



Metaphors and Linguistic Intimacy in *Ad Populum* Arguments

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Abstract

Metaphor is a pragmatic device that might influence how arguments are evaluated. Beyond its cognitive and aesthetic value, metaphor also fosters linguistic intimacy, i.e., the feeling of belonging to an intimate community. The paper hypothesizes that linguistic intimacy might be particularly relevant in *ad populum* arguments, where a sense of belonging to the community endorsing the argument might influence the acceptance of the conclusion. In *ad populum* arguments, indeed, metaphors might act as a “concealed invitation” to accept and share a conclusion, encouraging effortful interpretation that results in a feeling of shared community. However, not all *ad populum* arguments are fallacious: they may reflect reasonable consensus, with the agreement with their conclusion depending on how they are framed. The article presents an empirical study investigating whether conventional and novel emotive metaphors vs. their literal counterparts within *ad populum* premises increase participants’ acceptance of the argument conclusion. The results showed that especially novel and negative metaphors in the premises make people less prone to evaluate the conclusion of *ad populum* arguments as logically acceptable, while conventional and positive metaphors in the premises makes them feel intimacy with the group of people supporting the conclusion, more easily leading to agreement with their conclusion.

Keywords *Ad Populum* arguments · Metaphor · Linguistic intimacy · Feeling of belonging · Argument evaluation · Argumentation fallacies

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1 Introduction

In the last three decades, traditional research questions on argumentation have been complemented via an experimental approach to better understand what drives people's interpretation of arguments and their perceived reasonableness (van Eemeren et al. 2000, 2009, 2012). Also, the opening up of new developments in the pragmatics of argumentation suggested that the study of argumentation fallacies could be advanced by looking at them from an experimental point of view, providing insight on how people think and reason when reading a (fallacious) argument (see e.g. Schumann et al. 2019, 2021).

The pragmatics of argumentation is nowadays at the forefront of different disciplines, including philosophy of language, logic, cognitive science, but also the psychology of reasoning, social psychology, psycholinguistics, that make their perspectives interact to better understand how argumentation fallacies work in everyday contexts (Oswald 2023). Indeed, the evaluation of fallacious arguments does have a psychological component (Walton 2010, p. 159; Godden 2015), as fallacious arguments, for various reasons, *appear to be sound* even though they are not. Also, when formulated in everyday conversational contexts, arguments are often rich in non-literal language, especially in metaphors, which might influence the acceptance of an argument conclusion (van Poppel & Pilgram 2024) or phenomena of resistance to metaphor in argumentation (van Poppel & Pilgram 2023).

Adopting Cohen's definition of linguistic intimacy (Cohen 1978), we propose the idea that, when using a metaphor, the arguer issues a kind of "concealed invitation" to the addressee. This invitation requires the addressee to make a special effort to accept it and understand the metaphor, but this effort is rewarded by the recognition of an intimate community. This might particularly be relevant in the case of *ad populum* arguments, whose conclusion is accepted as true or valid simply because most people believe it to be so. We hypothesized that metaphors, compared to their literal counterparts, would have a stronger influence on the evaluation of arguments where the evaluator accepts the conclusion of an *ad populum* argument based on a sense of belonging to a community. In *ad populum* arguments, the evaluator might accept the conclusion based on the shared belief of the community.

However, an *ad populum* argument is not always a straightforward fallacy: most people might have valid reasons for believing the conclusion, and its evaluation may depend on how the issue is framed (Tindale 2007). Thus, this article presents and discusses an empirical study aimed at understanding whether, and to what extent metaphors, whether conventional or novel, within the premises of *ad populum* arguments can lead participants to agree with the community's conclusion.

2 The Ad Populum Argument

When introducing the *ad populum* argument, Tindale (2007, p. 105) warned that "there is an old adage to the effect that "thousands of people can't be wrong." And yet, as we frequently learn to our chagrin, thousands of people often are wrong: they support dictators, engage in unhealthy lifestyles, or put their money into schemes that

seem to have little chance of success. All this leads us to ask what weight we should place on such popularity when it is advanced in support of a cause or claim”.

In argumentation theory, *ad populum* argument is classified as an emotional fallacy, making appeals to popular sentiment to make a conclusion accepted by someone. For instance, when a group of friends say that a guy is an amoeba, concluding that he won't have success in his professional life, if we commit an *ad populum* fallacy, when we accept this conclusion as true just based on what the group of friends say. The standard *ad populum* argument may be schematized as follows:

(P1) A (large or socially relevant) group G believes that proposition p is true.

(C) Therefore, p is true.

The *ad populum* fallacy arises because the acceptance of the conclusion C by a group does not constitute a relevant indicator of its acceptability or truth, unless additional premises justify the authority, expertise, or representativeness of the group. This is, of course, a basic schema of *ad populum* arguments, but variations of the schema exist, appealing to popular opinion may be much more complex than “believing p”, implying a set of beliefs connected with “believing p” (cf., e.g. Tindale, 2007, pp. 105-108). More complicated forms of *ad populum* arguments can have more than one premise connected to P1 or explicating P1, in order to derive C. Such premises might also be implicit or implicitly connected to P1, “because the fallaciousness is not primarily due to the invalidity of an argument but connected with the unacceptability of an unexpressed premise (in *ad verecundiam*, *ad populum*, and *ad hominem*, for example)” (Van Eemeren & Grootentorst, 2004, p. 161).

Evidence that comes from personal sources of verification rather than from the saying of a group of people should be used to evaluate the degree of logical acceptability of the argument's conclusion. In other words, we should not accept an argument as sound because a group of people consider it sound or support it, but rather because we have independent and our own reasons to evaluate the premise as true and the conclusion as following from the premise. In referring to the *ad populum* as an “emotional” fallacy, we follow Walton (2010) and Macagno & Walton (2014), who classify appeals to popularity among fallacies in which emotive or affectively charged considerations replace relevant argumentative support. This terminology is not meant to imply that the *ad populum* necessarily involves emotions in a psychological sense. In pragma-dialectics, for example, the *ad populum* is instead analyzed as a violation of the argument-scheme rule, that is, an incorrect appeal to symptomatic argumentation.

Indeed, emotional fallacies occur when emotions inappropriately interfere with the ultimate aims of argumentation as an ally of truth. The emotional arguments might give rise to relevance fallacies or, even when relevant, reach a level of emotional intensity that risks distracting interlocutors from the original goal of debate: the discovery of truth (Woods et al. 2004). However, as previous literature pointed out (Walton 1980), it is not clear why it should be considered a fallacious argument. For instance, in the case of an *ad verecundiam* argument, where the group of people (*populus*) that supports the argument is constituted by experts, there might be good

reasons to accept the proposed conclusion. Even in everyday life, when we decide to go to restaurant or to a cinema where we have never been based on the opinion of most people on that restaurant or cinema, we implicitly accept an *ad populum* argument, but we probably would not say that we committed a logical mistake.

