian warship go f*ck yourself" macro meme

This is one of the war's most popular memes, using the utterance (or the gesture) "Russian warship, go f*ck yourself," which was famously said by a Ukrainian soldier who defended a tiny island in the Black Sea and refused to surrender to Russia (Meme 11). The meme is thought to be an interpretation of the David and Goliath story, where a young boy defeats a giant with a single stone, and as such, we find an element of situational irony in it, for a contradiction can be inferred from the fact that the apparently weaker and younger/smaller defeat the strongest and older/bigger. For this reason, the image of this soldier has become an inspiration for Ukrainians, who sympathize with him in their feeling that the invasion of Ukraine by the Russians is illegal and totally unfair.

⁶ In spite of the popularity of the image as a symbol of the Ukrainian resistance, the Council of Churches condemned the use of a Madonna-like saint figure with modern weapons of war as blasphemy. (https://en.wikipedia.org/wiki/Saint Javelin)



Meme 11: Feb 25th 2022. The one year anniversary. Russian warship, go f*** yourself

Another version of this macro meme is found in Meme 12:



@StephenKingUkrainian womanwelcomes Russian troops

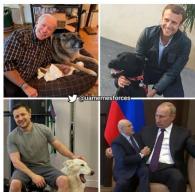
Meme 12: Ukrainian woman 'welcomes' Russian troops

Here the irony is found in the contradiction between Stephen King's words and the image of the Ukrainian woman, who, to judge from her gesture, is not welcoming the Russian troops at all. In this case we are facing a case of illocutionary irony, for the clash is found at the level of the speech act, which is anything but a welcome one. It is then another case of Negative, aggressive irony, which also conveys and instills negative evaluations and emotions regarding the Russian troops.

4.2.4. The Putin macro meme

The Putin meme has not only been exploited in the Covid memes, but also in the Ukrainian war memes, as could not be otherwise. In Meme 13 we find a critique of Putin and Belarusian President Alexander Lukashenko, depicting the latter as Putin's pet (and puppet).

Presidents with their dogs



Meme 13: Presidents' pets

This is an ironic joke whose inferred contradiction is found between the image of Biden's, Macron's and Zelenski's pets in contrast with Putin's, whose pet is not a dog like the others, but the Belarusian President. We may speak of propositional irony here, because what is said to be a dog, in Putin's case is not a dog but a person, evoking in that way the inference that President Lukashenko is to Putin what dogs are to the other presidents, thus making fun of what is interpreted as his submission to Putin's commands and ideas. It is a sarcastic joke, and it is thus a case of negative, aggressive irony displaying a negative evaluation of both Putin and Lukashenko, as well as a display of the Ukrainians' negative emotions towards the two countries that they represent.

4.2.5. The Zelensky macro meme

In contrast with the Putin macro meme, the Zelensky memes in the corpus always display a positive kind of humor, showing affiliative constructive feelings among the Ukrainian people, as well as great respect for their president.

Meme 14 is an example of this macro meme, showing Zelensky's wife's expression on her face when in an interview with CNN he said that no one cooked him breakfast, with a humorous accompanying comment on the St Javelin Tweet saying that he has never been in such a dangerous situation.





Meme 14: Zelensky: "No one cooks me breakfast"

We may speak here of conversational irony found in the interplay between Zelensky's words, the image of his wife gazing at him, and the comment at the side of the image. Saying that "President Zelensky has never been in such a dangerous situation before" presents an inferred contradiction between the real perils of the war he is facing, and the danger of his wife being upset with him about what he said. Thus, the comment presents an example of conversational positive irony, where an implicature is triggered out of an ironic exaggeration whose function is not at all aggressive but affiliative, with the sole intention of being humorous and in some way distract the Ukrainians from the real horrors of war.

In Meme 15 there is a combination of the Putin meme in contrast with the Zelensky meme, exploiting the contrast between two words that differ only in one letter, *hero* and *zero*, a letter that however makes all the difference between one President and the other. The pun on words presents an inscribed praise of Zelensky, but in the case of Putin, the idea that he is not a hero is not direct but indirect or invoked and has to be inferred out of the literal meaning of the term *zero*. There is therefore an open, direct praise of Zelensky, and an inferred criticism of Putin based on the numerical term used for him, which accounts for 'nothing'. Regarding the emotions expressed or instilled, the meme triggers emotional inferences that show the pride that Ukrainians feel for their President, and the aversion they feel for Putin.



