

How bloody is your vessel? 'Contrastive idiomaticity' among languages and cultures

Federica Ferrari & Houda Akalai
Alma Mater Studiorum – Università di Bologna

Abstract Dealing with idioms, otherwise called templates, fixed or semi-fixed expressions in language in a contrastive perspective can be useful to promote linguistic and cultural awareness, mutual understanding, and inclusion. From a cognitive metaphor perspective, the interface between cultural variation and the universality of specific experiential and cognitive groundings and between motivation and linguistic variation are of great interest. This is especially true when considering linguistic relativism (Sapir-Whorf Hypothesis), embodiment, and emotion (Lakoff 1993; Kövecses 2000; Boroditsky 2001). In this paper we compare the idiomatic expression “to burst a blood vessel”, commonly used by English speakers when experiencing anger, vs. similar expressions in French, Italian, and Arabic, to explore their potential metaphorical grounding, usage, and emotional impact with a quantitative and qualitative contrastive approach. The degrees to which variation and similarities among the chosen comparable idioms occur is what we call ‘contrastive idiomaticity’. How these languages relate to these idioms’ metaphorical groundings will also be discussed from a cross-cultural persuasion and sustainability perspective.

Keywords conceptual metaphor; idioms; emotions; embodiment; ‘contrastive idiomaticity’.

1. Introduction

The study of idioms, conceptual metaphors, and their interplay with emotions can provide an insightful vision towards a comprehensive understanding of language and cognition. Conceptual metaphor theory, as introduced by Lakoff and Johnson (2003 [1980]), asserts that our comprehension of abstract concepts is fundamentally rooted in more tangible experiences, frequently expressed through metaphorical language. Idioms, as fixed expressions whose meanings are not typically derivable from their individual components, are conceived as not arbitrary but motivated (Lakoff 1993: 211) so that they can be interpreted as conventionalized “experientially motivated metaphorical expressions”. Their motivational basis given, they manifest various “degrees of variation” from one linguistic and cultural context to the other (Ferrari 2018: 105). In this sense,

they pose distinct challenges while also offering meaningful insights into linguistic creativity and cultural specificity. The paper initiates the discussion by drawing connections between four idiomatic expressions from four different languages relatable to a common emotional metaphorical grounding.

Emotions are essential in both the expression and the reception of idiomatic and metaphorical phrases. The emotional charge and impact of these expressions can affect how they are used and perceived by both speakers and listeners. Combining knowledge from cognitive linguistics, corpus studies, and emotion research to address idioms from a contrastive perspective can contribute to a more comprehensive understanding of the relationship between language, thought, body, and emotion in a multilingual and multicultural horizon.

From this standpoint, the paper elucidates the metaphorical grounding of an idiomatic expression conventionally associated with anger in English (“burst a blood vessel”) vs. its variations in French, Italian, and Arabic: “*piquer un coup de sang*”, “... *si chiude/gonfia la vena*” and, “*ثار الدم في عروق...*” (*thāra al-dām fī ‘urūq*). These idioms mentioned convey anger metaphorically, displaying how this emotion is expressed across different cultures, eventually linking abstract feelings of anger to complex embodied, cognitive, and emotional processes. We will observe whether and how the metaphorical grounding changes from one language to the other in relation to the expression of anger within complex embodied cognitive processes.

The study combines quantitative and qualitative metaphor and emotional analysis to explore the variation of these corresponding idiomatic expressions along their conceptual groundings, emotional impact, and related cultural considerations. This is what we call “contrastive idiomaticity”: the integrated observation of common motivational and experiential roots together with the creative diversifications of corresponding idiomatic expressions across different linguistic and cultural domains.

According to Gibbs (1994) and Palmer (1996), universality and cultural variation should be examined with an integrated and balanced approach, considering the selection of variants from among many possible ones. Analyzing idioms from a contrastive perspective can be a way not only to investigate idiomaticity cross-linguistically but also to promote more cultural awareness for the sake of more sustainable intercommunication. In other words, within such an integrated perspective, idioms can serve as lenses to zoom into linguistic and cultural specificities, leading to a more comprehensive understanding of the linguistic domains of interest as such and interactively with one another.

The primary questions to be investigated include: What type of metaphorical primary (Grady 1997) mapping do these idioms share implicitly? Can we validate through our linguistic data the claim that emotion metaphors are universal or cross-linguistically comparable? How does this embodiment integration encompass the universality of language together with the uniqueness of different cultural and linguistic spheres? How does universality intersect with degrees of variation?

2. Paving the theoretical ground for ‘contrastive idiomaticity’

Figurative language, and especially metaphors, effectively convey emotions. Studies show that using metaphor to describe personal feelings about an event is more productive than describing the event itself, especially for intense emotions. Metaphors also help clarify emotional aspects of social interactions, creating a sense of closeness and improving the understanding of others’ mental states and emotions (Ortony & Fainsilber 1987, cited in Citron et al. 2019).

“Metaphor is fundamentally conceptual, not linguistic in nature. [...] Metaphors are mappings across conceptual domains. [...] Mappings are not arbitrary, but grounded in the body and in everyday experience and knowledge” (Lakoff 1993: 244-5). This is evident in orientational metaphors like “HAPPY IS UP; SAD IS DOWN” (Lakoff & Johnson 2003[1980]: 15) or “RATIONAL IS UP EMOTIONAL IS DOWN”, whose motivational ground can also be found in physical and cultural basis. (Id.: 17).

Metaphors are therefore grounded in our physical and cultural experience. This feature of metaphor can be referred to as embodiment. It is thanks to embodiment that metaphors also preside over the perception and expression of our emotional experience, as also culturally informed. In other words, as long as they are correlated with our “perceptual-motor” functioning (Id.: 58), they can help the conceptualization of our emotions.

Metaphors also matter in how we think about emotions (Kövecses 1986; 2020). According to Kövecses, metaphors not just “reflect” but “constitute” “our emotional reality”: “Is it of any consequence that speakers of English use expressions like *boiling with anger*, *being swept off one’s feet*, *building a relationship* and *being madly in love*?” (Kövecses 2000: 1). He discusses the way concepts of anger, fear, love, and joy are conceptualized and expressed in language. Kövecses further highlights that emotions can have diverse metaphorical realizations, like the case of love, which is conceptualized in many

ways, as journeys (“it’s been *a long, bumpy road*”), fire (“I am *burning* with love”), magic (“he was *enchanted*” Kövecses 2000: 26), just to say a few. Our claim is: as long as metaphors are also embodied there is a high degree of possibility that these metaphors may also tell us something about what these emotions are and above all how are they expressed and perceived by speakers depending on their language of reference?

Embodiment refers to the process of constructing simulations of bodily experiences, as described by Lawrence Barsalou’s theory of embodied cognition. Interactions of people with the world are processed through multiple input and output modalities, such as seeing a car’s shape, hearing its engine, gripping the wheel, and experiencing emotions (Barsalou 1999; Barsalou et al. 2003; Damasio 1989; Casasanto & Gijssels 2015). Niedenthal et al. (2009) explored how emotion concepts are perceived, represented, and processed in the human mind. In their article “Embodiment of Emotion Concepts”, they demonstrate that individuals possess extensive knowledge about emotions, both implicit and explicit. They can explain when and why emotions occur and describe their own emotions in detail, showing similarities across individuals and cultures (Boucher 1983; Brandt & Boucher 1986; Keltner & Haidt 2003; Matsumoto et al. 1988; Tangney et al. 1992; Niedenthal et al. 2009).

Research conducted on metaphor within linguistics and cognitive science over the past two decades has laid a valuable foundation for comprehending multiculturalism. Experientialists maintain that metaphor serves as the standard means of grasping abstractions and intricate phenomena. They posit that our imagination enables us to investigate complex ideas and enhance our understanding through more familiar social and physical experiences. Metaphor becomes both a conceptual and experiential mechanism that shapes our perceptions of the world (Johnson 1995). The convergence of multiculturalism and conceptual metaphor reveals several significant insights (Johnson 1990; Tianying & Bogoyavlenskaya 2023; Halstead 2024).