The idea of *ad populum* arguments as fallacious might come from the fact that extra-logical factors, as the public opinion of a group, play a role in the evaluation of argument, while in argumentation we aim to understand whether the premises are true, and the conclusion follow from true premises. As argued (Walton 1980, p. 266), “what seems wrong is that one’s argument is allowed to be subjectively oriented, person-relative, and therefore it subverts the objective goal of arriving at the truth by the process of logical reasoning”. However, *ad populum* arguments might follow another type of reasoning, including the consideration of other people’s opinion, especially if reasonable, independent of their truthfulness. Reducing argumentation to individual reasoning from true premises would not make justice of the fact that in argumentation we consider other people’s opinion in context according to context criteria (van Eemeren 2013), where the attribution of truth conditions to words might vary for a number of reasons as well as the relationship between the arguer and the evaluator of the argument in a dialectical way (van Eemeren and Grootendorst 1994; van Eemeren 2018).

Argumentation often relies on connecting with the audience by sharing widely accepted beliefs or common knowledge. While appeals to popularity can sometimes be justified, such as when supported by reliable data and expertise, they must anyway be critically evaluated. Popularity does not necessarily imply quality or truth, as it may result from factors like contextual availability or even marketing. Therefore, when encountering an appeal to popular opinion or to a feeling of being part of a community based on shared beliefs, it is fundamental to assess whether the appeal to popularity is contextually relevant to the conclusion, and it is supported in a way that makes the conclusion more likely to be true. Otherwise, the argument risks committing the *ad populum* fallacy (Tindale 2007).

In the Pragma-dialectical approach, the effectiveness of an argument, i.e. the ability of an argument to achieve its communicative aims, can be distinguished from its reasonableness, i.e. the adherence to the rules for critical discussion and sound reasoning (van Eemeren 2015). As Jansen (2020) shows in his analysis of populist argumentation, appeals to “the people” can play a strategic persuasive role even when they lack justificatory force, further highlighting the need to distinguish effectiveness from reasonableness in appeals to popularity. *Ad populum* arguments, as well as other argumentation fallacies, are considered as a violation of “the standards for critical discussion that are expressed in a code of conduct for reasonable argumentative discourse” (Van Eemeren and Garssen 2023, p. 167). In the empirical evidence provided by Van Eemeren and colleagues (2014, p. 578), people rated *ad populum* fallacious arguments on a 1–7 Likert scale as less reasonable ($M=2.77$, $SD=0.75$) when compared to sound *ad populum* counterparts ($M=5.88$, $SD=0.73$). In this framework, *ad populum* fallacy can indeed be explained as an unreasonable way to increase the effectiveness of the argument, i.e. by appeal to a popular sentiment. In actual argumentative discourse, when aiming to resolve differences of opinion, discussion rules should be intersubjectively valid and finally lead to the resolution of disagreements.

What makes the *ad populum* problematic from a pragma-dialectical perspective is that the arguer substitutes a group's acceptance for relevant argumentative support, thereby violating intersubjective discussion rules. This is not due to a "feeling of community" per se, but to the fact that an appeal to popularity does not provide the kind of reasons required for a rational resolution of disagreement. To the best of our knowledge, no empirical research has been conducted with metaphorical *ad populum* arguments in comparison to literal *ad populum* arguments to check whether contextual interpretation of non-literal language influences the reasonableness and effectiveness of *ad populum* arguments.

3 The Double Framing Effect

In the last three decades, metaphor has been considered as a pragmatic-linguistic and cognitive mechanism (Carston 1997, 2002; Oswald and Rihs 2014) that influences the evaluation of a variety of arguments (Ervas et al. 2015, 2016, 2018; Ervas and Mosca 2024). Indeed, a metaphor contributes to the truth-conditions of an argument's premise or the conclusion of an argument, is its intuitive truth-conditions, which differ from the truth condition of the vehicle, i.e. the term used to represent the topic (also called "tenor"). Metaphor interpretation involves a process of pragmatic enrichment that leads to the creation of an "ad hoc" concept (Carston 2002, 2010; Vega Moreno 2004), which departs from the concept encoded by the vehicle. For example, in the sentence "Ilaria is a gem", the metaphor is not intended to be understood literally, as if Ilaria were a precious stone. Instead, the reader constructs a modified concept, GEM*, which captures contextually relevant traits to describe an outstanding, brilliant, and nice person. Thus, metaphor requires *ad hoc* adjustments of the lexical meaning based on the speaker's encyclopedic knowledge, contextual information, and shared cultural background. These online pragmatic processes enable the readers to infer the intended, contextual meaning beyond the words' conventional meaning.

Conventional metaphors, as in the case of "Ilaria is a gem", are typically processed through local enrichment, where the conventional meaning of the term is pragmatically adjusted to convey an "*ad hoc*" interpretation. In contrast, novel metaphors, as in the sentence "Ilaria is a sparkle", often retain their literal meaning alongside a broader, global pragmatic process that conveys, other than the ad hoc concept of something that shines with light and joy, additional non-propositional or imagistic effects (Carston 2010; Carston and Wearing 2011). Thus, in Carston's words, the "comprehension of a metaphorical use is a case of ad hoc concept formation where, crucially, the concept inferred is much broader in its denotation than the lexical concept from which it was derived" (Carston 2010, p. 168).

Scholars argue that metaphors can introduce or support standpoints in arguments (Wagemans 2016, 2019; van Poppel 2018, 2020) and stimulate creative thinking in scientific contexts. Indeed, in the pragmatic process of enrichment, some relevant properties of the encoded concepts, i.e. the *source*, are selected while others remain hidden or ignored (Ervas 2021), thus providing a specific perspective from where to look at the *target*, i.e. what needs to be explained or supported in argumentation. Metaphors are never neutral in argumentation, as their framing effects shape both

reasoning and argument evaluation even for important societal issues (see e.g. for crime, Thibodeau and Boroditsky 2011, 2013; and for health issues, Semino et al. 2016). The conclusion drawn from metaphor-based arguments can be influenced by a widely believed set of properties associated with the metaphor framing effect, rather than logical soundness or reasonableness. As a result, people might accept conclusions based on belief rather than reasoned inference, leading to potential fallacies in argument evaluation.

Research on the effects of metaphorical framing has mostly focused on conventional metaphors, which are familiar and largely accepted within a linguistic community, going unnoticed by the speakers. However, novel metaphors, while more cognitively demanding and often perceived as literally false, can deliberately shape discourse and influence reasoning (Steen 2017; van Poppel & Pilgram 2023, 2024). Empirical findings suggest that conventional metaphors are often accepted as “true” due to familiarity, whereas novel metaphors take less time to be judged as false but still impact the reasoning process in argument evaluation (Ervas et al. 2015, 2016, 2018, 2021; Ervas and Mosca 2024).

Moreover, it has been argued that the metaphorical framing also has an affective dimension (Maiese 2014; Ervas et al. 2021), as metaphors are “emotion-laden” terms that might elicit positive vs. negative emotional reactions. Maiese (2014, p. 524) used the term “affective framing” to express the idea that emotions are “a spontaneous, non-inferential, and pre-reflective way of discriminating, filtering, and selecting information that allows us to reduce the overwhelming clutter of information” (see also DeLancey 2002; Solomon 2003; and Prinz 2004). This is why a double (metaphorical and affective) framing effect might influence argumentation in the case of emotive metaphors, such as “This guy is an amoeba” or “That girl is a gem”, where emotive words (amoeba, gem) are used as vehicles¹.

