

# Framing Effects of WAR Metaphors in Mountaineering

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MASTER'S THESIS  
**Framing Effects of WAR Metaphors in Mountaineering**

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DIPLOMSKI RAD

**Uokvirivanje alpinizma pomoću metafora rata**

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## **Abstract**

This study deals with the phenomenon of metaphorical framing, its effects on reasoning, and its connections with the phenomenon of metaphor resistance, all by looking at the example of WAR metaphors in mountaineering discourse. Metaphors provide an interpretative frame which may influence the way people view an activity. For instance, framing mountaineering as WAR may result in mountaineering being seen as more dangerous. To test the potential framing effects of WAR metaphors on mountaineering, two studies were performed. The first one is a survey study which confirms that mountaineers oppose (resist) the usage of such metaphors. In contrast, it was found in a psycholinguistic experiment that framing a fictional mountain climb as WAR results in very limited effects on reasoning on participants. The discussion focuses on why psycholinguistic experiments are less likely to confirm framing effects of metaphors as opposed to discourse-based studies and bridges the gap between the limited results of the psycholinguistic experiment and the great significance WAR metaphors were given by the mountaineering community in the survey study. To achieve that, three main elements are discussed: methodological differences between psycholinguistic experiments and discourse-based studies, limits of metaphorical inference, and metaphor resistance as an index of social identity.

**Keywords:** conceptual metaphors, metaphorical framing, war metaphors, mountaineering discourse, metaphor resistance

## **Sažetak**

Koristeći se primjerom ratnih metafora u diskursu o alpinizmu, ovaj rad istražuje pojavu metaforičkog uokvirivanja, učinke na razmišljanje koje ono može polučiti te poveznice tog fenomena s fenomenom otpora metafori. Metafore pružaju interpretativni okvir koji može utjecati na percepciju određene aktivnosti. Primjerice, uokvirivanje alpinizma pomoću ratnih metafora može dovesti do toga da ga se gleda kao na opasniju aktivnost. Kako bi se testirali potencijalni uokvirujući učinci ratnih metafora na percepciju alpinizma, provedene su dvije studije. Prva je anketno istraživanje koja potvrđuje da se alpinisti protive korištenju takvih metafora. S druge strane, rezultati psiholingvističkog eksperimenta pokazuju kako su takvi učinci vrlo maleni. Rad objašnjava zašto je uokvirujuće učinke metafora teže dokazati psiholingvističkim eksperimentima nego diskursnim studijama te objašnjava raskorak između malenih uokvirujućih učinaka dobivenih psiholingvističkim eksperimentom te velike važnosti dane ratnim metaforama od strane alpinističke zajednice u anketnom istraživanju. Tri su ključna elementa kojih se rad dotiče: metodološke razlike između diskursnih studija i psiholingvističkih eksperimenata, granice stvaranja paralela između ciljne i izvorne domene te otpor metafori kao pokazatelj društvenog identiteta.

**Ključne riječi:** konceptualna metafora, metaforičko uokvirivanje, ratne metafore, alpinizam, otpor metafori

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## 1. Introduction

Mountaineering is an outdoor sport that involves climbing mountains. In mountaineering discourse, WAR metaphors can be used – e.g. *conquering* a mountain. The purpose of this paper is to shed light on various implications the usage of these metaphors involve – for linguistics and for speakers themselves – by means of a case study with two components: a survey study and a psycholinguistic experiment. The paper explains why the usage of these metaphors has been increasingly opposed by mountaineers and other outdoor adventure enthusiasts (the examples for which can be seen in Bruce 2019 and Moore 2020), along with effects this has on their language use. Secondly, these implications have to do with metaphorical framing – more specifically, the question of whether WAR metaphors in the context of mountaineering can result in different reasoning on the topic as opposed to the usage of non-metaphorical language. In the remainder of this introduction we discuss metaphor and framing, and its application to mountaineering.

Following the publication of Lakoff and Johnson’s seminal work *Metaphors We Live By* (1980), the view shared by most linguists has been that metaphors are not merely a figure of speech, but a “figure of thought,” thus profoundly shaping our conceptual system. One of the tenets of the Conceptual Metaphor Theory, developed by Lakoff and Johnson, is that the usage of a particular source domain to conceptualize a target domain results in a particular conceptualization of the target domain. In that way, some aspects of the target domain are emphasized, while the others are deemphasized (Lakoff and Johnson 1980, 10). For example, understanding LIFE in terms of a JOURNEY as opposed to a PLAY (as suggested by Shakespeare) can lead us to two vastly different views of life (Kövecses 2017, 17).

This idea would later be proven by various discourse-based studies that show that the choice of metaphor affects how various topics are tackled and understood by individuals and society as a whole. In his paper, Santa Ana (1999, 217) describes how metaphorical representation of undocumented immigrants as animals by *The Los Angeles Times* “reinforces” a racist worldview.” Furthermore, Jimenez et al. (2022) show how comparing immigration to floods in social media posts is linked to the support of building a wall on the U.S.–Mexico border in those same posts. Similarly, in their discourse-based study, Štrkalj et al. (2020, 199) find that framing the COVID-19 pandemic as WAR is used to “evoke fear and anxiety” and “strengthen a militant framework” for discussing this topic in the Croatian public discourse.

What these papers find is that a particular frame is linked to a particular way of talking (and thinking) about things.

Thibodeau and Boroditsky (2011) have proven the effects of metaphorical framing on reasoning experimentally, which initiated a series of similar psycholinguistic studies in the field. While some of them have been able to find framing effects of metaphors on participants' reasoning (Elmore et al. 2017; Hart 2018; Flusberg et al. 2017), others have not (Stanojević et al. 2023; Škrnički et al. 2022; Steen et al. 2014). Mixed results have lead researchers to investigate “boundary conditions under which metaphors can have differential effects on reasoning” (Steen et al. 2014). These involve things like participants' attitudes (Flusberg et al. 2017; Stanojević et al. 2023), psychological distance (Jia et al. 2013), the grammatical form of metaphors (Stanojević et al. 2023), and metaphors' conventionality/novelty (Hart 2018). Furthermore, the usage of a particular metaphor/metaphorical frame sometimes leads to metaphor resistance, showing that different speakers can interpret the same metaphors differently (Steen et al. 2023). Such is the case of WAR metaphors in mountaineering, which are often resisted by those who engage in that sport. For this reason, the case of WAR metaphors in mountaineering presents a pretty unique opportunity to study both metaphorical framing and metaphor resistance, finding connections between the two phenomena.