In this respect, the contrastive idiomaticity perspective can be revealing, offering observable niches of vision to delve into cognitive processes informing the emotional perception and expression within and across diverse linguistic and cultural horizons.

Important conclusions can be deduced from studying the literature on conceptual metaphor and emotions of anger. Paul Ekman’s research showed anger causes skin temperature, blood pressure, and visual perception interference (Ekman et al. 1983). As Lakoff reports, “The physiological effects of anger are increased body heat, increased internal pressure (blood pressure,

muscular pressure), agitation, and interference with accurate perception.” (Lakoff 1987: 381) The most common conceptualization of anger is “ANGER IS HEAT”, which can be applied to “fluids” as well as “solids”, generating in turn “ANGER IS THE HEAT OF A FLUID IN A CONTAINER” and “ANGER IS FIRE (cross-linguistic variations aside).¹ “The ANGER AS HEAT metaphor, when applied to fluids, combines with the metaphor THE BODY IS A CONTAINER FOR THE EMOTIONS” (Lakoff 1987: 383). Lakoff further specifies how “[i]ntense anger produces pressure on the container” and “[w]hen the pressure on the container becomes too high, the container explodes” (Lakoff 1987: 385). Not by chance, “I almost *burst a blood vessel*” is among the first examples chosen by Lakoff to introduce the conceptualization of anger (1987: 380). The embodied meaning of “anger is the heat of a fluid in a container” (1987: 383), which is related to our idioms “burst a blood vessel”, “*piquer un coup de sang*”, “*si chiude/gonfia la vena*” and “*ثار الدم في عروقه*”, finds its roots in the similar physiologically grounded bodily experiences that people share cross-culturally, despite culture-based differences evident in the specific articulations across languages (Dobrovol’skij & Piirainen 2006, 2022 [2005]: 165-193).

The conceptualization of emotions has resulted as responding to metaphorical universals in cognitive linguistics, though with some nuances of diversity across linguistic and cultural domains. The literature about the multicultural variations across languages within a cognitive approach is also vast and varied, featuring numerous scholars, including Sharifian (2017), Ahrens (2010), Musolff (2017), and Wierzbicka (2014).

Different researchers observed the idiomatic metaphorical expressions from a cross-cultural perspective and discussed both “universality” and “cultural specificity”. Emotional cognition theories are believed to be divided into two schools of thought: experientialists (e.g. Paul Ekman) and social constructionists (e.g. James Averill and Rom Harré). The first theory believes that emotion concepts are universal across languages and cultures, with universal metaphors based on universal human experiences. Meanwhile, the social constructionists argue that emotion concepts are socio-cultural scripts or scenarios whose properties depend on specific aspects of a given culture. Therefore, different cultures will have different conceptualizations for the same emotion concepts due to different socio-cultural relevance. Both

¹ For instance, corresponding to “FIRE” and “FLUID” metaphors in English, “Chinese uses “FIRE” and “GAS”” (Yu 2009: 59).

experientialists and social constructionists contribute to the understanding of emotion concepts and their meanings (Gladys 2011). The embodied cultural prototype theory (Kövecses 2005; Maalej 2004, cited in Gladys 2011) has been proposed to integrate different perspectives to gain a better understanding of emotion concepts across cultures. “[A] cross-linguistic difference on some implicit measure [...] in a non-language-specific task” is claimed by Boroditsky to show “that experience with a language affects thought in some broader sense” (Boroditsky 2001: 3). Contrastive idiomaticity is perfectly in line with that.

Studies have investigated the link between an idiom’s comprehension and metaphor awareness, particularly in the context of teaching and among English language learners in metaphoric situations (Jelčić Čolakovac 2020; Gladys 2011).

The study by Jelčić Čolakovac focuses on the following metaphor discussed by Lakoff and Kövecses (1987): BODY IS A CONTAINER FOR EMOTIONS and ANGER IS A HOT FLUID IN A CONTAINER. The results suggested that expressions not motivated by a conceptual metaphor (CM) are more difficult to interpret than those rooted in CM, which confirms the claim of Boers: “An awareness of the metaphoric themes behind the novel vocabulary can facilitate retention” (Boers 2000: 557, also cited in Jelčić Čolakovac 2020). Accordingly, we can relate the way we express and interpret anger based on our physical sensations, though with some degrees of variation. In English, the manifestation of anger is often expressed with the embodied idiomatic expression “... (almost) burst a blood vessel”,² corresponding to an embodied manifestation in the person who is experiencing anger: the angry person’s face may turn red when they are extremely angry. Similarly, in French anger is frequently conveyed through the phrase “piquer un coup de sang” which translates literally into “*to sting a stroke of blood / to strike a blow of blood.” In Italian, anger is referred to as a closing or blowing vein “... si chiude/gonfia la vena” (lit. “the vein closes/swells...”). In Arabic, anger is expressed as a bloody explosion: “... ثار الدم في عروقه” (*thāra al-dām fī ‘urūq*)³ “blood erupts in... vessels” (literal translation in English),⁴ bringing up not only a burst of blood in vessels, but also in the face, the body, and the chest. While the physical manifestations of anger—like warmth, tightness, and flushing of the face—are common to everyone, they can be expressed in various ways through language,

² The idiomatic phrases presented are mentioned in general without specification of personal pronouns.

³ Literal translation has been provided for languages other than English. Phonetic transcription has also been provided for the Arabic phrases.

⁴ E.g. with personal reference: “ثار الدم في عروقه”, *thāra al-dām fī ‘urūqih*, “blood erupts in (his) vessels”.

often in comparable manners, and rarely in identical terms. The examples just mentioned seem to suggest a climax in the expression of anger in terms of both intensity and bodily involvement extension. We are investigating how the common conceptual root intertwines with the different linguistic articulation in the idiomatic expressions at issue. In question is also whether and how emotional conceptualization, engagement, and effect vary accordingly.

3. Methodological sketch and materials for this study

To address these questions, access to comparable corpora is needed so as to allow for a contrastive analysis, which we set to be dealt with by both quantitative and qualitative methods. As regards retrievability, despite the limited availability of academic language resources, the corpora available in Sketch Engine allowed us to successfully establish a contrastive basis for analysis relative to everyday spoken language in web corpora for all the four languages considered. Following a more thorough investigation on the English case, focusing on BNC, COCA, and Web, we concentrated on the Web corpora for the comparison with the other languages, for the sake of balance.⁵

In this paper we are concerned with the results of concordance in Sketch Engine, which will form our case studies. We will provide data of our four idioms in the chosen four different languages starting from the English idiom “to burst a blood vessel”, followed by the Italian “gli si chiude/gonfia la vena”, then the French “piquer un coup de sang”, and finally the Arabic idiom “ثار الدم في عروق” (*thāra al-dām fī ‘urūq*).

We can describe the methodology as divided into three phases, the first quantitative and the other two qualitative, followed by a final double-check.

In the first phase, we conducted the search of each idiomatic expression in Sketch Engine with reference to the following corpora: BNC, COCA, and Web for the English idiom, with which we initialized the search, and just Web for the other languages. This phase is dedicated to collecting the number of occurrences of each idiomatic phrase for each language. Relevant samples for qualitative analysis are eventually sorted using the GDEX option to automatically select cases that are both illustrative and representative.

⁵ By balance we refer here to comparability based on text types rather than a strictly quantitative balance. The Web Corpora do in fact slightly change in size, ranging from the largest to the smallest, as follows: Web English consists of 61,585,997,113 words, French Web 23,191,789,469 23.8 billion words, Italian Web 14,514,566,714 words, and Arabic Web 6.5 billion words.