Meme 15: The Putin and Zelensky memes contrasted.

Meme 16 is another version of this macro meme, where another character is added: Donald Trump. There is an ironic criticism of Putin and Trump as cowards who hide in their bunkers, in contrast to Zelensky, who is shown in a combat costume as a sign of his courage and bravery. The emotional inferences triggered, like in the previous memes, are oriented towards the pride felt for Zelensky and the disrespect and despise felt for Putin and Trump.



Meme 16: the Putin, Trump, and Zelensky memes combined and contrasted.

4.2.6. The Elon Musk macro meme

Another popular target of Ukrainian memes is U.S. business magnate Elon Musk, who was initially praised for his help when delivering satellite internet terminals to Ukraine, but later despised for having suggested that Ukraine should abandon its bid to join NATO. Meme 17, published by a Ukrainian politician and volunteer on Twitter, is an example of this kind of meme:



@uamemesforces Sheriy Prytula

Hope it helps you understand why surrendering to the Russian evil empire is not an option for Ukrainians.

Meme 17: An instance of the Elon Musk macro meme

Here we find sarcasm by means of a clash of images and names that reflect a subplicit negative attitude towards Elon Musk: there is an inferred contradiction showing Musk as Jerry (the mouse of the *Tom and Jerry* cartoon) doing nothing (and even laughing) while Ukraine and Russia

fight. The sarcastic attack is therefore obviously directed at Musk as a criticism for his lack of support in the Ukrainian attempt to join NATO.

4.2.7. The Russian defense macro meme

The Russian defense meme is often used by the Ukrainian Defense Ministry to thank allies for weapon supplies or to make fun of Russia's military capabilities. In Meme 18, the ministry shared a photo of chocolates shaped as the hedgehog anti-tank constructions used for defense, saying that this is how they view Russia's recently built fortifications in the occupied territories.



Meme 18: Russian Defense

Defense of Ukraine
@DefenceU
Ukraine government organization
(Ukrainian Defense Ministry)

In recent weeks, Russia has been rapidly building fortifications in occupied territories. This is how they look from the perspective of Ukrainian Armed Forces.

Again, in this meme we find a clash that leads to an inferred contradiction between the image: chocolates shaped as the hedgehog anti-tank constructions used for defense (i.e., weak structures that can be eaten) and the words describing it: *fortifications*, to sarcastically show the weakness and inferiority of the Russian defense constructions with respect to those of the Ukrainians. It is a case of prototypical propositional irony, where the meaning finally agreed is that what we see in the picture is not at all a fortification, but rather the opposite. The prevailing function of the irony here is the aggressive one towards the Russians, as well as an additional amusement function given the fact that they use irony to make fun of the Russians.

4.2.8. The racoon macro meme

The racoon wave of memes on social media originated in relation to Russia's military retreat from the city of Kherson, when the Russian soldiers allegedly stole a raccoon from the local zoo. Due to this, the Ukrainians made fun of them saying that the only "strategically important object" that the Russians had managed to capture during the war so far was a raccoon. Meme 19 is one of the versions of this macro meme, as spread on Twitter:



Meme 19: One of the versions of the racoon macro-meme

Once more we find a sarcastic joke pointing to a clash between what the Russians intend to do and what, according to the Ukrainians, they have really done (just stealing a racoon). They make fun of them by comparing their mission to the one in the movie entitled *Saving Private Ryan* (where the mission was to save a soldier whose brothers had all died in the war) to what the Russians did in Kherson. Again, we find a combination of the attack and amusement functions of irony and humor by ridiculing the Russians and saying that the Ukrainians want the racoon back, as if that were crucial for winning the war.

4.3. Quantification of the types of irony found in the memes

Although the main aim of this study was not to make a quantitative analysis, it was considered useful to quantify the cases of irony found in the corpus according to the types described in Section 2 above, in order to identify the tendencies and the most frequent types of irony used in the memes. The results are shown in Table 1.