Since WAR metaphors can generally be used to talk about virtually any target domain that involves danger or difficulty (Semino 2008, 100), it is common in the English language to use it in the context of mountaineering – because it is an inherently dangerous and difficult activity. It would, however, be wrong to say that the mapping between the two domains is as systematic as is the case with some other conceptual metaphors, such as ARGUMENT IS WAR or TEAM SPORT IS WAR. Most crucially, mountaineering does not involve two opposing parties. When WAR metaphors are used in the context of mountaineering, they are most often restricted to the expression *conquering a mountain*, which would imply *taking control* of it, but not necessarily other events which are inherent to war, like strategizing, using weapons, and being in direct conflict with an opposing force. However, according to Kövecses (2017, 15), in such cases metaphorical inference can happen – mapping “additional knowledge onto the target” – based on our knowledge about the existing correspondences between elements of the target and the source domains. For example, we can infer from our knowledge about the correspondence between elements of ANGER and FIRE (for example, the fact that they are caused by something and they can vary in intensity) that anger, just like fire, can be *quenched* (Kövecses 2017, 15).

Similarly, if mountains can be *conquered*, just like a particular territory during war, then we can infer that climbing a mountain is a *battle*, that the preparation before climbing it is *strategizing*, and that the mastery of mountaineering skills is akin to having and using certain *weapons*. This extended conceptualization is also reinforced by our general knowledge of how WAR as a source domain is used for targets other than MOUNTAINEERING, like the above-mentioned TEAM SPORTS IS WAR. Similarly, stating that deodorants offer “24-hour protection” in advertising can be looked as a case “reality construction” that make costumers conceptualize of body odor as an *enemy* and to purchase the product to *protect* them (Kövecses 2017, 17). Likewise, using WAR metaphors to describe the pursuit of climbing a particular mountain emphasizes the difficulties, dangers, and the combative aspects of that pursuit – thus resulting in both framing effects on reasoning and, because of the perceived mischaracterization of climbing pursuits (which can be seen as “reality construction”), potential metaphor resistance among mountaineers. Steen et al. (2023) describe metaphor resistance as a phenomenon whereby “discourse participants” dislike “the use of a particular metaphor in a particular way in a specific discourse situation, and protest.”

As mentioned previously, in this paper, a study with two components will be presented. Both studies are conducted using the same pair of stimuli – a “metaphorical” text and a “literal” text (find them under *Method*) about climbing the fictional Mount Tamali, which differ only in a few expressions, but are otherwise the same. The first component is a survey study that delves into mountaineers’ opinions about the use of WAR metaphors in mountaineering discourse and their opinions on the presumed framing effects this usage has. The second one is a psycholinguistic experiment with two experimental conditions and participants who are not mountaineers. This part of the study investigates the effects of WAR metaphors on participants’ ideas about mountaineering as a sport and their reasoning about what it is like to climb the above-mentioned fictional mountain. This is done while accounting for the above-mentioned “boundary conditions” like participants’ attitudes, psychological distance, the grammatical form of metaphors, and metaphors’ conventionality/novelty.

More precisely, three things were considered in the process of writing the texts. The first one has to do with the target domain itself. In their study about the framing effect of ego- vs. time-moving metaphors in the discourse about climate change, Stanojević et al. argue that the framing effect might not have been observed because ceiling effect has been reached for all participants (2023, 101). The idea is that participants who are more skeptical toward the

existence of climate change are more susceptible to certain metaphors being used. If the vast majority of participants are not skeptical (as was the case in the study), the framing effect is not likely to occur. Similarly, Štrkalj et al. have found no effect of different metaphorical frames on people's reasoning about the COVID-19 pandemic (2022). Both climate change and the COVID-19 pandemic are widely discussed topics and real-life problems that affect(ed) most people and that many people have strong opinions about – opinions which are less likely to be altered by a particular metaphorical frame. Part of the reason why mountaineering was chosen as the topic has to do with the assumption that the general public has not been affected by it and has not developed strong opinions about it. Secondly, Stanojević et al. argue that the copulative construction may be a factor that contributes to a particular metaphor's ability to yield framing effects, as opposed to predicate constructions (2023, 102-3). Hart also suggests that such "direct metaphors" (which involve the form *X is Y*) may be more persuasive. For this reason, a copulative construction was used in the first sentence of both texts (e.g. *Reaching the top of Mount Tamali is a battle many mountaineers want to fight.*) The third thing that was considered was the phenomenon of psychological distance. Smith (2013) argues that people tend to rely on metaphors to reason about certain concepts much more when that concept is psychologically distant. On the one hand, the topic of mountaineering is seen as much more psychologically distant than, say, the COVID-19 pandemic. Moreover, climbing a fictional mountain (Mount Tamali) that is supposed to be located in a country that is little-known in the United States and the United Kingdom (Botswana) was described in the text. The idea is that participants would be much more likely to rely on WAR metaphors to understand what it is like to climb this fictional mountain than some more famous ones, like Mount Whitney or Mount Everest. Thibodeau and Boroditsky (2011) used a similar strategy in their study about perceptions of crime in the fictional town of Addison. Furthermore, the previously-mentioned extended conceptualization of the metaphor MOUNTAINEERING is WAR is explicit in the metaphorical text, since it does not only feature the common phrase *conquering a mountain*, but also makes references to other war-related activities by featuring phrases that are less common in mountaineering discourse.

## **2. Aim and Hypotheses**

The aim of this paper is to explain the interconnections between metaphor resistance and metaphorical framing. It is expected that the survey study will show that mountaineers resist WAR metaphors in mountaineering discourse because they frame mountaineering as a war-like activity – in other words, because they misrepresent the sport. Furthermore, it is expected that

the psycholinguistic experiment will confirm that such framing effects occur when people are exposed to a text about climbing a fictional mountain that features WAR metaphors as opposed to being exposed to a text with literal expressions.

### 3. Method

#### *Participants of the survey study*

For the purpose of the survey study, self-identified mountaineers were recruited from various climbing forums, namely Mountain Project, SummitPost, CascadeClimbers, and UKClimbing. In total, 36 people agreed to participate in the study. Most people that use the first three forums are from the United States, while the last one largely attracts users from the United Kingdom. Even though it cannot be determined where the participants are exactly from, the assumption is that their native language is English.