In the second phase, a thorough search is conducted to identify and recognize the idioms present in the samples extracted from various corpora. We have carefully read the results of each idiom and emphasized each example's context by referring to the words and phrases before and after the idiom to observe it intratextually and scrutinize the corpus results. In this second phase, the metaphorical grounding starts to emerge, though hypothetically, so that we tentatively divided our results between literal and metaphorical usage of the idiomatic phrases. In other words, we examined each example separately to verify whether the idiom refers to a physical state of the human body or to a conceptualized metaphorical use in language. This result could only be confirmed more steadily after a proper metaphor analysis of the occurrences, which is the third phase of the methodology adopted here.

The third phase delves into metaphor analysis with the chosen procedure. By this phase, we were able to identify the conceptual metaphor pertaining to the idiomatic expressions by extracting the source and target domains and then observing the grounding of the metaphor and further conceptual, emotional, and contextual considerations according to the four-step procedure (Ferrari 2018). This procedure, initially inspired by Steen (1999), was chosen out of the appropriateness to the case here, i.e., the focus on emotional effect and persuasion orientation, after a keen comparison with other efficacious metaphor identification procedures like MIP (Pragglejaz Group 2007), and the MIPVU (Steen 2010) in the first place. The four-step procedure was then adapted to our case as follows, to encompass 'contrastive idiomaticity analysis' with a focus on embodiment and emotions and a cross-linguistic orientation.

In the first step (metaphor identification by means of "a) focus identification" and "b) conceptual metaphor identification"), we conducted a thorough search to identify the idioms present in the sample extracted from various corpora. We examined the examples meticulously in search of metaphorical foci, keeping the emotional slant of anger in mind, the potential target of our text. Consequently, we extracted the source and target domains relevant to the metaphorical context to identify the underlying conceptual metaphor within the micro-text of the concordance. Additionally, we acknowledged the mapping procedure involved in this analysis. In the second step ("conceptual implications"), the conceptual meaning of the idiomatic expression is further developed to motivate the grounding of the idiom. Given that the target of our idioms is in fact co-incident with emotions (anger and other related ones), idiomatically embodied, the emotional content starts to emerge already here in the first two steps. Then, focusing on the emotional

resonance of the idiom, we also evaluated terminology related to emotions, with an emphasis on how it connects to anger and other feelings. In the third step (“appeals to emotion/s”), we concentrated on the emotional appeal of the embodiment also as a potential effect. The fourth step (perspectives with respect to “ideological structure”⁶ and strategy of persuasion at a macrotextual level) is dedicated to contextualizing the procedure’s results for each idiom within the linguistic and cultural context of reference so as to allow for fruitful contrastive considerations among the four languages at issue as regards embodiment, emotional involvement, and eventually cultural specificity vs. conceptual universality.

The final phase serves as a double-check of the results coming from the second and third phases. It leads back to the corpus to confirm the initial hypothetical classification of Sketch Engine results data into two categories: metaphorical vs. non-metaphorical use of the idiom. Therefore, we selected several words that either confirm or deny the metaphorical embodiment of anger in the mentioned idioms. Then, with reference to metaphor analysis results and the pragmatic meanings in context, the primary metaphor of reference is observed in its manifestations and variations across the four languages, tracing potential connections of the meanings behind the bodily grounded experience with shared cultural backgrounds.

4. Analysis – quantitative and qualitative

The analysis of the idiomatic expressions starts with exploring the English idiom “burst a blood vessel” in BNC and COCA, and then concentrates on English Web 2021 in Sketch Engine. The French idiom “... piquer un coup de sang” (lit. “*to sting a stroke of blood / to strike a blow of blood”), the Italian “... si chiude/gonfia la vena” (lit. “the vein closes/swells...”), and the Arabic “... تار الدم في عروق” (*thāra al-dām fī ‘urūq*), lit. “blood erupts in... vessels”) will be explored accordingly from the most recent web corpora available in Sketch Engine: French Web 2023, Italian Web 2020, and Arabic Web 2024. By concordancing the occurrences of each idiomatic expression, the following data emerge.

“Burst a blood vessel” occurs 5 times in BNC and 18 in COCA. A larger number of occurrences is present in the English Web, where we have 546

⁶ For the original version of the four-step procedure, see Ferrari 2018: 115-18.

instances (from which 50⁷ have been selected by means of the GDEX option, to be used for the qualitative analysis). In the French Web “piquer un coup de sang” occurs 58 times and all these instances have been considered in the analysis. In the Italian Web the idiom “... si chiude la vena” resulted in 113 occurrences (from which 50 have been selected with GDEX for the qualitative analysis). A smaller amount of cases occurs then with the variant “... si gonfia la vena” (7 instances). Finally the Arabic idiom “... ثار الدم في عروق...” (*thāra al-dām fi ‘urūq...*), “blood erupts in... vessels”, is found in 18 occurrences, and we are examining them all. Analysis evidence follows relative to the idiomatic expressions starting with the English one and moving to the other comparable variants in French, Italian, and Arabic.

4.1 English

The verb “burst”, according to the Oxford Dictionary, means “to break open or apart, especially because of pressure from inside; to make something break.”⁸ The way blood rushes through vessels when anger intensifies is reflected in the English idiom, which imaginatively renders the effect of the pressure of the blood in the veins as already happened by means of “bursting”. The metaphorical ground comes from the physiology of rage (blood pressure). As for the source rendering, the following specificity seems to emerge in English: here it is like if the expression is already concentrating on the effect of anger – the damage is already done. Whether this can be related to a specific pragmatic orientation in the Anglosphere can be verified by observing the behavior of the expression in context in English to consider its metaphorical grounding and related emotional effects, and then by contrast with other linguistic/cultural horizons as the ones abovementioned.

A preliminary explorative exploration of BNC and COCA examples, respectively 5 and 18, suggests a predominance of metaphorical vs. non-metaphorical usage of the idiom in English, which appears to be metaphorically used 3 out of 5 times in the BNC and 12 out of 18 times in COCA, whose instances appear below in Figure 1.

⁷ For English and Italian Web, given the larger amount of occurrences found, 541 and 113 respectively, we have concentrated on 50 instances each selected by employing the GDEX option, which identifies automatically sentences which are suitable as dictionary example. Prioritizing meaningful comparisons over sheer quantity, the focus is also on the quality of the chosen examples.

⁸ https://www.oxfordlearnersdictionaries.com/definition/english/burst_1 [last access on 30/11/2024].

Focusing on the BNC examples makes it evident how there might be ambiguous cases like: a)⁹ “I don't think you should let yourself get worked up like that. You'll burst a blood vessel if you're not careful.' 'Well,' I said, 'he gets on my wick at times.'” Thanks to the co-text in the second part of the example (“get on my wick at times”) we can understand that “burst a blood vessel” is not meant in its literal sense here, but to idiomatically convey anger. Considered finally as metaphorical, this example raises an issue that is worth mentioning prior to entering the whole analysis. In some cases, it is difficult to distinguish between metaphorical and literal usage, as the embodied reference in the idiom could be evoked by the utterer without distinguishing between the actual and imaginative reaction of bursting a blood vessel in the body. The embodied reaction of bursting a blood vessel, in fact, could be happening for real, out of an emotional backlash, as well as just rendering idiomatically the emotional reaction of anger.

Concentrating then on COCA examples (see Fig. 1 below) led us to think that the English idiomatic phrase is used more commonly in informal speech, as it was identified in the categories of movies, fiction, and television content.

⁹ The linguistic examples mentioned, taken from our corpora, have been labelled with alphabetical letters to avoid confusion with the numerical order of the occurrences they refer to in Sketch Engine. Only for Arabic, where all occurrences have been considered, direct reference is made to their numbers, according to their order in Figure 2.