In the process, the emotive valence of the metaphor provides a specific (positive or negative) perspective which also influences the way we look at the target and thus the overall argument where the metaphor appears. Metaphors, as empirically shown, are “more emotionally engaging than literal expressions” (Citron and Goldberg 2014, p. 9), thus making arguments persuasive and emotionally appealing (Ervas et al. 2021). Research on the affective framing effect of metaphor in argumentation showed anyway that it depends on the type of argument: while negative metaphors make participants more prone to committing the equivocation fallacy (Ervas et al. 2021), they help participants detecting the *ad hominem* fallacy (Ervas and Mosca 2024).

¹ In this article, we use the term emotive metaphors in the sense common in affective psycholinguistics (e.g., Citron and Goldberg 2014), namely metaphors whose vehicle carries a positive or negative affective valence, even if the word does not denote an emotional state. Thus, expressions such as amoeba or gem are not “emotive” in a semantic sense; rather, they are emotion-laden because they evoke culturally stable evaluative connotations (positive or negative). Throughout the paper, “emotive metaphor/word” is therefore to be understood as shorthand for “metaphor/word with affective valence”.

4 Metaphor and Linguistic Intimacy

Further empirical research on metaphorical framing reveals that its effect on the evaluation of metaphor-based arguments might be ephemeral or even dependent on other factors, either personal or collective, as for instance in the case of political opinion modulating or even nullifying the effect (Steen et al. 2014; Panzeri et al. 2021). Also, the purpose of using metaphor is not solely reducible to its cognitive power or, at times, its aesthetic qualities, but to other communicative aims that might be relevant for its effectiveness in arguments' evaluation or even in the acceptance of fallacious arguments as sound or in the agreement with fallacious arguments' conclusion. Previous literature pointed out that the point of using a metaphor might be the achievement of linguistic intimacy (Cohen 1978). Linguistic intimacy, defined as a feeling of belonging to an intimate community, can be conceived as a *social feeling*, i.e., feelings related to other people and tracking our relationships with others. Different from social feelings toward one person, as for instance when feeling trust toward someone or feeling that someone is lying (De Sousa 2008; Dokic 2012), linguistic intimacy concerns the feeling of constituting a *community*.

As Cohen (1978) defined it, linguistic intimacy is created via ordinary language as a “concealed invitation” to the addressee/s to build an intimate community. However, in Cohen’s view, linguistic intimacy is not specific to metaphor but can be created through all linguistic phenomena. Indeed, to achieve linguistic intimacy, three conditions need to be met (Cohen 1978, 8):

- (1) the speaker issues a kind of concealed invitation;
- (2) the hearer expends a special effort to accept the invitation;
- (3) this transaction constitutes the acknowledgment of a community.

All three conditions are present in any communication, but in ordinary literal language, their presence is so constant and routine that it goes unnoticed. However, the experience of linguistic intimacy can be better achieved via metaphorical language because it requires to be remarked, as something that strikes us or even causes momentary puzzlement. According to Cohen (1978), a metaphor does precisely this: it is not only noticeable but also evokes this sense of closeness by drawing attention to two or more people on the same piece of language, requiring a special effort by all of them. However, not everybody is prone to make this effort to accept the “concealed invitation” and might be simply not interested to engage with others in pay attention to a piece of language. However, when they are prone to do so, in feeling intimacy “the maker and the appreciator of a metaphor are drawn closer to one another” (Cohen 1978, p. 8).

For this to happen, the piece of language must first stand out: this is why Cohen probably had novel metaphors in mind, since conventional metaphors typically go unnoticed by speakers, because - due to their frequency, familiarity and lexicalized status - they have become so widely used in a linguistic community that they work much like literal words (Carston 1997, 2002). In contrast, novel metaphors catch our attention because they represent entirely new and unexpected uses of language that surprise us and attract our interest. We might therefore expect that linguistic inti-

macy is a positive feeling, but as Cohen warned (1978, 23), it might not be always perceived as such: “Intimacy sounds like a good thing. [...] It is not, however, an invariably friendly thing, nor is it intended to be. Sometimes one draws near another in order to deal a penetrating thrust. When the device is a hostile metaphor or a cruel joke requiring much background and effort to understand, it is all the more painful because the victim has been made a complicitor in his own demise”.

However, as argued, this case might be considered as phenomena related to the use of sarcasm where linguistic intimacy is still positive, but it is created to deliver a negative critical remark toward the target of the hostile metaphor or the cruel joke (Ervas 2022). The affective incoherence between the positive valence of linguistic intimacy and the negative valence of the criticism on the target, who finally is the victim of sarcasm in the communicative encounter. Also, though linguistic intimacy can be felt via both metaphor and humor, metaphor aims to convey a specific point or insight, while humor and jokes typically does not have a point and relies on recognizing an incongruity without resolving it (Attardo 1994). The point of a metaphor might be argumentative, as already claimed in previous literature (Santibáñez 2010; Macagno and Zavatta 2014; Oswald and Rihs 2014; Svačinova 2014; van Poppel 2021).

As argued, linguistic intimacy might depend on familiarity and entails a sense of belonging (Ervas 2022). The idea that, in using a metaphor, a speaker draws on a certain familiarity to create linguistic intimacy is not new and has even been supported by empirical evidence. In a series of experimental studies (Horton 2007, 2013), participants attributed significantly greater familiarity between interlocutors when a metaphor was used rather than a literal expression, even when the interlocutors appeared to fail in fully understanding the metaphor. In another set of studies (Bowes and Katz 2015), metaphors, but not their literal counterparts, were associated with emotional impact and a sense of interpersonal intimacy and belonging to a community, especially in affective contexts activated by the presence of emotionally charged words in the narratives. Emotive words, especially when metaphorical, might then be crucial when reading arguments that draw from a sense of belonging to a community to infer the truth of a conclusion, as in the case of the *ad populum* argument.

5 Research Questions and Hypotheses

Although the present study does not evaluate the truth of the premises, participants’ judgments of logical acceptability may be influenced by whether the premise appears literally or intuitively true. Since metaphorical premises often require pragmatic enrichment and may be perceived as literally false, this can affect participants’ acceptability of judgments. References to “truth conditions” therefore concern the perceived acceptability of the premise, not its literal truth conditions. By emotive metaphors, we refer to metaphors whose vehicle carries affective valence (positive or negative), as shown in Citron and Goldberg (2014). This contrasts with metaphors using affect-neutral vehicles. Metaphors charged with a positive or negative valence might entail a double (metaphorical and affective) framing effect possibly influencing also the evaluation of the *ad populum* arguments, as in the case of other type of arguments (Ervas et al. 2021; Ervas and Mosca 2024). Also, emotive metaphors

might influence the perceived intimacy with the speaker/s advancing a claim, making them feel as part of the community sharing the claim and finally agreeing with their conclusion. We therefore propose the following research questions:

RQ1. Do conventional vs. novel emotive metaphors, compared to literal counterparts, influence the perceived logical acceptability of *ad populum* arguments?