#### *Participants of the psycholinguistic experiment*

For the purpose of the psycholinguistic experiment, 200 participants from the United States were recruited via the Prolific platform. Their average age was 25.9 (range from 18 to 35). The majority of participants (58%) were men, and the majority of participants have completed secondary education (36.5%) or obtained a bachelor's degree (40.5%). On a scale from 1 to 5, the vast majority of participants rated their experience in mountaineering as low by selecting number 1 (65.5%) or 2 (18.5%).

#### *Materials and procedure for the survey study*

All participants were asked to read both the “metaphorical” and the “literal” text. The differences between the two are bolded. They are as follows:

##### **Climbing Mount Tamali (literal text)**

Reaching the top of Mount Tamali is an **adventure** many mountaineers want to **experience**. Needless to say, they first need to be **equipped** with an **array** of **skills** – including high-elevation hiking, rope handling, scrambling, and rock climbing. Apart from excellent physical shape, another prerequisite is a clear plan of **action**: extensive preparation, setting up a base camp, making sure you have all the equipment and enough food. And if the **ascent** is successful, the **prize** is extremely precious – the crown jewel of Botswana's Otso Mountains.

##### **Conquering Mount Tamali (metaphorical text)**

Reaching the top of Mount Tamali is a **battle** many mountaineers want to **fight**. Needless to say, they first need to be **armed** with an **arsenal** of skills – including high-elevation hiking, rope handling, scrambling, and rock climbing. Apart from excellent physical shape, another prerequisite is a clear plan of **attack**: extensive preparation,

setting up a base camp, making sure you have all the equipment and enough food. And if the **conquest** is successful, the **loot** is extremely precious – the crown jewel of Botswana's Otso Mountains.

Afterward, they were instructed to answer four questions. Participants were encouraged to think about the metaphors deliberately and were also told the purpose of the psycholinguistic experiment the texts were to be used for subsequently (to see whether they can influence people's reasoning about mountaineering and Mount Tamali). They were also encouraged to be as thorough as they wanted in their responses and to share any strong opinions they may have about the use of WAR metaphors in the context of mountaineering, as well as in other contexts. The questions that were asked are as follows:

- Do you think using war metaphors can influence the way in which people perceive mountaineering?
- Can these two texts have contrasting effects on people's perceptions of what it's like to climb Mt. Tamali or what this mountain itself is like?
- What is your opinion on the usage of war metaphors in mountaineering and in general (when talking about other sports, love, debates, fights etc.)?
- Other thoughts, comments, or feelings?

The responses were then coded so that various opinions, narratives, and comments can be grouped together and analyzed more efficiently.

### ***Materials and procedure for the psycholinguistic experiment***

Each of the 200 participants was randomly assigned to one of the two conditions – reading either the metaphorical text or the literal one. The texts are the same as those used in the survey study. The same number of participants was assigned to each condition ( $N=100$ ). Upon reading the texts, participants were asked to answer one question and rate their (dis)agreement with sixteen statements on a scale from 1 (“strongly disagree”) to 5 (“strongly agree”). These were used so that participants can assess:

- a) **Safety:** how safe mountaineering is and how safe it is to climb Mount Tamali, by responding to the following question/statements:
  - How tall do you think Mount Tamali is (in feet)?
  - People can get seriously injured when climbing Mount Tamali.
  - Mountaineering is as safe as skiing.
  - Climbing Mount Tamali is relatively safe.

- b) **Difficulty**: how difficult mountaineering is in general and how difficult it is to climb Mount Tamali, by responding to the following statements:
- Mountaineering is a strenuous activity.
  - Mount Tamali is relatively easy to climb for experienced climbers.
  - Experienced mountaineers can climb Mount Tamali on their own.
  - Fit people could reach the top of Mount Tamali with little training.
  - Reaching the top of Mount Tamali is a great accomplishment.
- c) **Mountaineers' attitude toward nature**, by responding to the following statements:
- People who climb mountains respect nature.
  - Mountaineers are more adrenaline seekers than nature lovers.
  - Mountaineers possess a great love for nature.
- d) **The need for laws regulating mountaineering**, by responding to the following statements:
- There should generally be strict laws that regulate mountaineering.
  - There should be a law dictating that certified guides must accompany mountain climbers.
  - It should be illegal to climb Mount Tamali on your own.
- e) **Mountaineers' personality**: whether mountaineers exhibit specific personality traits associated with soldiers, by responding to the following statements:
- Mountaineers respect authority more than other people.
  - People who love mountaineering are disciplined.

Subsequently, the data was analyzed to see whether there are statistically relevant differences between the responses given by participants assigned to different conditions.

## 4. Results

### A) Survey study

Overall, participants believe that the texts would differently influence the way people think about mountaineering and about what it is like to climb Mt Tamali. This opinion has been expressed in their responses to the first two questions that were asked. More precisely, 30 out of 36 people gave an affirmative answer to the first question (*Do you think using war metaphors can influence the way in which people perceive mountaineering?*), while only one person answered that the metaphors would not cause a different effect. The other five respondents were either not sure or did not answer the question directly. When it comes to the second question (*Can these two texts have contrasting effects on people's perceptions of what it's like to climb*

*Mt. Tamali or what this mountain itself is like?*), 27 people gave an affirmative response, while three people disagreed. The others were unsure or did not answer the question directly.

Apart from the above-discussed beliefs, respondents expressed various other opinions regarding the use of WAR metaphors in mountaineering. One of the most notable ones is that WAR metaphors can only (or to a larger degree) influence people who are not mountaineers or who do not know much about the topic, as well as that WAR metaphors would largely be used by non-mountaineers. This opinion is not restricted to the first two questions and is present in answers to all four questions. Specifically, it can be discerned from 14 different responses given by 9 different respondents (each respondent in the examples provided below was given a number). Here are some examples:

Participant 15: “With inexperienced people yes. I imagine people with the experience to understand what the ascent involves would see through the language used.”

Participant 5: “Again, only for those readers who are largely uninterested in the activity. I would attribute the change of voice between the two passages to the author’s approach to mountains, not to mt. Tamali itself”

Participant 10: “Yes, especially if they are not mountaineers”

Participant 22: “Archaic and outdated, typical of 1950-1970 descriptions, although occasionally used today by non mountaineers try to write exciting accounts of mountaineering”

The same number of people stated that the text with WAR metaphors makes it sound like climbing Mount Tamali is a harder challenge or that it is appropriate to use those metaphors in certain contexts, i.e. when describing more, mentally or physically, challenging ascents. This opinion was observed in 17 different responses by 9 participants. Most of these responses are in line with the hypotheses posited prior to conducting the study, i.e. that participants reading the text with WAR metaphors would perceive the climb as more challenging and dangerous and think of mountaineering as more competitive and adrenaline-driven activity. Here are some examples:

Participant 4: “I think the war metaphors make the climb seem more difficult, precarious, and with more potential negative outcomes.”