Corpus of Contemporary American English

SEARCH FREQUENCY CONTEXT OVERVIEW

(SHUFFLE) ENTRIES: 18 TEXTS LIMITS: NONE SORTING: YEAR GENRE

CLICK FOR MORE CONTEXT SAVE TRANSLATE ANALYZE HELP

1	2019	TV	Black Lightning	your dad. Don't tell him. He's gon na burst a blood vessel. Jen... Hey, Dad. Yeah, I know you're calling because
2	2014	FIC	Bk:WouldntItBeDeadly	! " # " If you shout any louder, you'll burst a blood vessel. " # " What in heaven's name is that woman doing? I
3	2012	WEB	amazon.com	some of his most memorable quotes (whether you applaud them or burst a blood vessel in fits of Trotskyite rage). # In any case, do not stereotype
4	2012	BLOG	towleroad.com	the Democrats TWICE. (Did Rush Limbaugh have a coronary or burst a blood vessel today?) # Posted by: Dback Nov 7, 2012 8:14:37 PM #
5	2012	BLOG	...dsright.blogspot.com	. Romney ignored it. I was screaming! And Obama nearly burst a blood vessel! He wanted it! HE CRAVED THE ATTACK about Benghazi so he could turn
6	2010	TV	Dance Academy	anyway. If my brother knew you brought this, he would burst a blood vessel. Is he always so uptight? Only now he's got a girlfriend.
7	2006	TV	Nip/Tuck	so it can't recirculate. You're lucky you didn't burst a blood vessel. Why didn't you ask your wife to help? Let her see me
8	2005	TV	The West Wing	he was a bit obsessed with it. I thought you'd burst a blood vessel trying to talk him off it. Got ta be nice with lobbyists from over-subsidized
9	2003	FIC	FantasySciFi	better than Li, anyway. The Chinese tweak's going to burst a blood vessel out when he figures out the case went south on him. " " Hard
10	1998	FIC	Mov:GodsMonsters	called him? He laughed. He laughed so hard he practically burst a blood vessel. Said it was a good lesson for me. Not to try to fill
11	1997	MOV	Breast Men	How is it? Is it good? I think I just burst a blood vessel. Look, you missed some. You'll have to try it again.
12	1997	TV	Daria	camera, Daria. Remember what the doctor said last time you burst a blood vessel? Yeah, he said it would be two hundred dollars. Before that.
13	1996	FIC	SouthernRev	(rocks flying, presumably, windows shattering), until she burst a blood vessel in her throat and bled to death. Family tradition does not record whether Mr.
14	1996	FIC	Heritage	defensive and starts apologizing, but by then Grandpa is ready to burst a blood vessel. I don't hear much of the squabbles because I live in the dorm
15	1992	SPOK	CNN_Sonya	and, do you know someone who's getting mad enough to burst a blood vessel? Well, he or she might be a likely candidate for a heart attack
16	1992	MOV	Red Dwarf	left, right! Try and relax! You're gon na burst a blood vessel! Shut up, you maggot! Do you understand? Do you understand!
17	1991	MOV	The Doctor	, is that blood? You know what? I must have burst a blood vessel trying not to laugh. Jack, I have blood on my dress. My
18	1990	FIC	Triquarterly	beautiful Prince gambled on his wedding night) the beautiful Prince Renzi burst a blood vessel in his inner ear and succumbed (the newspapers' word for it).

Figure 1: “burst a blood vessel” in COCA

In COCA, we have 18 results with only 6 occurrences using the idiom in a non-metaphorical sense and 12 examples with metaphorical usage meaning anger and other related feelings. There are terms present to differentiate between the literal and metaphorical usage of "burst a blood vessel", to enhance its significance. The metaphorical category contains terms such as “relax”, “rage”, and “uptight”, which emphasize how the expression is employed to communicate feelings of anger and fury. The examples also include various verbs such as "shut up," "shout," "scream," "relax," and "apologize," along with adjectives like "hard," "loud," and "mad." Lastly, there's an instance featuring the verb "laugh" in example b), 10 in Figure 1 above: “He laughed. He laughed so hard he practically burst a blood vessel”, which ironically highlights the uncomfortable feeling of surprise over something that nearly brings about shock and anger. This raises the question: can laughter also cause a blood vessel to burst? Conversely, the non-metaphorical category comprises terms such as “doctor”, “death”, and “died”, which directly pertain to the concrete meaning of a physical occurrence of a bursting blood vessel.

The common metaphorical grounding of the primary emotional metaphor ANGER IS THE HEAT OF A FLUID IN A CONTAINER, which could also give rise to conceptual variants such as ANGER IS AN INTERNAL PRESSURE OR A HOT LIQUID IN A CONTAINER, seems here confirmed, and yet diverse meaning nuances may emerge from a cross-linguistic comparison. The analysis continues, focusing on the exploration of the idiomatic expression in the Web.

Moving to the English Web corpus (enTenTen2021), which is 61,585,997,113 tokens or words in size, fifty instances were selected for the analysis using the GDEX sorting, out of the total of 541. To help the identification of metaphorical vs. non-metaphorical usage, keywords were identified in the relative co-text, therefore eventually functioning as foci of the metaphor in the cases interested by metaphorical transposition, with respect to those cases where instead the meaning seemingly stuck to a more literal reference.

Only eighteen sentences out of fifty featured a literal usage of the expression. These sentences incorporate body parts to highlight the connection between the idiom and the body with a direct physiological reference (“burst a blood vessel” goes with e.g. “in... leg”, “in... brain”, “in... eye”, “in... neck*”,¹⁰ “bleed”, “died”, “bloodshot”, “advanced cancer”, “crying blood”, “and the leg never healed”, “veins in your eyes”, “and cause swelling of the ear flap”, “marks on his body”, “an accident”, “bled from the nose and mouth”, “heart attack”, “and died before medical aid arrived”).

In contrast, metaphorical phrases can be seen in the remaining sample of thirty-two out of fifty, with several instances that are idiomatically conveying anger and other related feelings, also excitement in a few cases. For instance, c) “concentrating so hard... like he’s going to burst a blood vessel”, d) “blushing so hard he was afraid to burst a blood vessel, he wiped a tear”, or e) “he became so excited that he burst a blood vessel”. In these cases, the attribution is difficult because the emotional displacement is somewhere else in the sentence, and the (literal) physical bursting of the vessel is evoked metaphorically as a potential outcome, so to say, with a persuasive impulse, to render the level of concentration in the first of the cases, of blushing in the second, and of excitement in the third (concentration is embodied as pressure in the head, blushing and excitement as an increase in blood flow). In the most evident

¹⁰ The “neck” is ambiguous as a bodily part as it is the one typically going with the idiomatic expression “bursting a blood vessel” imaginatively meaning anger.

cases, instead, the idiom is used directly to express anger, like in: f) “I thought he was going to burst a blood vessel when I said that to him”. Otherwise, the bursting is evoked as the physical reaction associated with anger, which gets also explicitly expressed in the sentence, like in: g) “I thought the major would burst a blood vessel. His face got red, his hands clenched, and he was trembling with anger.” Whether used to directly express anger or to evoke the potential embodied reaction out of other emotional experiences, the indices from the second group do not refer to any actually happening symptom that the body displays physically by having an outburst of a blood vessel for real, instead we have an emotional explosion, where most of the cases are related to anger and nervousness, and also strangely connected to excitement, fear, and embarrassment in a few examples.

The main question revolves around how we interpret the conceptual metaphor in the phrase “burst a blood vessel”: ANGER IS HOT LIQUID (blood) IN A CONTAINER (vessel). In English, the stress is on the effect in the container, a bodily part like the vessel, of the raising temperature and velocity of blood running in it, which is ‘anger’ physically rendered in the idiom with the corresponding experiential basis and effect in the body of this emotion itself. The effectiveness of the expression in English is also given by the rendering of the effect as if the damage was already done. Representing the emotional state as a fluid or a chemical substance capable of exploding, how do we linguistically and conceptually connect the physical act of a blood vessel bursting to the outburst of anger? If blood flows in vessels, is it that anger and rage also run, spill over, or overflow in some way? Does the reference to “burst a blood vessel” in discourse also help enact feelings of anger in the interlocutor, or does it elicit a different emotional response, or is it almost neutral, given the conventionality of the expression?