RQ2. Do conventional vs. novel emotive metaphors increase perceived linguistic intimacy with the group endorsing the conclusion?

RQ3. Do conventional vs. novel emotive metaphors increase agreement with the group's conclusion?

To answer these questions, we formulated the following research hypotheses:

H1. Premises using conventional emotive metaphors will yield higher logical-acceptability ratings than literal premises, whereas novel metaphors will yield lower ratings due to their higher interpretive cost.

On the basis of previous research (Ervas et al. 2018; Ervas and Mosca 2024), we expected that, especially in the case of conventional rather than novel metaphor, participants evaluate the *ad populum* argument as sound because conventional metaphor, being literally false but going unnoticed, makes the premise of the argument intuitively true, while novel metaphor, being easily noticeable, makes the premise patently false. Also, we expected that, especially in the case of positive rather than negative stimuli, participants consider the conclusion as logically acceptable, because positive stimuli are not threatening and easier to be accepted when compared to negative stimuli, that requires criticism and alternative solutions (Rozin and Royzman 2001; Citron and Goldberg 2014).

H2. Conventional (but not novel) emotive metaphors will elicit greater perceived linguistic intimacy compared to their literal counterparts.

We expected that, especially in the case of novel rather than conventional metaphor, participants would feel linguistic intimacy with the group of people who support the argument's conclusion, as novel metaphors are supposed to be more engaging, as a shared piece of language people pay attention to and make an effort to understand, thus feeling part of an intimate community. Also, we expected that positive metaphors rather than negative metaphors favor a perceived feeling of intimacy with the community supporting the argument.

H3. Agreement with the group's conclusion will be higher in the presence of emotive metaphors in the premises, in particular the ones with positive valence, compared to their literal counterparts.

Based on this hypothesis, we expected that participants would rather agree with the conclusion of the group with which they feel intimate and part as a community, so especially in the case of novel and positive metaphors.

6 Method

The study had a 3×2 within-subject experimental design, with 3 “metaphorical framing” conditions (novel metaphors vs. conventional metaphors vs. literal counterparts) \times 2 “affective framing” conditions (negative vs. positive valence). Participants ($N=62$, 61.5%F; $M_{\text{age}}=31.58$, $SD_{\text{age}}=16.72$; 67.3% with high school diploma, 31.5% had completed university-level education and 1.2% had post-graduate education) were presented with 8 *ad populum* arguments with (4 positive, 4 negative) novel metaphors (NM), 8 *ad populum* arguments with (4 positive, 4 negative) conventional metaphors (CM), and 8 *ad populum* arguments with (4 positive, 4 negative) literal counterparts (LC). Participants were recruited through university mailing lists, social-media announcements, and student forums. Inclusion criteria were being a native speaker of Italian and being over 18 years old.

6.1 Materials

Table 1. Examples of metaphorical *ad populum* arguments and their literal counterparts in English. (see appendix for the full set of *ad populum* arguments in Italian). All participants were native Italian speakers and gave informed consent, confirming their Understanding of the study’s purpose and procedures (Ethics committee of the university of Cagliari, protocol no. 0077642, 12/03/2024)

To provide the materials for the experiment, we used a set of metaphors already pre-tested (Ervas and Mosca 2024), by selecting (1) the metaphors in the premises of the arguments and (2) their literal counterparts in the following way:

(1) We selected a set of 206 nouns (from GRADIT, De Mauro 2000) that could serve as vehicles of the metaphor in the empirical study. These words were chosen based on their letter count (CM: $M=6.25$, $SD=1.20$; NM: $M=6.63$, $SD=1.50$; LC:

Table 1 Provides an example of each type of *ad populum* argument in english

	Novel Metaphor	Conventional Metaphor	Literal Counterparts
Negative valence	(P1) Friends say that guy is an <i>octopus</i> . (C) He won’t go very far in his career.	(P1) Friends say that guy is an <i>amoeba</i> . (C) He won’t go very far in his career.	(P1) Friends say that guy is <i>lazy</i> . (C) He won’t go very far in his career.
Positive valence	(P1) Friends say that girl is a <i>sparkle</i> . (C) She will be greatly admired wherever she goes.	(P1) Friends say that girl is a <i>gem</i> . (C) She will be greatly admired wherever she goes.	(P1) Friends say that girl is <i>beautiful</i> . (C) She will be greatly admired wherever she goes.

$M=7.87$, $SD=2.09$) and frequency: specifically, CM and NM words were categorized as “common terms” in the GRADIT. We selected the vehicles also based on their emotional valence, familiarity, meaningfulness, and difficulty of comprehension (Bambini et al. 2016). Participants rated each metaphor using a 5-point Likert scale (1 = very negative/unfamiliar/meaningless/easy to understand; 5 = very positive/familiar/meaningful/difficult to understand). Metaphors that were rated as insufficiently meaningful (meaningfulness < 2) or too difficult to understand (difficulty > 4) were excluded. Additionally, only metaphors with a clearly defined emotional valence were retained: specifically, those with high positive ratings (> 4) and low negative ratings (< 2). These metaphors were then classified as either positive or negative emotive metaphors. To construct novel metaphors, we ensured that none of the terms had previously appeared in conventional metaphorical use of language by crosschecking with GRADIT, and we carefully avoided any ambiguity in word choice.

(2) Participants completed a property generation task using the pre-selected metaphors. They were asked to generate at least three adjectives to describe each metaphor. This allowed us to identify the most cited properties, which were then used to determine the literal counterparts of both conventional and novel metaphors.

All the premises were introduced by “Friends say that” to ensure the same structure of an *ad populum* argument². All the conclusions of the arguments were all coherent with the premises of the arguments in content and all the same length (6–8 words).

6.2 Procedure

The arguments were presented to participants in randomized order. For each argument the following questions were asked:

- 1) Given the premise, to what extent is the conclusion logically acceptable?
- 2) How much would you feel part of this group of friends?
- 3) How much do you feel in agreement with their conclusion?

For each question participants were asked to rate the arguments on a 1–5 Likert scale (1 being least likely and 5 being most likely). The *first* question was intended to test the participants’ accuracy in the evaluation of the arguments’ logical acceptability. The *second* question was intended to test the perceived (linguistic) intimacy of the participants with the community of people proposing either a metaphor or a literal counterpart in the premise. The *third* question was intended to test the perceived

² We acknowledge that the Italian plural expression “gli amici” may allow for two types of interpretation: (i) a qualitative reading referring to a small group of trusted acquaintances, and (ii) a broader, collective reading suitable for an *ad populum* inference. Although the generic plural is frequently used in argumentation studies to instantiate a group-based appeal, its quantitative force is weaker than expressions such as “molti amici” or “la maggior parte delle persone”. A second ambiguity concerns referential anchoring: in Italian, “gli amici” need not refer to the speaker’s friends and can sometimes be interpreted as the friends of the person being described, especially under positive valence (e.g., “Her friends say she is a gem”). Because this potential ambiguity was constant across all conditions and stimuli, it should not systematically bias the results; however, future work should employ more explicit formulations to strengthen the intended *ad populum* reading.

agreement of the participants with the conclusion of the community supporting the argument.