Participant 5: “I’d say that there are days on the mountain when it feels like war metaphors are useful. Most often in the planning stages, where danger is not currently present but where laxity can still endanger life and limb later on.”

Participant 27: “The first one makes it seem simple and possible for anyone to complete if they have a background in the outdoors and some specific training. It's also perceived as more of a holiday whereas the second one makes it seem hard as nails and only doable by gungho adrenaline junkies at the peak of their sport.”

Participant 18: “Having experienced the odd battle (as in during war) and the odd mountaineering battle sometimes the similarities are there. Stonefall and artillery are both interesting random experiences. Otherwise less so as in mountaineering there is no guiding mind trying to kill you, the fear is the same though.”

Participant 16: “Using the warlike metaphors makes the mountain sound more rugged.”

The most common narrative expressed by the respondents was that WAR metaphors are not appropriate in the context of mountaineering, and that, when they are used, only the combative and competitive aspects of mountaineering are highlighted. In some responses, only the unfavorable view of WAR metaphors was expressed and not the reasoning behind it. However, in the vast majority of cases, the reason why WAR metaphors are deemed inappropriate is precisely because they highlight only the “wrong” aspects of mountaineers or because they are believed to entirely mischaracterize the activity. This narrative was shared by 17 individuals and were observed in 25 different responses. Here are some examples:

Participant 14: “Yes, the first sounds like an adventure, the second sounds like an attack or desecration.”

Participant 4: “I prefer not to use war metaphors. I think they make everything about the self and about conquering/winning. In activities that are not competitive or even ones that are, why does a violent edge (war metaphor) need to be included?”

Participant 15: “I strongly dislike the use of war or even competitive language. In climbing in particular, but also in any other activities. I like to pursue activities for the experience itself, not to conquer or boast about.”

Participant 16: “I loathe war metaphors in any context”

Participant 19: “I never really thought about the terminology until I was at University (doing an outdoor education degree) and I was talking to a tutor of mine about Bear Grylls programme Man vs. Wild. The discussion centred around how it was pitting ourselves against nature, instead of with it, or part of it. Since then I've always reconsidered our approach to 'conquering' nature. The modernistic view of always bettering ourselves in my opinion is a redundant view and I prefer a more postmodern paradigm of doing these activities just for the pure enjoyment. Unfortunately this isn't the view of the general population, especially outside of what I would classify as 'true mountaineers' with the media storms around speed records and youngest summiters making headlines. These phrases are still heavily used, perpetuating the ideology of having to conquer mountains, instead of purely climbing them.”

This narrative was, in turn, often paired with another one – the belief that WAR metaphors espouse machismo, imperialist/colonial ideology, and an outdated view of mountaineering. This sentiment can be seen as a sort of progression of the previous one. Not only are WAR metaphors inappropriate because they do not paint an accurate image of mountaineering, but they can also be tell-tale signs of ideologies deemed bad or dangerous for the society at large or for people who climb or want to climb mountains. This view was shared by 14 people in 20 different responses. Here are some examples:

Participant 3: “...They harken back to a time when most (not all) mountaineers were white men, many of whom were veterans themselves, and mountaineering was seen as an extension of national glory and easily analogized to war...”

Participant 31: “Another major conflict is feeling closer and more inevitable. I don’t want to add any momentum to this by my use of language.”

Participant 36: “In fact it sounds like the biggest challenge faced if you choose to join the trip is the fact that you’re probably going to be in the company of a bunch of rapey ‘roid heads who aren’t tough enough to join the real army, the kind of people that seem likely to have been lured in by the most vacuous of marketing bollocks.”

Participant 14: “Unpleasant and should be resigned to history. Probably linked to male aggressive dominance of these pursuits”

Participant 13: “...I’d like to think the military metaphor is an outmoded style of expression and thinking in relation to mountaineering, having had its hey-day in the times of massive expeditions to 8000m peaks with nationalistic/imperialistic back stories, mostly worked through by about the 1970s...”

Nearly one third of respondents (more precisely, 11 of them in 12 responses) commented on the way that metaphors were used in the text, stating that it was so saturated with them that it sounded unnatural or exaggerated. Here are some examples:

Participant 21: “...I think your problem may be that the war metaphors that have been utilised are all rather hackneyed and forced. Another problem is that most mountaineering literature is written in the first person - with any use of war metaphors therefore coming from the perspective of a combatant (and usually an underdog) where as this third person narrative seems to vicariously revel in the combat metaphors in an very unsympathetic way.”

Participant 22: “Nobody I’ve ever known uses war metaphors like that, yes different metaphors would colour the text and thinking”

Participant 1: “Used every once in a while, I’d say it’s ok. Your example is over the top, carried away, though. Making the whole story a battle or a war, is, unfortunate.”

Participant 14: “Yes, but I think by the use of ‘loot’ and ‘crown jewel’ you have stretched the metaphors to absurdity”

Finally, it is interesting to note that some participants (5 in total) suggested or mentioned other source domains to be used instead of WAR. They did it mostly because they disapprove of the usage of WAR metaphors and because the questionnaire encouraged them be aware of the conceptual metaphors in language production. Here are some examples:

Participant 3: “they do - the second paragraph is more evocative and attention-grabbing because metaphors are evocative and attention-grabbing regardless of the subject. And using one metaphor throughout a whole passage can be effective writing. I wonder if a third attempt could be made with non-war metaphors. A few stabs at it:

Sports: Reaching the top of Mount Tamali is a game many mountaineers want to win. Needless to say, they first need to be trained with major-league skills – including high-elevation hiking, rope handling, scrambling, and rock climbing. Apart from excellent physical shape, another prerequisite is a gameplan: extensive preparation, setting up a base camp, making sure you have all the equipment and enough food. And if the contest is successful, the championship is extremely precious – the crown jewel of Botswana’s Otso Mountains.