Sets of memes	Type of irony (inference)			Type or irony (Attitude)			Type of irony (level at which the contradiction is found)		
	Conversation al	Convention al	Non- implicature	Positive	Negati ve	Neutral	Proposition al	Illocutionary	Image
Covid	32	0	18	0	50	0	24	15	11
Ukrainian war	39	0	11	6	44	0	28	16	6
SUB- TOTAL	71	0	29	6	94	0	52	31	17
TOTAL	100			100			100		

Table 1: Types of irony found in the two sets of memes

As the table shows, the most common type of irony in terms of the inference made to unveil it is conversational irony in both sets of memes (71%), which means that in most cases the type of inference worked out was a conversational implicature. No cases of conventional irony were identified, and the rest (29%) were of the non-implicature kind, which means that the inference worked out had to do with implicitudes or subplicit meanings, mainly about the attitudes indirectly expressed or instilled.

Regarding attitude, most cases in both sets of memes were of the sarcastic negative kind (94%) and only a few were of the positive type (6%). The latter are all related to the Zelensky meme in the Ukrainian war set (as expected, considering that all the memes in this set were created by Ukrainians).

Finally, and in relation to the level at which the contradiction inherent to all irony was found in the memes, the results show that in the majority of cases (52%) the contradiction was found at the proposition level. A considerable amount of illocutionary irony was also found (31%), and in a lower number of instances the contradiction was found exclusively at the discursive level of the image (17%).

5. Summary and conclusions

The work presented in this article has focused on the ironic humor found in two sets of memes that became viral at the time of two important crises of our time: the Covid pandemic crisis (2020) and the Ukrainian war crisis (2022, and still ongoing at the time of writing this paper). The memes were classified according to the type of macro meme to which they belonged, and they were all subsequently analyzed from the theoretical perspective which sees irony as

inferred contradiction, in the conviction that this approach can help us clarify and understand their nature, as well as their emotional and evaluative basis.

The analysis carried out was mainly of the qualitative type, based on the *Inferred Contradiction Theory of Irony* (Alba-Juez 2014), but a quantification of the different types of irony found in the memes was also deemed necessary, as explained and shown in 4.3. above.

In response to Research Questions 1 and 2 (What type(s) of irony is/are exploited to make the memes humorous?/ What type of inference is found in the inferred contradiction that is essential for the comprehension of the ironic humor in the memes?) the results reveal that the humor and irony were always based in some kind of contradiction that had to be inferred at some discourse-linguistic level, displaying instances of not only propositional (52% of cases examined) but also illocutionary irony (31%), and other kinds of irony in which the inferred contradiction is found in the subplicit information that is shared by the interlocutors (29%), or even in the images shown (17%). Most of the jokes in the memes examined were sarcastic (94%) and therefore the inferred contradiction led to the negative evaluation of some person or situation. Some of them (6%), however, aimed at praising somebody or something (e.g.: Zelensky, the Ukrainians, etc.), in which case the inferred attitudes were of the positive kind.

Regarding Research Question 3 (What is the main function of the irony (and humor) in the memes?), we have seen that the functions fulfilled by the ironic humor in the memes may also serve contrasting and contradictory motivations having to do with aggressiveness (towards the out-group) and affiliation (with the in-group), apart from its amusement function, depending on the contextual and intertextual information shared.

The examination of the different types of irony used in the memes also threw information about the emotions expressed, implied, or instilled in them. In the case of the Covid memes, the prevailing emotion instilled in the readers was *fear* for the vaccines, as well as negative emotions for the people who manufacture the vaccines or who were thought to be behind them in a conspiracy against humanity (e.g., the Bill Gates memes). This was the case in all 50 memes examined (100%). In the case of the Ukrainian war memes, the great majority (44 out of 50) were sarcastic and showed negative emotions towards the Russians or anyone supporting them, but in the case of the Zelensky meme the emotions expressed or instilled were all of the positive kind (6 out of 50), as could have been expected.

All in all, it may be concluded that using the Inferred Contradiction Theory of irony has proved to be a useful theoretical tool for the analysis of the memes used by people in times of crises, and in particular, for the Covid and Ukrainian war crises. Finally, I hope to have also

made the readers aware of the possibilities that this theory presents and opens for the analysis of any type of ironic discourse.

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