4.2 French

Moving to the French language domain, reference is made to the FrTenTen23, also known as the French Web Corpus, consisting of a total of 23,8 billion words. Of course the chosen idiom is not the only possibility to express anger in French. Others are, for instance: “avoir le sang qui monte au visage” (having blood rushing to the face), and “voir rouge” (seeing red), and/or serrer les poings (to clench one’s fist), as well as “entrer dans une colère noire” (to enter in a black anger), and finally “piquer un fard”, similar to our chosen one but meaning “turning red”, or “blushing” out of not just anger but also

embarrassment. The expression “*piquer un coup de sang*” has been identified by both dictionary and context comparison as the closest, both semantically and in terms of emotional reference (anger), to the idiom in English. Moreover, like the English one, it can bear both a literal and a metaphorical meaning. Fifty-eight occurrences were found and analyzed consistently. Only two instances had the literal meaning of experiencing a blood stroke, while all other sentences metaphorically portrayed anger.

From this analysis, despite the limits of the corpus scope vs. French language as a whole, we can observe that when used literally, the term “*coup de sang*” can refer to an “*attaque cérébrale*” (stroke), or apoplexy, and other variations, depending on the context of usage, however valid for a minority of the cases. The idiomatic expression is employed metaphorically in French to signify a kind of anger that is sudden, explosive, and impetuous (like the English idiom “burst a blood vessel”). Moreover, it expresses feelings of anger across various types of online content, including news websites and fiction, where it appears as inherently negatively connotated, since the verb “*piquer*”¹¹ is frequently used in an unpleasant context to imply something that penetrates like a wasp sting, inflicting a sting that can also be painful. Nevertheless, the idiom indicates that the act of pricking and stinging originates from an ‘external stimulus’ and agent, often coinciding with the subject, in contrast to the English bursting, which can result from an internal force in the case of bursting blood vessels out of the rising temperature of the blood as a metaphorical rendering.

The phrase “*piquer un coup de sang*” is not analogously framed as to “burst a blood vessel,” grounded on the primary metaphor of anger as a hot liquid in a container. The French term “*un coup*”¹² as defined by the Cambridge French English dictionary, refers to the action of “*frapper qqn, qqch*”, suggesting notions of striking, stabbing, or punching. When we consider the verb “*piquer*” and the noun “*un coup*” connected to “*sang*,” meaning “blood,” there are two significant interpretations we can derive. The first is that a liquid, blood within the body, is suddenly sprouted out (of a vessel) as a result of a punch, hit, or even as a prick of a needle/thorn. The second consideration is that an external stimulus (a provocation) prompts the body to experience a stroke or a rush of blood, as suggested by the verb “*piquer*,” meaning “to sting”. This implies that blood cannot be affected solely from within the body. However, this analysis should not be viewed through a breakdown of words

¹¹ <https://dictionary.cambridge.org/dictionary/french-english/piquer> [last access on 30/11/2024].

¹² <https://dictionary.cambridge.org/dictionary/french-english/coup> [last access on 30/11/2024].

within the idiom, but rather by examining the broader linguistic constructions of the phrase.

We can find contextual indices that help understand the meaning of the idiomatic expression “*piquer un coup de sang*” and see how it conceptualizes anger. The following examples, which have been translated into English, include co-textual expressions that enhance the identification of the metaphorical sense. In the first example a) below, the immediacy and the strength of the emotional reaction evoked metaphorically by the idiomatic phrase “*piquer un coup de sang*” is reinforced by the subsequent overstatement “*elle est capable de tout*”:

- a) “Quand t-elle *piquer un coup de sang*, elle est capable de tout”.
 “When she **strikes a blow of blood* [lit. translation]¹³, she is capable of everything”
 “When she *bursts a blood vessel*, she is capable of everything”

The idiomatic specificity in French is highlighted in this first example a) by the literal translation in contrast with the idiomatic translation in English. Accordingly, further evidence is provided in the upcoming examples: b) “Je pique un coup de sang! je n'en peux plus! je sature!” ([*I stroke a blow of blood] I burst a blood vessel! I can't take it anymore! I am saturated!). The action of bursting a blood vessel is here rendered differently, with more emphasis on the agency, the subject of “*piquer*”, and the abrupt velocity of the outburst of the blood: “*coup de sang*”, literally referring to a sudden and unexpected stroke of blood, meaning sudden rage. Although the personal agency of the act is structurally expressed in French, the act is not depicted as deliberate, as evident from this example: c) “Elle a piqué un coup de sang, a-t-on murmuré, comme pour l'excuser” ([*She stroke a blow of blood] She burst a blood vessel, somebody whispered, as if to excuse her). The negative evaluation of rage and, above all, loss of control emerges from the justification provided by another participant in the reported episode. Otherwise the expression can also refer to sudden decision and action, following the stroke, as in this other example: d) “Frank Cary pique un coup de sang et décide de

¹³ As evident from the first example mentioned for French, Italian and Arabic, when translating the examples from languages other than English, a literal translation of the source has been provided at first, the asterisk indicating it would not be adequate for an idiomatic translation, which follows, to present an idiomatic analogy in the target language.

s'occuper directement du problème” ([*Frank stroke a blow of blood] Frank burst a blood vessel and decided to handle the problem personally).

The idiomatic expression of anger starts to manifest degrees of variation when moving across different languages and cultures. The cultural combination of elements represents the embodiment of wrath and anger, with distinct sociocultural interpretations. In French it can be described using expressions such as "piquer un coup de sang", the most similar to "burst a blood vessel". Here the metaphorical grounding gets slightly changed in source depiction as follows. The stress in the French idiom seems more to be on the effect of the outburst and on the agent, the subject of anger. It is like if it were almost the subject and agent of the feeling to cause, by the inadvertent action sustained by the verb "piquer", the outburst of their own blood, rendered here with the highly rapid and unexpected move ("coup"). ANGER IS (letting) HOT LIQUID (blood) IN A CONTAINER (outburst): ANGER IS (the outburst of) HOT LIQUID IN A CONTAINER. The effectiveness of the French variant seems to be related to the velocity of the unpredictable act, whose subject is, whether inadvertently, and maybe unconsciously, the agent.

4.3 Italian

Searching the idiomatic Italian expression "... si chiude la vena" in the Italian Web (itTenTen20), consisting of 14,514,566,714 tokens, 113 occurrences can be found with most of the hits from news and blogs websites. Less frequent but still used is the variant "... si gonfia la vena" occurring 7 times. Among the first 50 examples we selected as most representative of the 113 occurrences of the first variant, two of them resulted as ambiguous at first sight, but after careful examination, even the two ambiguous cases appeared to be metaphorical, as all metaphorical are the seven occurrences of the second Italian variant.

Both expressions use the reflexive form of the verb "chiudere/gonfiare", the indirect object omitted at the beginning of the search phrases consisting in the subject of the action where the agency is attributed to their own body, more specifically, the veins. The reflexive forms "... si chiude la vena" and "... si gonfia la vena" literally mean "*the vein closes/swells... to me/him/her/themselves" / "my/his/her/their vein closes/swells". Another alternative could have been the expression "... parte un embolo" ("getting a blood clot"). Although bearing both a literal and metaphorical meaning in Italian, where it is also used to convey anger, this expression has not been selected for an Italian counterpart to the English "burst a blood vessel" as it

appears to be lexically more distant and generic in meaning than the chosen Italian idioms: “... si chiude la vena” and “... si gonfia la vena”.

To judge from the examples, a larger emotional resonance seems to be found in correspondence with the most frequent expression, where the emotion is anger but can also be any other emotional reaction implying loss of control, like in:

a) “È ubriaca e *le si chiude la vena*, non ha più filtri”

She is drunk and **her vein closes* [lit. translation], she no longer has any filter.

She is drunk and *has burst a blood vessel*, she acts without any restraints.