School: Reaching the top of Mount Tamali is a test many mountaineers want to pass. Needless to say, they first need to be have reached the right grade level – including good marks in high-elevation hiking, rope handling, scrambling, and rock climbing. Apart from excellent physical shape, another prerequisite is a syllabus: extensive preparation, setting up a base camp, making sure you have all the equipment and enough food. And if the you study hard and are successful, the graduation is extremely precious – the crown jewel of Botswana’s Otso Mountains.”

Participant 18: “Sometimes appropriate sometimes not. Depends on the route. Some are battles some are endurance excercises, some are elegant joy.”

Participant 6: “it makes it more about the end result (winning vs. losing) instead of about enjoying the journey”

## **B) Psycholinguistic experiment**

Overall, the results of the psycholinguistic experiment confirm only a very limited effect of WAR metaphors on reasoning in relation to reading a non-metaphorical text. Specifically, out of fifteen questions/statements which were analyzed (the question concerning the height of Mount Tamali was discarded because of the wide divergence of the responses), differences were found only in two of them, one concerning safety (participants who read the metaphorical text were more convinced that *People can get seriously injured when climbing Mount Tamali*), and one concerning mountaineers’ attitudes toward nature (participants who read the metaphorical text were less convinced that *People who climb mountains respect nature*). There were no statistically significant differences in the remaining thirteen statements which concerned difficulty, the need for laws regulating mountaineering, and mountaineers’ personality. The

differences found are in line with the hypotheses, but show that the effect is very limited. The details are provided in Table 1.

Table 1. Descriptive statistics of the responses in two experimental conditions and results of Mann-Whitney U tests

Statement	Metaphorical text		Non-metaphorical text		Mann-Whitney U-test
	M	SD	M	SD	
Safety					
People can get seriously injured when climbing Mount Tamali.	4,5	0,732	4,36	0,718	$p = 0.049$
Mountaineering is as safe as skiing.	2,37	0,991	2,49	1,02	$p = 0.22$
Climbing Mount Tamali is relatively safe.	2,39	0,984	2,5	0,916	$p = 0.19$
Difficulty					
Mountaineering is a strenuous activity.	4,62	0,632	4,64	0,612	$p = 0.59$
Mount Tamali is relatively easy to climb for experienced climbers.	2,55	0.914	2,73	0,993	$p = 0.09$
Experienced mountaineers can climb Mount Tamali on their own.	3,14	0,910	3,15	1,05	$p = 0.48$
Fit people could reach the top of Mount Tamali with little training.	2,08	1,051	2,14	1,045	$p = 0.32$
Reaching the top of Mount Tamali is a great accomplishment.	4,58	0,571	4,44	0,808	$p = 0.22$
Mountaineers' attitude toward nature					
People who climb mountains respect nature.	3,65	0,845	3,9	0,859	$p = 0.02$
Mountaineers are more adrenaline seekers than nature lovers.	3,92	0,895	3,82	0,914	$p = 0.21$
Mountaineers possess a great love for nature.	3,88	0,808	3,99	0,835	$p = 0.19$
Need for laws regulating mountaineering					

There should generally be strict laws that regulate mountaineering.	3,25	1,067	3,24	1,055	$p = 0.47$
There should be a law dictating that certified guides must accompany mountain climbers.	3,17	1,146	3,05	1,201	$p = 0.24$
It should be illegal to climb Mount Tamali on your own.	2,62	1,229	2,54	1,145	$p = 0.35$
<b>Mountaineers' personality</b>					
Mountaineers respect authority more than other people.	2,72	0,841	2,71	0,988	$p = 0.37$
People who love mountaineering are disciplined.	3,66	0,831	3,79	0,782	$p = 0.89$

## 5. Discussion

While the survey study shows that mountaineers believe that there is a clear difference between the texts and that those differences would result in different reasoning about mountaineering and about what it is like to climb Mount Tamali, the psycholinguistic experiment shows that such an effect is very limited among non-mountaineers. As was previously mentioned, psycholinguistic experiments are generally less successful at finding effects of metaphorical framing on reasoning consistently, as opposed to discourse-based studies. Furthermore, it is clear from the results that there is a discrepancy between how some people think of metaphorical framing important and effective and the actual effects which are found in the psycholinguistic experiment. Let us examine why this may be and whether that is even relevant for how people (should) think about their use of metaphor.

### A) Effects of metaphorical framing in psycholinguistic experiments

To reiterate the results of the psycholinguistic experiment, framing effects were found regarding two questions, one concerning the safety/danger of the climb (*People can get seriously injured when climbing Mount Tamali*) and one concerning mountaineers' attitude toward nature (*People who climb mountains respect nature.*). It should be noted that participants in both the metaphorical and the literal condition, when confronted with other statements about the safety/danger of climbing Mount Tamali, gave similar responses. The same goes for statements regarding mountaineers' attitude toward nature. When it comes to the difficulty of the climb,

the regulation of mountaineering, and mountaineers' personality, this study does not provide any evidence that WAR metaphors yield framing effects.

Methodological differences might be a partial explanation of why discourse-based studies generally find that metaphorical frames exhibit effects on reasoning, while psycholinguistic experiments often do not. In discourse-based studies, the usage of a particular source domain is linked with how a particular topic is tackled. In other words, a particular source domain, at least to some extent, determines the content of the discourse. This is precisely where psycholinguistic experiments often encounter a problem: how to determine the supposed framing effects of a particular source domain if we know that that source can determine the way in which the target domain is discussed from the get-go? We can consider Ross et al.'s discourse-based study (2018) about the usage of WAR metaphors in cycling discourse, in which they find that they are utilized to highlight only particular aspects of the sport like "competition, strategy, power, teamwork, and sportsmanship." Let us now consider how effects of metaphorical framing would be tested via a psycholinguistic experiment concerning that particular example. We would probably write two texts about cycling which would be nearly the same apart from a few expressions and assign them to two experimental conditions. If we were to write two texts about a cycling competition using WAR metaphors and the same text, but with literal expressions, they would still have more-or-less the same aspects of cycling highlighted, but using different wording. Likewise, we could argue that the WAR frame determines the contents of both the metaphorical text and the non-metaphorical one written for this study. If we were to test the framing effects of, say, JOURNEY metaphors used in mountaineering instead, there would potentially not be a need to mostly emphasize the difficulty, skills, preparation, or on the act of actually reaching the top of the mountain in both the metaphorical and the literal text. In other words, the fact that texts used as stimuli have to be largely "the same," one of the requirements for experimentally testing the effects on reasoning of a particular metaphorical frame, makes it difficult to actually determine those effects. This is a shortcoming of psycholinguistic experiments which could, to some extent, explain why qualitative discourse-based studies generally produce strong results while quantitative, psycholinguistic ones often do not. With all this in mind, it would be interesting to see whether the use of WAR metaphors in the context of mountaineering is linked to texts describing particularly difficult ascents or the combative aspect of mountaineering, but that is beyond the scope of this study.