6.3 Pilot Study

A pilot study ($N_{\text{participants}}=11$) showed that participants felt more intimacy with the community in the case of positive rather than negative metaphors, and especially when conventional rather than novel.

7 Analysis

We performed the following statistical analyses:

1. A repeated measures analysis of variance (ANOVA) to assess the main effects of two within-subject factors, metaphorical (novel metaphor vs. conventional metaphor vs. literal counterpart) and affective framing (negative vs. positive valence), and the interaction of the two factors on the evaluation of the arguments' evaluation accuracy. A repeated measures analysis of variance (ANOVA) to assess the main effects of two within-subject factors, metaphorical (novel metaphor vs. conventional metaphor vs. literal counterpart) and affective framing (negative vs. positive valence), and the interaction of the two factors on the evaluation of the arguments' accuracy.
2. A repeated measures analysis of variance (ANOVA) to assess the main effects of two within-subject factors, metaphorical (novel metaphor vs. conventional metaphor vs. literal counterpart) and affective framing (negative vs. positive valence), and the interaction of the two factors on the evaluation of the arguments' evaluation accuracy. A repeated measures analysis of variance (ANOVA) to assess the main effects of two within-subject factors, metaphorical (novel metaphor vs. conventional metaphor vs. literal counterpart) and affective framing (negative vs. positive valence), and the interaction of the two factors on the evaluation of the arguments perceived linguistic intimacy.
3. A repeated measures analysis of variance (ANOVA) to assess the main effects of two within-subject factors, metaphorical (novel metaphor vs. conventional metaphor vs. literal counterpart) and affective framing (negative vs. positive valence), and the interaction of the two factors on the evaluation of the arguments' evaluation agreement.

For all the ANOVAs we calculated the effect sizes, reporting the partial Eta squared coefficient (partial η^2) for ANOVA (Gravetter and Wallnau 2006): small effect size: $\eta^2=0.0099$; medium effect size: $\eta^2=0.0588$; large effect size: $\eta^2=0.1379$. We conducted then post-hoc analyses corrected for multiple comparisons (i.e., Bonferroni correction).

8 Results

The collected data are stored and available at the following OSF address: https://osf.io/93kf8/?view_only=a3da739a39ed445fa4f4942e4c5e6b17 The results of the analysis of the answers to each question is reported below in separate sections.

8.1 Analysis of Variance on Accuracy

The analysis of variance showed a significant main effect of the metaphorical framing type [$F(2,62) = 18.18, p < .001$, Wilk's $\Lambda = 0.63$, partial $\eta^2 = 0.37$] and the affective framing type [$F(1,63) = 97.28, p = .015$, Wilk's $\Lambda = 0.39$, partial $\eta^2 = 0.61$], and a not significant interaction between the metaphorical framing type and affective framing type [$F(2,62) = 1.18, p = .31$, Wilk's $\Lambda = 0.96$] on the perceived accuracy level. A post-hoc test, corrected for multiple comparisons (i.e., Bonferroni correction), was performed to determine the statistical significance of the difference between specific metaphorical and affective framing conditions. The post-hoc analysis revealed a significant difference between the literal condition ($M = 3.28$) and the conventional ($M = 3.15$) metaphorical framing condition ($p < .001$), a significant difference between the conventional and the novel metaphorical condition ($p < .001$), and a nearly significant difference between the novel ($M = 2.67$) metaphorical framing condition and the literal condition (literal counterparts, $p = .06$). Positive affect framed metaphors ($M = 2.72$) showed higher levels of accuracy compared to negative affect framed metaphors ($M = 3.34$) ($p < .001$). There was no statistically significant interaction between the metaphorical framing type and the affective one (Cf. Table 2, and Fig. 1 for descriptive statistics for accuracy in each condition).

8.2 Analysis of Variance on Linguistic Intimacy

The analysis of variance showed a significant main effect of the metaphorical framing type [$F(2,62) = 6.59, p = .03$, Wilk's $\Lambda = 0.82$, partial $\eta^2 = 0.18$] and the affective framing type [$F(1,63) = 70.32, p < .001$, Wilk's $\Lambda = 0.47$, partial $\eta^2 = 0.53$], and a not significant interaction between the metaphorical framing type and affective framing type [$F(2,62) = 0.95, p = .39$, Wilk's $\Lambda = 0.97$] on the perceived linguistic intimacy. A post-hoc test, corrected for multiple comparisons (i.e., Bonferroni correction), was performed to determine the statistical significance of the difference between specific metaphorical and affective framing conditions. The post-hoc analysis revealed a not significant difference between the literal condition ($M = 2.83$) and the conventional

Table 2 Descriptive statistics for accuracy in each condition

	Descriptive statistics - Accuracy			
	Min	Max	M	Sd
Literal Negative	1.25	5.00	3.02	0.89
Literal Positive	2.00	5.00	3.54	0.75
Conventional Negative	1.50	5.00	2.82	0.80
Conventional Positive	2.00	5.00	3.48	0.76
Novel Negative	1.00	4.00	2.33	0.73
Novel Positive	1.00	5.00	2.88	0.91

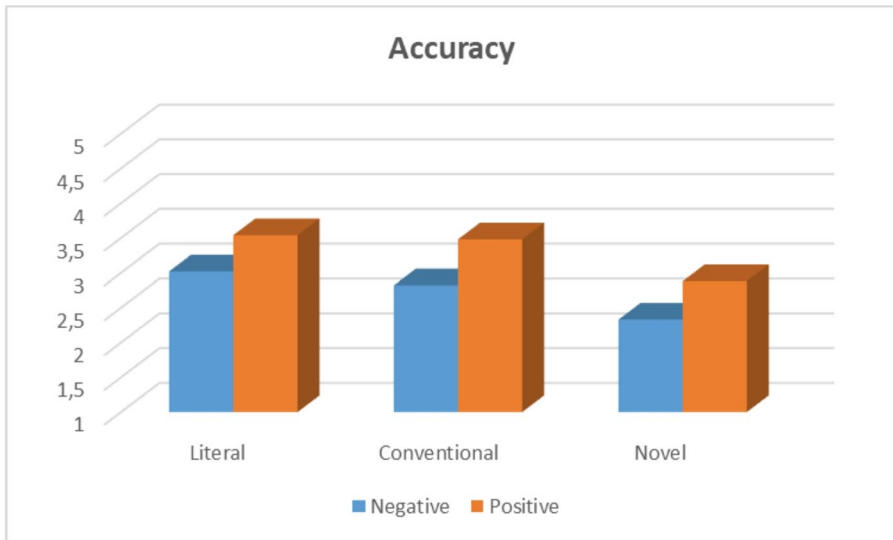


Fig. 1 Descriptive statistics for accuracy in each condition

Table 3 Descriptive statistics for intimacy in each condition

	Descriptive statistics - Linguistic intimacy			
	Min	Max	M	Sd
Literal Negative	1.00	5.00	2.49	0.90
Literal Positive	1.00	5.00	3.17	0.78
Conventional Negative	1.00	4.00	2.38	0.73
Conventional Positive	1.25	5.00	3.13	0.73
Novel Negative	1.00	4.25	2.22	0.74
Novel Positive	1.00	5.00	2.85	0.84

($M=2.75$) metaphorical framing condition ($p=.48$), and a significant difference between the novel ($M=2.53$) metaphorical framing condition and both the literal condition (literal counterparts, $p=.003$) and conventional metaphorical framing condition ($p=.003$). Positive affect framed metaphors ($M=2.36$) showed higher levels of intimacy compared to negative affect ($M=3.05$) framed metaphors ($p<.001$). There was no statistically significant interaction between the metaphorical framing type and the affective one (Cf. Table 3, and Fig. 2 for descriptive statistics for intimacy in each condition).