Even though the term is associated with anger and rage, we encounter instances that indicate an emotional disconnection where the speaker is unable to comprehend their feelings and appears to be stuck or emotionally blocked, like, for example, in the following instance: b) “Ammetto che quando si parla di Gilles mi si chiude la vena, non sono obiettivo.” (I admit that when people talk about Gilles [**my vein closes*] I burst a blood vessel, I am not objective.)

As far as emotions are concerned, the Italian version of the idiom “... si chiude la vena” seems to suggest not just anger but the idea of getting caught by a state where rationality does not command, and the subject is led to act on impulse, like is evident in the following two examples: c) “le si chiude la vena e non capisce più nulla.” (**Her vein closes*) She bursts a blood vessel and she no longer understands anything); d) “Se il sangue ti va subito alla testa o, come dico io, ti si chiude la vena molto facilmente e ti fai prendere dall'impulsività e dall'aggressività, senza valutare l'entità vera dei fatti o del "nemico" rischi di sfasciarti la testa contro il muro.” (If blood promptly rushes to your head, or, as I say, [**your vein closes very easily*] you very easily burst a blood vessel and you are taken by impulsivity and aggressiveness, without evaluating the true extent of the facts or of the “enemy”, you risk smashing your head against the wall.)

The less frequent “si gonfia la vena” seems to be more specifically related to anger: e) “A volte qualcuno la spara talmente grossa che ti si gonfia la vena e via, boom, in un battibaleno la vostra lunga amicizia virtuale termina. “Eppure fino a ieri andava tutto bene.” (Sometimes somebody shoots it so well that [**your vein swells*] you burst a blood vessel and that's it, in a flash your long virtual friendship ends). In any case, the feature of anger that gets stressed in both cases is the uncontrollable feature, if anything else corresponding to the

common metaphorical grounding of the primary conceptual metaphor of anger as a hot liquid in a container, which, we could say, when the temperature gets really high, can become like a volcano, erupting without control.

The metaphorical grounding is similar to the English case, with the difference that in English the action is picked as if the damage was already done, with an emphasis on the effect of the experiential basis: the vessel has already burst, whereas in Italian the embodied metaphorical action is taken at the moment of the potential rupture. In fact, the closing or swelling of the vein are nothing but the preliminary phases, the stage prior to bursting. It is like if the same experiential gestalt has been taken from different angles, or, if you like, at slightly different shots of the scene in movement. ANGER IS (the pressure of) HOT LIQUID (blood) IN A CONTAINER, generated by either the closure of the container itself (in the case of “... si chiude la vena”) or presumably by an increase in the amount of liquid/blood flowing at higher velocity within the same container, causing it to swell and indicating the possibility of its rupture. The stress is here on the potential rather than on the effect, the effectiveness of the Italian rendering given by the suspense intrinsic in the expression, suggesting an ‘almost happening’ damage, rather than by the image rendering of the ‘already happened’ damage as it is in English. Can this be related to a more insistent focus on the pragmatic consequences, effects, and action in the Anglo-culture and relative language and structure, as pragmatic, action-based, and effect-oriented (Wierzbicka 2003: 447-448), with respect to the more contemplative, thought-oriented, and process-based Italian one? The hypothesis can be traced here on the ground of cross-linguistic studies and also referring to the philosophical traditions of reference, but a wider search would be needed to provide us with a satisfactory answer.

4.4 Arabic

The last idiomatic expression we explore in Sketch Engine is: “ثار الدم في عروق...” (*thāra al-dām fī ‘urūq*) from Arabic Web 2024 (arTenTen24), the most recent version of the arTenTen corpus, consisting in 6.5 billion words. The results have shown 18 occurrences of the idiom, and we are considering them all (see Figure 2 below). The expression means that “blood (has) burst in the vessels”.

Interestingly, in Arabic there are other expressions that start with ثار الدم (*thāra al-dām*) which means “blood (has) burst”, and that do not only refer to vessels alone, but also to blood bursting “in” – في (*fī*) – body; face, head, chest. Meanwhile, the first verbal phrase consists of the verb that is ثار (*thāra*) meaning:

arise, rise, be enraged and rebel against or be deeply stirred, and *الدم* (*al-dām*), which means blood.¹⁴ All the occurrences seem to metaphorically depict anger by means of an eruption through blood bursting *in* the body, and none appears to be literal in meaning.

CONCORDANCE Arabic Web 2024 (arTenTen24)

simple ثار الدم في 18
less than 0.01 • 2.4e-7%

Sort GDEX

Get more space

Left context KWIC Right context GDEX score

Row	Source	Context	GDEX score
1	wikipedia.org	لهل مَعها في القبة.<S></S> فما آن سمع عمرو بن كلثوم ذلك ثار الدم في وجهه والقوم يشربون الخمر.<S></S> وتَنظَر عمرو بن هند إلى	0.443
2	pal-stu.com	ع يعطي إشارة للسفاح الذي ارتعد ارتعاده شديدة ..<S></S> و ثار الدم في عروقه و النفث إصر سليمان بن عبد الملك الذي كان واحدا م	0.385
3	lakil.com	كرات والمصائب العظام.<S></S> لذلك عندما يراها يثور الدم في عروقه ويغضب.<S></S>.</S></S> وقد يشتد غضبه.<S></S>	0.369
4	nadyalfikr.com	خواطري و تشتعل أحاسيسي ..<S></S>.</S></S>.</S></S> يثور الدم في عروفي مطالبا إياي بالخروج و الإسراع بياقة قبل حزاقة على و	0.349
5	3nazh.net	ها : لو سمحت لا ترأسليني ولا تتصلي بي " عندها ..<S></S> ثار الدم في جسدي كله ..<S></S> فلو كان أمامي لما بقي حيا ..<S></S>	0.337
6	graam.com	ثم تكلموا عن الوحدة ..<S></S>.</S></S>.</S></S> يقول لقد ثار الدم في عروقي ولولا انه شيخ ضرير لأنقمتم منه (حسأ هو ومن خلفه	0.318
7	sandroses.com	ن الحق بطريقة خاطئة.<S></S> ممارسة التدريب: تذكر كلما ثار الدم في عروقي أن: 1- قوة الشخصية ليست في الغضب والتمسك ب	0.254
8	alkalema.net	ة ريكية: - سالاك (وهي شئمة بالتركية تعني غيبي).<S></S> ثار الدم في راس الشيخ وبدأ قلبه يخفق بسرعة جنونية ولكنه تمكن أن يس	0.174
9	bizturkmeniz.co...	ث التنظيم الإرهابي فيديو حرق الطيار الأردني معاذ الكساسبة ثار الدم في عروقي، واتخذت قراري هذه المرة باختراق موقع التنظيم، وإعا	0.093
10	r4fm.ps	يه وبالارده مهما كان عرضه يرى زوجته شبه عاربه مع رجل ولا يثور الدم في عروقه اللهم استر علينا بالدنيا والاخره<S></S>.<S></S> حسبي الله علر	0
11	66n.com	قيقتها وبعد شهر علمت أن أحد أصدقائي سوف يتزوجها وهنا ثار الدم في عروقي واتنابني غيظ شديد وجافاني النوم لعدة ايام وقررت ان	0
12	ahm1.com	، وانا في احدى مواقع الدردشه دخلت بنت ورفعت علم امريكا ثار الدم في عروقي ودخلت انا واياها في نقاش طويل وسب وتكفير وتخو	0
13	hmsaat.com	الولد بكرته ومرتي ما كذبت خبر مدت يدها بتلقظه ساعتها انا ثار الدم في عروفي لا ابوها لا أبو العلاج وأنط في ذاك الولد وأقول له احتره	0
14	qassimy.com	ه الدين دخلت وقررت كامل الخبر ولم اترك منه حرفا وبصراحة ثار الدم في عروقي حقا على من تنكروا لبلد شقيق واكثر من شقيق من ا	0
15	sauress.com	التي كان يشدو بها لبلبل الجنوب الصداح فكل من سمع اغانيه يثور الدم في جسمه ويزداد الحماس في قلبه للتحرير والاستقلال واستعادة	0
16	yemeres.com	لية في سيناء ما جعل عبدالناصر ونائبه غير الكفو المشير عامر يثور الدم في عروقهما ويقعان في الحفرة التي خُفرت لهما ويطلبان باجلاء	0
17	annaharkw.com	ن و قلبي لك حاطر أجيك بلحمي وضفري و اخلي العقل يتطاير يثور الدم في صدري وضغطي يرتفع طائر أجيك واسلم بأمرى وحيي لك أكبي	0
18	chaatomam.com		0