It is worth noting that this can be avoided by testing two metaphorical frames that are used to think about the same aspects of the target domain. Such is the case of Elmore et al.'s study (2017) which shows that framing an IDEA as a LIGHTBULB that has been turned on versus a SEED that has taken root results in participants viewing the inventor Alan Turing as more genius. Both of these frames highlight how ideas come into existence and how they develop.

Taking all the above into consideration, it is still necessary to reiterate that certain framing effects, although small and inconclusive, have been attested. What is more, the results suggest that participants who read the metaphorical texts were inclined to think of mountaineers as less respectful toward nature, which was not the topic of the texts *per se*. Similarly, in his study about the effects of framing CIVIL DISORDER as FIRE, Hart (2018) finds, albeit conclusively, that participants are more likely to find the usage of water cannons to disperse the crowds a justifiable/logical method. What is different about his study is the fact that in the texts used as stimuli only, he makes use of highly conventional metaphors only. Hart argues for stimuli to be made having in mind “attested, conventional usages,” and mentions “CDS’s commitment to analyzing established discourse practices” (2018, 283). Furthermore, in relation to Thibodeau’s and Boroditsky’s study (2011) which attests that framing CRIME as a BEAST makes participants more inclined to suggest enforcement-oriented solutions to it as opposed to framing it as a VIRUS, Hart states that “searching for alternative metaphorical conditions can result in forced metaphors that do not reflect the way people use metaphor to think about the target frame in normal circumstances.” (2018, 289) According to him, it is only natural that such “forced” metaphors stick out more than conventional ones.

Nevertheless, other studies with “forced” metaphors do not show the framing effects of metaphors on reasoning. For starters, Steen et al. (2014) repeated the Thibodeau’s and Boroditsky’s study with some changes in methodology and were not able to replicate the same results. Furthermore, Štrkalj et al. (2022), who also used “forced” metaphors to frame the COVID-19 pandemic as either WAR, DANCE, or SOCCER MATCH in their psycholinguistic experiment, found no significant differences in participants’ reasoning about how to tackle the spread of the virus. Similarly, this study found some, but very limited framing effects on participants.

These results, together with those presented in other papers, lead us to conclude that “forced” metaphors (or in this case “extended,” as will be discussed further in the paper) do not have an advantage over conventional, attested metaphors when influencing participants’

reasoning in psycholinguistic experiments. Furthermore, the idea that using copulative constructions make participants think of the target domain more firmly within the framework of the source domain remains to be (dis)proven. However, it seems to be the case that psychological distance is an important factor, along with the topic itself, which ought to be something about which participants do not have fixed opinions. That is at least the case in psycholinguistic experiments, since multiple discourse-based studies have shown that particular choice of metaphors can shape the discourse about pressing issues like immigration or the pandemic.

It can be argued that, in psycholinguistic experiments, metaphorical framing influences people's reasoning when it is necessarily needed to understand the stimuli, often in relation to questions that are posited after reading them. The previously mentioned Elmore et al.'s study (2017) with IDEAS framed as LIGHTBULBS vs. SEEDS has been successful at providing such metaphorical framings. Hart's study (2018) with CIVIL DISORDER framed as FIRE has also been "successful," but using metaphorical phrases which can be seen as having, in that particular context, the same denotative meaning as their literal counterparts (protests *ignited/started*; protests *engulfed/overwhelmed* the city). Maybe the FIRE frame was important for participants' decision-making because *water cannon* was mentioned? In the case of our study, limited framing effects are explained similarly. While the content of both the literal and the metaphorical text are very similar (both highlighting the same aspects of mountaineering), some denotative and consistent connotative differences between war-related terms/metaphors and their literal counterparts were necessary to understand them as well. We can speculate that the effects of the WAR frame were triggered by the questions, but not systematically. Maybe the word *respect* (in the statement *People who climb mountains respect nature*) was particularly inconsistent, while the word *injured* (in the statement *People can get seriously injured when climbing Mount Tamali*) particularly consistent with the WAR terminology participants encountered in the text. It could also be argued that had different questions/statements been provided, framing effects would have been more pronounced.

To conclude, it is worth mentioning that, since there are so many factors that determine the effects of metaphorical framing, it is best to view it as "context-sensitive" (Štrkalj 2022, 226), as well as a "local rather than a global phenomenon" – as something that "may happen if particular conditions are satisfied" (Stanojević 2023, 103). To that, it can be added that the main effect of using a particular metaphorical frame for a particular topic (target) is the change in

how that topic is tackled to begin with, as is routinely found in discourse-based studies. More precisely, since a certain way in which a particular target is tackled can be linked with a particular metaphorical frame, it is also linked with particular metaphorical phrases. But that does not mean that literal expressions cannot be used instead of them, while tackling that topic similarly. In fact, this is likely to occur when writing textual stimuli for psycholinguistic experiments. In that case, metaphorical expressions are more crucial than the metaphorical frame, making the difference between metaphorical and literal accounts mostly lexical and potentially insignificant. This is probably not common in everyday communication since metaphorical frame (and, along with them, aspects of a particular source) and metaphorical expressions match. Nevertheless, psycholinguistic experiments are still necessary to prove effects on reasoning empirically and to determine its limits and under which conditions they happen when set against non-metaphorical language. It is only necessary to take into account all of the potential shortcomings and perfect their design as much as possible. Still, that does not mean that the choice of metaphors/literal expressions is irrelevant in language use when differing effects on reasoning are difficult to prove via psycholinguistic experiments. Since the phenomenon of metaphor resistance can occur regardless of that, metaphor choice can still be crucial – as discussed later in the paper.