8.3 Analysis of Variance on Agreement

The analysis of variance showed a significant main effect of the metaphorical framing type [$F(2,62)=23.22, p<.001, \text{Wilk's } \Lambda=0.57, \text{partial } \eta^2=0.43$] and the affective framing type [$F(1,63)=86.68, p<.001, \text{Wilk's } \Lambda=0.42, \text{partial } \eta^2=0.58$], and a not significant interaction between the metaphorical framing type and affective framing type [$F(2,62)=1.61, p=.21, \text{Wilk's } \Lambda=0.95$] on the agreement. A post-hoc test,

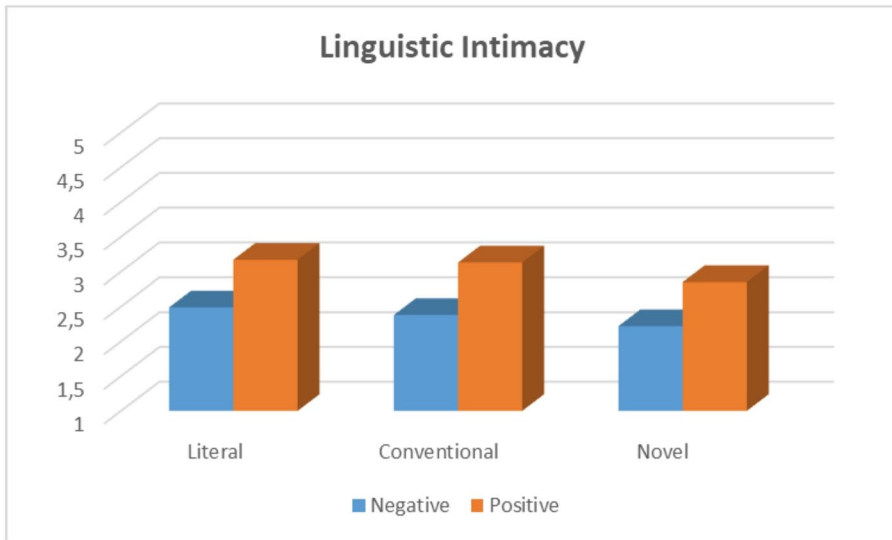


Fig. 2 Descriptive statistics for intimacy in each condition

Table 4 Descriptive statistics for agreement in each condition

	Descriptive statistics - Agreement			
	Min	Max	M	Sd
Literal Negative	1.00	5.00	2.92	1.05
Literal Positive	1.50	5.00	3.42	0.84
Conventional Negative	1.00	5.00	2.70	0.84
Conventional Positive	1.25	5.00	3.39	0.78
Novel Negative	1.00	4.75	2.19	0.78
Novel Positive	1.00	5.00	2.88	0.91

corrected for multiple comparisons (i.e., Bonferroni correction), was performed to determine the statistical significance of the difference between specific metaphorical and affective framing conditions. The post-hoc analysis revealed a not significant difference between the literal ($M=3.17$) and the conventional ($M=3.05$) metaphorical framing conditions ($p=.09$), and a significant difference between the novel ($M=2.53$) metaphorical framing condition and both the literal condition (literal counterparts, $p<.001$) and conventional metaphorical framing condition ($p<.001$). Positive affect framed metaphors ($M=2.60$) showed higher levels of agreement compared to negative affect ($M=3.23$) framed metaphors ($p<.001$). There was no statistically significant interaction between the metaphorical framing type and the affective one (Cf. Table 4, and Fig. 3 for descriptive statistics for agreement in each condition).

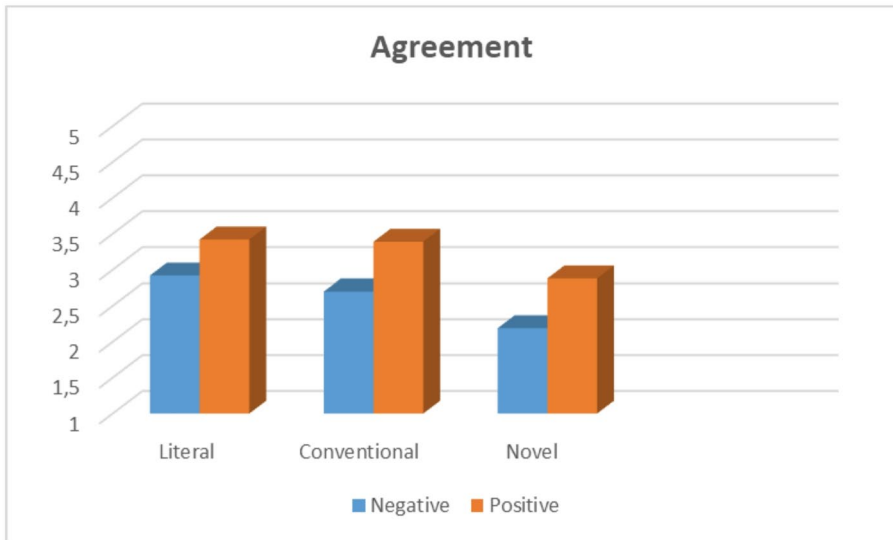


Fig. 3 Descriptive statistics for agreement in each condition

9 Discussion

The results suggest that a double metaphorical and affective framing effect is in place in the evaluation of *ad populum* argument, as for other argument types (*quaternio terminorum*, Ervas et al. 2021; *ad hominem* argument, Ervas and Mosca 2024). Given the metaphorical vs. literal premises of the *ad populum* arguments, participants evaluate the conclusion as more logically acceptable in the case of literal *ad populum* arguments when compared to both conventional and novel metaphorical framing of the same argument. Different from other argument types, the metaphorical framing of the *ad populum* arguments helped participants in detecting the fallacy. The reason for this effect on the metaphorical framing on the argument type can be seen in the fact that metaphors in the premises made them literally false while literal phrasing of the same premises might have been considered literally true. From a logical point of view, the participants evaluated the conclusion as following from false premises, especially in the case of novel metaphors that are easily recognized as metaphors. In the conventional metaphor condition, the difference of the framing effect in comparison with the literal condition is less significant and just a trend can be observed, probably because the interpretation of conventional metaphors requires a lexical modulation like that required for polysemous literal terms (Carston 1997, 2002). Therefore, intuitive truth conditions might have been assigned by participants to the premises with conventional metaphors, reading them as true rather than false, as the premises with novel metaphors. The process of lexical modulation is required in order to obtain the complete logical form, already pragmatically adjusted (Carston 2002; Hall 2008), and to derive the proposition p in $P1$. This process is crucial to connect $P1$ to an implicit set of beliefs or implicated content that the participants accept together with the conclusion C , holding $P1$ to be true. This might explain why the

conclusion of *ad populum* arguments with conventional metaphors in the premises might have been evaluated as more logically acceptable compared to the conclusion of the same arguments with novel metaphors in the premises, even though in both cases they were not logically acceptable.