Rows per page: 20 1-18 of 18 < > 1/1

Figure 2: *ثار الدم في* (*thāra al-dām fī*) from Arabic Web 2024

Also in the previously mentioned idioms in other languages the meaning entails a rapidity or hasty action that happens suddenly as the verb mentioned is also used with argument, volcanos eruption, and rage. In Arabic, to clearly distinguish its metaphorical usage is the literal meaning of the verbal part of the idiom that is arise, rebel against and that is not commonly used in a medical way referring to a stroke or an apoplexy. The mapping of the verb “*thāra*” with anger is already referring to anger by means of a volcano that can erupt anytime. Especially with words and phrases such as: “فورة” (*fawra*)¹⁵ that means “boom”, “flare”, “outburst”, a word in Arabic used also to refer to “heat” and “anger”, “لم يستطع ان يسيطر” (*lam yastaṭi‘i an yusayṭir*), which means “he could not control”, “فانفجر” (*fa infağara*), meaning “then he exploded”, “يخفق قلبه بسرعة جنونية” “و يرتفع ضغطي” (*yakbfiq qalbukhu bisur‘a junūniyya*), “his heart beats so high”,

¹⁴ <https://www.almaany.com/en/dict/ar-en/> [last access on 30/11/2024].

¹⁵ [In English - Translation and Meaning in English Arabic Dictionary of All terms Page 1](#) [last access on 30/11/2024].

(*wa yartafi‘u ḍagħṭī*), meaning that “my blood pressure goes high” in a metaphoric sense. In the last sentence, the idiom is also used metaphorically to express how enthusiastic the speaker is in expressing his love; love, not rage, is what caused the blood in the vessels to burst.

To specify how the idiom refers to different pronouns, we refer to the last word عروقه (*‘urūqih*) meaning “his vessels”. The “H” at the end of the word عروقه (*‘urūqih*) refers to the pronoun “He” and it is found in 4 examples; we also have different parts of the body such as “his face” وجهه (*wajhib*), جسمه (*jismih*) “his body”, صدري (*ṣadri*) “my chest”, which are all mentioned only one time, in addition to the word عروقي (*‘urūqī*) “my vessels”, that is mentioned seven times.

Making reference to specific examples picked from Figure 2 above, translated here in English, we observe an expansion of the metaphorical container from the vessels to other bodily parts, as well as an increase of intensity of the expressed emotional experience, visible in the idiomatic expressions as such as well as in the co-textual elements in the chosen sentences. Example 3)¹⁶ is more similar to English:

عندما يراها يثور الدم في عروقه و يغضب
(*‘ndama yaraha yaṭḥuru dām fi ‘uruqih wa yagħdab*)

“So when he sees her, *blood erupts in his vessels* [lit. translation] and he gets angry”

“So when he sees her, *he bursts a blood vessel* and he gets angry”

In fact, here the container corresponds to the vessels and the emotional reference is anger. Then we shift to example 4), where the extension of the container is visible in the co-text following the idiom usage: يثور الدم في عروقي مطالبا إياي بالخروج و الإسراع بباقة قبل حرّاقة على وجنتيها و يديها و قدميها (*yaṭḥūru al-dāmu fī ‘urūqī muṭāliban iyyāya bi al-khurūj wa al-isrā ‘ bi baqati qobāl ḥarīqihā ‘ala wajantīyhā wa yadīyhā wa qadamīhā*) “*Blood erupts in my vessels*, asking me to get out and hurry up with a bunch of burning kisses on her cheeks, hands, and feet”. Moreover, the emotional reference of the idiom here seems not to be restricted

¹⁶ As for the other languages other than English, the first example mentioned shows evidence of the convention followed: the literal translation of the idiomatic expression has been provided first, followed by an idiomatic translation. As for Arabic, the rest of the examples mentioned in reference to Figure 2 are presented with a literal translation in English to highlight the expansion of the metaphorical container, which would have been lost with an idiomatic translation adapted to the target language.

to anger but to compulsion in general, which might not be maintained by an idiomatic translation in English. In examples 5) and 9) the extension is evident in the idiomatic expression itself, interesting the whole body and the head, respectively. In 5) عندها ثار الدم في جسدي كله (*indaha thāra al dāmu fī jāsadi kūllihī*) “Then *blood erupted all over my body*” the idiomatic extension to the whole body is meant to express an extreme state of anger, whose intensity is rendered afterwards by the speaker hypothetically envisaging that it could lead him to physical violence: فلو كان أمامي لما بقي حيا (falaw kāna amamī lāma baqiyā hayān) “so if he was in front of me, he would not stay alive”]. Similarly, intense anger is conveyed when the idiomatic embodiment refers to the head: 9) ثار الدم في راس الشيخ وبدأ قلبه يخفق بسرعة جنونية (*thāra al-dām fī ra’s al-shaykh wa bāda’ a qalbuhu yakhfiq bi-sur’a junūniyya*) “The *blood erupted in the head* of the Sheikh and his heart began to beat at a crazy speed”.

The metaphorical grounding of ANGER IS A HOT LIQUID (blood) IN A CONTAINER (vessels, face, chest, body) seems to get expanded in the Arabic rendering as the container extends potentially to the body as a whole. Is this extension relatable to a more emphatic and enthusiastic expression, as well as perception of anger and emotions in general at the embodied cognition level in Arabic? In other words, could this extension reflect a cultural tendency to emphasize and embody emotions more vividly in Arabic? And if so, could this emotional expression tendency also have an impact on the culturally shared tendency in emotional perception?

5. Discussion of results

Metaphorical language helps develop communication in everyday life. It eases comprehending abstract ideas and representing them in a concrete way: we employ figurative language to make abstract thinking more concrete (Beck (1983); Lakoff & Johnson (2003[1980])); Lakoff & Turner (1989). The degree of connection between the concrete and abstract meanings varies depending on the idiomatic expression. For instance, when examining the English idiom "burst a blood vessel," the concrete and abstract meanings are not directly related. The act of bursting blood in a vessel is a physical, concrete operation, while associating it with anger, which is generally understood as high temperature or a liquid in a container, in a linguistic representation of another domain is a creative effort to translate the abstract sense into a tangible one.

This creative effort becomes automatic given the conventionality of idiomatic expressions in languages.

The French, Italian, and Arabic language variations all incorporate blood as a fluid in the vessels, but with some distinctions. In French, the pressure of a fluid in a vessel is only cognitively implied; instead, a sudden and painful sting or a blow of blood is emphasized, sometimes related to the subject and agent of the (involuntary) action that cannot but indirectly be framed as a hot liquid in a vessel prone to bursting, which is characteristic of the English idiom. In a similar way, the Arabic language depicts the body, as suggested by the verb “thara,” as a volcano, with blood flowing like lava, and when anger is added to that volcano, it erupts, thus connecting it to the well-known concept of a hot liquid in a container. In contrast, in Italian the underlined aspect of the frame is on the constriction, impediment, resulting from too much anger’s pressure, as if anger constricts or impedes the flow of blood (*si chiude, si gonfia*). This metaphorical realization can also be related to the primary metaphor but insists on the potential rather than on the effect as it is in English. This makes us consider the conception of anger not as an eruption, an explosion, or a sharp pain, but rather as a blockage or obstruction that hinders the normal flow of blood in the body. At first sight, compared to the other three languages, this can be regarded as reducing anger to a slight annoyance rather than strong anger. And yet, it is only a different perspective of observation of the same motivational basis of the primary metaphor of reference. In fact, in some contextual settings, both the Italian and the French idioms mentioned above may denote a strong emotion of anger as discussed in some examples.