### **B) Limits of what can (or should) be mapped from the source to the target**

As was previously mentioned, understanding mountaineering in terms of war is common, but is mostly restricted to the phrase *conquering a mountain*. On the other hand, the degree to which this conceptual metaphor is extended in the metaphorical text written for this study is an attempt to “construct reality,” as suggested by Kövecses (2017, 17) in his example concerning deodorants framed as protection against body odor that is mentioned at the beginning of the paper. This is because all the other metaphors that were used apart from *conquering* are not conventional and present the entire climb as war, as opposed to the act of reaching the summit (or the climb as a whole, without describing its details). The psycholinguistic experiment shows that this “reality construction” can only yield very limited framing effects. As was mentioned earlier, this is probably because both texts already present the climb as a difficult and dangerous pursuit, regardless of the expressions used. Nevertheless, why is it that respondents of the survey were convinced that the framing effects would be significant?

It can be argued that respondents of the survey made associative inferences beyond the content of the “metaphorical” text and, for that reason, argued in favor of stricter demarcation between the source and the target on the linguistic level. Since the source domain to describe it is WAR, climbing a mountain can be understood as a violent activity that is associated with atrocities that are committed during war (like murder and rape) or the ideologies that cause warfare (like ultra-nationalism and imperialism). Furthermore, there is also the victory-or-defeat aspect of wars which may or may not align with someone’s idea of what it is like to climb a mountain. For the most part, respondents do not view it as a competitive activity at all. It should also be stipulated once again that they are all mountaineers, which comes with a lot of knowledge about the sport. Hypothetically, we imagine dermatologists being opposed to framing the usage of deodorants as *protection* against body odor, which is our *enemy*. In addition, since respondents were exposed to both texts and encouraged to compare them, it is only natural that they would attribute great importance to the metaphors regarding their effect on reasoning, especially since most of them disapprove of MOUNTAINEERING being understood in terms of WAR. Additionally, when doing the psycholinguistic experiment, we have unconscious processes at hand, but when we ask people about a metaphor specifically, as was the case in the survey study, we are talking about a metalinguistic, conscious process.

Another interesting point to make has to do with the fact that there are limits to metaphorical inference. For example, Kövecses (2017, 15) gives an example of the conceptual metaphor THEORIES are BUILDINGS and how, for example, the number of rooms cannot be transferred from the source to the target. Kövecses (2017, 17) also writes that there is still not an “entirely satisfactory” explanation as to what are the limits of what can be mapped from the source onto the target. In this case, it depends on who you ask. As stated in Results, many respondents thought the metaphorical extension deployed in the text was forced, even absurd. They mentioned several reasons as to why that is the case. One person (Participant 16) mentions that these metaphors are more suitable for first-person accounts of climbing mountains, whereas “this third person narrative seems to vicariously revel in the combat metaphors in an [*sic*] very unsympathetic way.” Others were unhappy because the entire description of climbing a mountain was framed as a WAR, making it seem exaggerated viewed in its entirety. In longer accounts mountain climbs, instances of WAR metaphors would be sporadic. One respondent (Participant 1) also mentions how this “war” does not have to be directed at the mountain, that it can be an internal one, or a war against a rival team, authority, or God. Several respondents pointed the fact that describing the *crown jewel of Botswana’s Otso Mountains* as *loot* is just

too unconventional. What is more, some argued that the usage of WAR metaphors in the context of mountaineering is not that prevalent at all in the media or mountaineering literature, or at least, not in this manner. One respondent wrote that it would have been more useful to find an existing account of climbing a mountain with WAR metaphors and use that instead. This idea is related to the previously mentioned problem of using “forced” metaphors in psycholinguistic experiments, as pointed by Hart (2018, 289).

In his paper, Hart (2018, 283) also mentions that avoiding “forced” metaphors is in the interest of achieving ecological validity of experiments. While thinking that way can be useful, it is often not possible to always use only conventional, attested metaphors. It can be argued that it is also not always necessary, since conclusions relevant for “real-world” language production can be achieved without only using conventional, attested examples of metaphor. What is necessary, though, is to consider the limits of metaphorical inference when preparing the stimuli for the psycholinguistic experiments. From this example, we can see that those limits are blurry and heavily dependent on the speaker’s knowledge about the world and, more specifically, their knowledge or opinions about the target domain that is concerned. This means that the limits of metaphorical inference, just like the interpretation of metaphors themselves (Steen et al. 2023), can be different for different speakers.

### **C) Metaphor resistance/use as an indexical of social identity**

Let us now turn to why the usage of the conventional metaphor *conquering a mountain*, and not just of its extended counterpart (which can be seen as an unwarranted “reality construction”) was overwhelmingly deemed as problematic and unwarranted by the mountaineering community. Consider the following excerpts from articles posted on sites dedicated to outdoor sports:

“To conquer means to own; enslave; to kill and take... this word is a blight in modern mountaineering literature, and it needs to be eradicated... This notion of beating mountains into submission was born in an age of empires, when war was seen as noble and heroic. It also goes hand-in-hand with the notion of “claiming virgin peaks through manly perseverance” – an act we now call rape. Both notions today are equally abhorrent.” (Moore, 2020)

“The idea of ownership and victory over something that isn’t ours shows how much we lack an understanding of the natural world. And makes us miss out on the real gifts – the connection and what we can learn about ourselves when we honor the mountain rather than trying to conquer it.” (Robbins)

“Our language decisions help us accurately convey the kind of people we are, what an adventure with us will be like and what our values as an organisation are. [...] ‘Conquer’ is a word that’s widely used by many in the world of mountaineering, and to me at least, conjures up the idea of defeating one’s own fears – taking on an uphill battle, or mental and physical challenge that unlocks that achievement you feel as the ground beneath you evens out after much huff and puff. ‘Climb’ just didn’t feel like it reflected all that initially. On reflection though, ‘conquer’ was the wrong choice of word. ‘Conquer’ undeniably embodies notions of territorial warfare, of defeating an enemy, of dominating someone else’s space.” (Bruce, 2019)

It is clear that using an extended metaphor necessarily involves thinking about the target domain in terms of the source domain in some way, either in terms of aspects that are highlighted or in terms of connotations of the source. However, as Steen (2023) argues, most metaphors are “indirect and conventional,” because most of them are “based on lexical polysemy.” The usage of such metaphors, as is the case with *conquering a mountain*, can result in different readings. Steen gives an example of how the word *fight* when used to talk about cancer, can either be interpreted as conveying comparisons with physical violence in its deliberate reading or as just an alternative way to phrase a “deliberate attempt to stop cancer” in its non-deliberate meaning. In the Deliberate Metaphor Theory, developed by Steen, metaphor processing can be “fast and automatic,” and especially “when it relates to metaphor processing by lexical disambiguation” (2023). Processing metaphors can slow down a bit, sometimes resulting in “metaphoric thinking” which is still “automatic and unconscious,” but results in people thinking of the target more in terms of the source (Steen 2023). However, processing metaphors can also slow down even more, to the point of people becoming completely conscious of their use of metaphors. This sometimes results in “metaphor resistance” (Steen 2023). There are numerous examples for metaphor resistance, from cancer patients being opposed to being called *warriors* (Wackers et al. 2021) or scientists being critical of using the computer metaphor of the brain (Finsen et al. 2021). Mountaineers’ resistance to the use of the verb *to conquer* is one such example as well.