Also, different from other argument types, the metaphorical framing of the *ad populum* arguments helped participants in detecting the fallacy, especially in the negative condition compared to the positive condition (helping instead to detect *ad hominem* arguments, Ervas and Mosca 2024). As argued (Ervas et al. 2021), the use of emotive language in argumentation can significantly influence whether people accept an argument's conclusion (Blanchette and Richards 2010; Macagno and Walton 2014; Pollaroli et al. 2019). Several studies have explored how positive and negative valence differently shape both the content and style of thought, playing a key role in information processing (Fredrickson and Branigan 2005; Clore and Huntsinger 2007). In particular, negatively-valenced stimuli are often perceived as potential threats requiring immediate reaction or alternative interpretation (Rozin and Royzman 2001; Citron et al. 2014; Ervas et al. 2021). Also, in the case of *ad populum* arguments, the negative valence of the verbal stimuli, either literal or metaphorical, might have led participants to be vigilant in accepting the premise as true and thus the conclusion as acceptable from a logical point of view.

Thus, when considering H1:

H1. Premises using conventional emotive metaphors will yield higher logical acceptability ratings than literal premises, whereas novel metaphors will yield lower ratings due to their higher interpretive cost.

The hypothesis was not confirmed, as the conclusion of *ad populum* arguments with literal premises were rated as more logically acceptable compared to both the conventional and metaphorical conditions. However, the expectation that novel metaphors make the conclusion of *ad populum* arguments less logically acceptable when compared to conventional metaphors was confirmed, as well as the expectation that negative rather than positive stimuli make the conclusion of *ad populum* arguments less logically acceptable. Therefore, we can provide the following answer to the first research question:

RQ1. Do conventional vs. novel emotive metaphors, compared to literal counterparts, influence the perceived logical acceptability of *ad populum* arguments?

No, the presence of an emotive metaphor, especially when novel or negative, lead participants to evaluate the *ad populum* fallacious argument as *not sound*. It is noteworthy that literal *ad populum* arguments received relatively high acceptability ratings ($M=3.28$ on a 1–5 Likert scale), higher than what prior studies (e.g., van Eemeren et al. 2009) have reported. One plausible explanation is that our premises involved neutral or trait-descriptive statements (e.g., “Friends say he is lazy”), which may be perceived as more credible or socially plausible than the more explicitly fallacious premises used in earlier work. This plausibility may have softened participants' sensitivity to the fallacy. A second possibility is that the repeated-measures

design increased familiarity with the argument structure over time, making participants more tolerant of the group-based premise. Finally, our task asked participants to evaluate “logical acceptability”, which some participants may have interpreted more loosely as “reasonableness within the scenario”, rather than strictly as a rule-based assessment of argument-scheme correctness. Future studies will strengthen the manipulation by using explicit plural quantifiers (“many friends”, “most people”) or clearer fallacious constructions.

Furthermore, the double metaphorical and affective framing effect was in place also when participants evaluate their feeling of intimacy, of being part of the community of people supporting the conclusion of the *ad populum* argument. The novel metaphor condition is significantly different from both the literal and the conventional metaphorical conditions, in that participants perceived less linguistic intimacy with the group of people proposing the argument. Therefore, different from what was expected, novel metaphor decreased intimacy with the group of people supporting the *ad populum* argument, while conventional metaphor increased intimacy with the same group, as in the case of literal phrasing of the same argument. There might be at least two reasons why conventional rather than novel metaphor promoted the feeling of intimacy with the community:

- 1) Novel metaphors are more difficult and time consuming to understand than conventional metaphors, precisely because they are completely new uses of language that required a special effort to be interpreted (Glucksberg 2001, 2003). Also, the availability of context is crucial for the interpretation of novel metaphors (Gildea and Glucksberg 1983; Glucksberg and Estes 2000; Bambini et al. 2016), which might need further information not included in a narrow argument composed by a short premise and a conclusion. Participants might have simply given up the interpretation of the novel metaphor, feeling it too difficult and effortful.
- 2) Linguistic intimacy depends on familiarity (Ervas 2022) and conventional metaphors are usually more familiar than novel metaphors, precisely because they are widely accepted by the community other than easily understood, and activating a tacit shared set of commonplaces held to be true by the linguistic community, even when containing downright mistakes (Black 1954). A methodological clarification is in order concerning the formulation of the premises.

Different from the perceived logical acceptability of the conclusion, positive verbal stimuli, independent of their being literal or metaphorical, increase linguistic intimacy of participants with the community of people supporting the argument. This confirms the idea that linguistic intimacy is felt as *positive*, independently of whether it is then used to commit a fallacy or to support a sound argument. Nonetheless positive valence of the stimuli helps increasing the perceive feeling of belonging to the community, possibly leading to also sharing its conclusion in both the cases of metaphors and their literal counterparts. From this point of view, as Cohen (1978) warned, linguistic intimacy can be found in any communication, either literal or non-literal.

Thus, when considering H2:

H2. Conventional (but not novel) emotive metaphors will elicit greater perceived linguistic intimacy compared to their literal counterparts.

The hypothesis is not confirmed, because novel metaphors in argument premises led participants to perceive less sense of intimacy with the community, and conventional metaphors in argument premises led participants to feel more sense of intimacy with the community, as well as in the literal condition. However, the expectation that the positive metaphors rather than negative metaphors increased the perceived feeling of intimacy with the group supporting the argument was confirmed, though for all verbal stimuli, including literal ones.

We can therefore provide the following answer to the second research question:

RQ2. Do conventional vs. novel emotive metaphors increase perceived linguistic intimacy with the group endorsing the conclusion?

Yes, the presence of an emotive metaphor, especially when conventional or positive rather than novel or negative, lead participants to feel more intimate with the group of people proposing the conclusion. Our findings show that conventional emotive metaphors increase perceived intimacy, whereas novel metaphors decrease it. Thus H2, which predicted a general metaphor advantage, was not supported. However, RQ2 is answered partially affirmatively: the effect depends on the type of metaphor. The presence of a conventional and positively-valenced metaphor increases intimacy relative to the novel-metaphor condition, but this effect is not attributable to metaphor per se, since literal positive premises produced a comparable increase. We therefore conclude that affective valence plays a primary role, and the metaphorical status of the premise modulates the effect only when the metaphor is conventional and easily interpretable.