It is interesting to see how Bruce (2019), one of the authors quoted above, recounts the above-described process of gaining metaphor consciousness. At first, he thought *conquer* was an appropriate word, explaining its meaning in the context of mountaineering, but “on reflection” decided that it was the wrong choice of word, pointing to an entirely different meaning to justify his decision to stop using it. However, it would be naïve to think that all mountaineers who are opposed to using the word *conquer* went through that process autonomously and came to the same conclusions. It is more likely that some of them did and

spearheaded collective metaphor resistance. This is related to the phenomenon of speakers' agency, by which language users make conscious decisions about their language use, often for purposes of projecting a particular identity in a particular context (Dyer 2007, 104-105). When certain characteristics of language use come to be associated to some "socially meaningful characteristics," we can also talk about the notion of indexicality (Dyer 2007, 102). Just like the choice of language, accent, or other linguistic features, the usage, or lack thereof, of particular metaphors or metaphorical frames can be seen as an act of identity, an indexical or "a pointer to a particular social identity." (Dyer 2007, 102) This is clear from survey study participants' responses and from the above-quoted writings about the use of the word *conquer* in the context of mountaineering. The initial reason for why WAR metaphors are seen as inappropriate in the context of mountaineering by mountaineers was probably their frustration with the perceived mischaracterization of the sport. However, it can be argued that the function of the current opposition to those metaphors is, at least in part, a way for mountaineers to project a particular identity, even if it is the case of avoiding the use of a single word.

Most respondents oppose the usage of these metaphors and, in fact, do not use them so as to distance themselves from particular mountaineering practices, narratives about mountaineering, or even types of mountaineers (Participant 36 mentioned "rapey 'roid heads") they dislike. Furthermore, in one of the excerpts presented above it is stated very clearly how "language decisions help us accurately convey the kind of people we are, what an adventure with us will be like and what our values as an organisation are." On the other hand, one respondent to the survey (Participant 17) justified the use of WAR metaphors by stating that the literal text "comes across as a bit dumbed down woke millennial." We can see that the usage of WAR metaphors (or lack thereof) can point to or be perceived as pointing to an identity of a particular kind of mountaineer or to someone's political views. To see whether this is a common phenomenon, it is necessary to find more examples of particular metaphors or metaphorical frames serving as such a meaningful marker of social identity within a certain community of practice.

Needless to say, there are other instances in which metaphor use has been linked to a particular worldview or political positions. As was mentioned earlier in the paper, Santa Ana (1999, 217) analyzed the usage of the metaphor IMMIGRANTS are ANIMALS and stated that it is particularly effective in reinforcing a particular worldview because it "does not draw attention to itself." Furthermore, he claims that "when an original, truly novel metaphor is used, the

reader ... is prompted by its novelty to evaluate the metaphor by its appropriateness..." (Santa Ana 1999, 217) Furthermore, Philip (2017, 226-227) mentions David Cameron's use of the expression *swarm of people* to describe immigrants, as "documentation of what happens with novel metaphors," novelty being, in line with Santa Ana's view, the reason why it "caused a stir." Some people claimed it is used to dehumanize refugees and immigrants, other people found it appropriate, whereas Cameron himself stated that he only meant to refer to the sheer number of people. Contrary to Santa Ana's and Philip's findings, we can see that this process of metaphor evaluation can happen not only to novel metaphors, but to conventional metaphors as well, as is the case of *conquering a mountain* or *fighting cancer*. Since metaphors vary in their degree of conventionality/novelty (Philip 2017, 226), we can argue that more conventional, deeply rooted metaphors are less likely to be reevaluated (like spatial or embodied metaphors), while those that are less rooted and more novel are more likely to undergo that process. Another explanation would be that all metaphors, regardless of their rootedness or conventionality/novelty can be reevaluated and, subsequently, resisted and, in some instances, used as an indexical of social identity. Further study is needed to determine the relationship between metaphor conventionality/novelty and the potential for metaphor resistance, as well as the relationship between metaphor resistance and social identity.

## 6. Conclusion

This paper presented a study with two components that both examine WAR metaphors in the context of mountaineering. The psycholinguistic experiment showed that framing a mountain climb as WAR influences people's reasoning about that climb and about mountaineering, but to a very limited degree. It is maintained that this metaphorical framing highlights certain aspects of mountaineering both in the metaphorical and the non-metaphorical text, because the latter was written with the aim to differ only in the phrases used, but highlighted the same aspects. Thus, in psycholinguistic experiments, effects of metaphorical framing can be observed when connotative differences between stimuli are needed to understand them or when two different frames are used, but that highlight the same aspects of the target domain. Psychological distance of the target is also necessary. Discourse-based studies usually do not encounter this problem, since they generally seek to explain how metaphorical framing is used to discuss and think about some topic (target) to begin with, without the need to make that frame the only changing variable in an experimental design.

The survey study showed that mountaineers oppose the usage of WAR metaphors because they do not appreciate the extended nature of the WAR metaphor in the text. Another reason for their opposition is the fact that they strongly dislike the connotations of the source domain. Finally, with regards to the sole use of the word *conquer*, as opposed to *climb*, mountaineers' deliberate reading of the metaphor, instead of processing it by lexical disambiguation, has resulted in collective metaphor resistance and, subsequently, in this metaphor becoming a socially meaningful characteristic of language production.

The results of this paper can be used to further our understanding on the differences between discourse-based and psycholinguistic studies of metaphorical framing, as well as our understanding of the effects of metaphorical framing on reasoning as a highly context-sensitive phenomenon in experimental designs. Furthermore, the explanation of why metaphor resistance has occurred in the specific case of WAR metaphors in mountaineering has opened some questions with regards to this phenomenon as a whole. Last but not least, this paper describes the process of metaphor use/resistance becoming an indexical of social identity, which can be helpful to anyone researching that kind of indexicals or the connection between ideology and metaphor processing/use.

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