Also, for the agreement with the conclusion of the community of people who supported the argument, participants felt more in agreement with the conclusion of the *ad populum* argument in the case of literal or conventional metaphorical premises rather than novel metaphorical premises, and when reading positive rather than negative verbal stimuli in the premises. Negative stimuli would have rather called for disagreement and criticism, bringing to an alternative solution or conclusion compared to the one proposed by the community, without resolving differences of opinion (van Eemeren and Garssen 2023). So, interestingly, participants rather agreed with the conclusion of the group in the case of novel and positive metaphors, in the same conditions in which they felt intimate and part of a community.

Thus, when considering H3:

H3. Agreement with the group's conclusion will be higher in the presence of emotive metaphors in the premises, in particular the ones with positive valence, compared to their literal counterparts.

The hypothesis is not confirmed, because novel metaphors in argument premises led participants to agree less with the conclusion of the community, and conventional metaphors in argument premises led participants to agree more with the conclu-

sion of the community, as well as in the literal condition. However, the expectation that the positive metaphors rather than negative metaphors increased the perceived agreement with the conclusion of the group supporting the argument was confirmed, though for all verbal stimuli, including literal ones.

10 Conclusion

The article reports an empirical study examining whether conventional and novel emotive metaphors in the premises of *ad populum* arguments, compared to their literal counterparts, influence participants' acceptance of an argument's conclusion. The findings reveal that novel and negatively-valenced metaphors tend to reduce the likelihood that participants will judge the conclusion as logically acceptable. In contrast, conventional and positively-valenced metaphors foster a sense of intimacy with the group endorsing the conclusion, also increasing the likelihood of agreement with their conclusion.

This piece of empirical research shows that the framing of the premises influences the acceptance of an argument conclusion as logically acceptable, also depending on the type of argument: the evaluation of *ad populum* argument is indeed sensitive to metaphorical and affective framing in different ways and for different reasons, compared to other arguments. Still, further research should investigate whether the two framing effects interact depending on the *affective coherence or incoherence* of the metaphorical source and target, as well as in other arguments type (see e.g. *quaternio terminorum*, Ervas et al. 2021). Also, this research show that empirical methodology can tell us to what extent extra-logical factors, as the feeling of linguistic intimacy, might influence the acceptance of an *ad populum* argument conclusion, making it reasonable to agree with. Further research should look at context availability and conversational moves to understand whether the linguistic intimacy created by novel metaphors might foster new and alternative ways to face differences in opinion.

A limitation of the study is the use of the Italian expression “gli amici”: it was chosen to maintain uniformity across all stimuli, but it does not fully guarantee the prototypical quantitative dimension associated with *ad populum* appeals. While Italian speakers can interpret “gli amici” as a socially relevant group endorsing a claim, the term may also evoke a small circle of trusted individuals, thus approximating testimonial rather than popularity-based reasoning. Moreover, “gli amici” is not obligatorily anchored to the speaker, and in some positive contexts it can be naturally interpreted as referring to the target's own friends. Although these interpretations were equally available across conditions – and therefore unlikely to produce systematic between-condition differences – future research should adopt expressions such as “molti amici”, “la maggior parte delle persone”, or “i miei amici” to more clearly fix both the quantitative force and the referential anchoring of the *ad populum* argument.

Appendix

See Table 5

Table 5 Metaphorical *ad populum* arguments and their literal counterparts in Italian

	Novel Metaphor	Conventional Metaphor	Literal Counterparts	
Negative valence	(P1) Gli amici dicono che quel ragazzo è una <i>rupe</i> . (C) Sarà impossibile capire di cosa sia capace.	(P1) Gli amici dicono che quel ragazzo è un <i>baratro</i> . (C) Sarà impossibile capire di cosa sia capace.	(P1) Gli amici dicono che quel ragazzo è <i>pericoloso</i> . (C) Sarà impossibile capire di cosa sia capace.	
	(P1) Gli amici dicono che quel fidanzato è una <i>granita</i> . (C) Non riuscirà ad abbracciare la persona che ama.	(P1) Gli amici dicono che quel fidanzato è un <i>automa</i> . (C) Non riuscirà ad abbracciare la persona che ama.	(P1) Gli amici dicono che quel fidanzato è <i>freddo</i> . (C) Non riuscirà ad abbracciare la persona che ama.	
	(P1) Gli amici dicono che quell'amica è una <i>grattugia</i> . (C) Farà molti dispetti a chi le è vicino.	(P1) Gli amici dicono che quell'amica è un' <i>arpia</i> . (C) Farà molti dispetti a chi le è vicino.	(P1) Gli amici dicono che quell'amica è <i>antipatica</i> . (C) Farà molti dispetti a chi le è vicino.	
	(P1) Gli amici dicono che quel ragazzo è un <i>polpo</i> . (C) Non andrà molto lontano nella sua professione.	(P1) Gli amici dicono che quel ragazzo è un' <i>ameba</i> . (C) Non andrà molto lontano nella sua professione.	(P1) Gli amici dicono che quel ragazzo è <i>pigro</i> . (C) Non andrà molto lontano nella sua professione.	
	Positive valence	(P1) Gli amici dicono che quella ragazza è un <i>brillio</i> . (C) Sarà molto ammirata in qualsiasi posto vada.	(P1) Gli amici dicono che quella ragazza è una <i>gemma</i> . (C) Sarà molto ammirata in qualsiasi posto vada.	(P1) Gli amici dicono che quella ragazza è <i>bella</i> . (C) Sarà molto ammirata in qualsiasi posto vada.
		(P1) Gli amici dicono che quell'uomo è una <i>risata</i> . (C) Farà ridere a crepappelle chi gli sta intorno.	(P1) Gli amici dicono che quell'uomo è una <i>sagoma</i> . (C) Farà ridere a crepappelle chi gli sta intorno.	(P1) Gli amici dicono che quell'uomo è <i>divertente</i> . (C) Farà ridere a crepappelle chi gli sta intorno.
(P1) Gli amici dicono che quella mamma è un <i>forziere</i> . (C) Tutelerà i figli con tanto affetto.		(P1) Gli amici dicono che quella mamma è una <i>chioccia</i> . (C) Tutelerà i figli con tanto affetto.	(P1) Gli amici dicono che quella mamma è <i>protettiva</i> . (C) Tutelerà i figli con tanto affetto.	
(P1) Gli amici dicono che quella nonna è uno <i>sponsor</i> . (C) Sosterrà sempre tutte le richieste dei nipoti.		(P1) Gli amici dicono che quella nonna è un <i>supporto</i> . (C) Sosterrà sempre tutte le richieste dei nipoti.	(P1) Gli amici dicono che quella nonna è <i>generosa</i> . (C) Sosterrà sempre tutte le richieste dei nipoti.	

Author Contributions FE: design and construction of the materials; FE and OM: manuscript writing, respectively FE (1-6;9-10) and OM (7-8); GZ: data collection; OM: data analysis. All authors provided feedback on the draft and approved the final version of the manuscript.

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Data Availability Data have been deposited at the following OSF address: https://osf.io/93kf8/?view_only=a3da739a39ed445fa4f4942e4c5e6b17.

Declarations

Competing Interests The authors declare no competing interests.

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