Cognitively speaking, the four idioms have resulted as relatable to a common metaphorical grounding, though with slight variations. Summarizing our results, as for the English “burst a blood vessel”: ANGER IS HOT LIQUID (blood) IN A CONTAINER (vessel). The stress is on the effect in the container (a bodily part like the vessel) of the raising temperature and the velocity of the blood running in it, which is ‘anger’ physically rendered in the idiom. The effectiveness of the expression in English is also given by the rendering of the effect as if the damage was already done. In the French “*piquer un coup de sang*”, the stress seems more to be on the effect of the outburst and on the agent, the subject of anger. It seems like it was almost the subject and agent of the feeling who, by the inadvertent action sustained by the verb “*piquer*”, causes the outburst of their own blood, rendered here with the highly rapid and unexpected move (“*coup*”). ANGER IS (letting) HOT LIQUID (blood) IN A CONTAINER (outburst): ANGER IS (the outburst of) HOT

LIQUID IN A CONTAINER. The effectiveness of the French variant seems to be related to the velocity of the unpredictable act, whose subject is, whether inadvertently, and maybe unconsciously, the agent. In the Italian "...si chiude/gonfia la vena", the common metaphorical grounding is developed similarly to the English case, with the difference that in Italian the embodied metaphorical action is taken at the moment of the potential rupture. ANGER IS (the pressure of) HOT LIQUID (blood) IN A CONTAINER, generated by either the closure of the container itself (in the case of "... si chiude la vena") or presumably by an increase in the amount of liquid/blood flowing at higher velocity within the same container, causing it to swell and leading to its potential rupture. The stress is here on the potential rather than on the effect, the effectiveness of the Italian rendering given by the suspense intrinsic in the expression, suggesting an 'almost happening' damage, rather than by the image rendering of the 'already happened' damage as it is in English. Whether this can be related to a more insistent focus on the pragmatic consequences, effects, and action in the Anglo-culture and relative language and structure, as pragmatic, action-based, and effect-oriented, with respect to the more contemplative, thought-oriented, and process-based Italian one, opens up further future investigation. The metaphorical grounding seems to be expanded in the Arabic rendering as the container extends potentially to the body as a whole. Also, the movement is frequently empowered by the intensity of an eruption: ANGER IS (the eruption of) A HOT LIQUID (blood) IN A CONTAINER (vessels, face, chest, body). The effectiveness of the Arabic rendering seems to lie in the extension and intensity of the expression, which in turn might be related to the importance of demonstrating emotions in the Arabic language, which involves not only anger, but also sadness, happiness, and others. Whether this extension and augmented intensity is relatable to a more emphatic and enthusiastic expression, as well as perception of anger and emotions in general at the embodied cognition level in Arabic, is under question. Similarly, among the most challenging raising issues beyond the present case study is whether the emotional expression tendency can also have an impact on the culturally and linguistically shared tendency in emotional perception.

6. Conclusions and persuasion sustainability perspectives

All the mentioned idioms start with a verb phrase such as "burst," "piquer," "si chiude," and "تأثر," both syntactically and semantically equivalent in different

ways. They conceptualize anger by associating the concrete, embodied experience of blood bursting in the vessels with the feeling of anger. This feeling is, after all, related to the physiological manifestation in the body, which the idioms are rendering, gaining their meaningful figurative sense. When we feel anger, the blood pressure in the body raises, giving rise to physical manifestation including, for instance, the change in color of the face.

In accordance with the mainstream literature mentioned, anger is portrayed as a fluid and hot substance that flows in the body like blood, and as something that can outburst out of a rupture of the container (English, Arabic), or with the agency of the subject (French), or a physical pressure or closure of the container in which it flows (Italian), or sometimes like a chemical reaction prone to explode (Arabic).

Additionally to raising language awareness, the variations found at the level of their conceptual grounding also lead to hypotheses regarding their persuasive effectiveness. The rendering of the effect as if the damage was already done stands for the English variant. The effectiveness of the French variant seems to be related to the velocity of the unpredictable act, whose subject is, whether inadvertently, and maybe unconsciously, the agent. The effectiveness of the Italian rendering might be attributable to the suspense intrinsic in the expression, suggesting an ‘almost happening’ damage, rather than by the image rendering of the ‘already happened’ damage as in English. The effectiveness of the Arabic version seems to be found in the extension and intensity of the expression, which in turn might be related to the importance of demonstrating emotions in general in Arabic.

The different positioning of the presumed persuasive effectiveness of these expressions might in turn be related to wider cognitive and philosophical attitudes of the language ‘spheres’ they belong to, for instance, the pragmatic, action-based, and effect-oriented feature of the ‘Anglosphere’, or the more intimate, psychoanalytic orientation of the ‘French-sphere’; the more contemplative, thought-oriented, and process-based ‘Italian-sphere’, and the highly expressive and emotionally demonstrative ‘Arab-sphere’. Whether tentative and far from being pretentious of any truth value, these further meta-analytical hypotheses or others similar to these that the interlocutor may create out of their experience of the interaction with different linguistic and cultural domains may provide guidelines for improving mutual understanding as well as promoting further sustainability in persuasion, particularly when enacted within multicultural and cross-linguistic situations and contexts.

From this standpoint, a ‘contrastive idiomaticity’ perspective can be of help also to orient persuasion management towards enhanced sustainability in complex contexts of strategic as well as everyday communication within an increasingly interconnecting world, by providing awareness lenses from which to observe and interact across and within different horizons not necessarily sharing common cultural and linguistic grounds.

References

- Ahrens, Kathleen. 2010. “Mapping principles for conceptual metaphors.” In Lynne Cameron & Robert Maslen (eds.), *Researching and Applying Metaphor in the Real World*, 185–207. Amsterdam: John Benjamins Publishing Company.
- Averill, R. James. 1982. *Anger and aggression: An essay on emotion*. New York: Springer-Verlag.
- Barsalou, W. Lawrence. 1999. “Perceptual symbol systems.” *Behavioral and Brain Sciences* 22(4), 577–660.
- Barsalou, W. Lawrence, W. Kyle Simmons, Aron K. Barbey, & Christina D. Wilson. 2003. “Grounding conceptual knowledge in modality-specific systems.” *Trends in Cognitive Sciences* 7(2), 84–91.
- Beck, T. Aaron. 1983. “Cognitive therapy of depression: New perspectives.” In Paula J. Clayton & James E. Barrett (eds.), *Treatment of depression. Old controversies and new approaches*, 265–284. New York: Raven Press.
- Boers, Frank. 2000. “Enhancing metaphoric awareness in specialised reading.” *English for Specific Purposes* 19, 137–147.
- Boucher, D. Julien. 1983. “Antecedents to emotions across cultures.” In Sid H. Irvine & John W. Berry (eds.), *Human assessment and cultural factors*, 407–420. Boston, Ma: Springer.
- Boroditsky, Lera. 2001. “Does language shape thoughts? Mandarin and English speakers' conceptions of time.” *Cognitive Psychology* 43(1), 1–22.
- Brandt, E. Milan & Julien D. Boucher. 1986. “Concepts of depression in emotion lexicons of eight cultures.” *International Journal of Intercultural Relations* 10(3), 321–346.
- Casasanto, Daniel & Tom Gijssels. 2015. “What makes a metaphor an embodied metaphor?” *Linguistics Vanguard* 1(1), 327–337.

Citron M. Francesca, Cristina Cacciari, Jakob M. Funcke, Chun-Ting Hsu & Arthur M. Jacobs. 2019. "Idiomatic expressions evoke stronger emotional responses in the brain than literal sentences." *Neuropsychology* 131, 233–248.

Damasio, R. Antonio. 1989. "The brain binds entities and events by multiregional activation from convergence zones." *Neural Computation* 1(1), 123–132.

Dobrovol'skij, Dmitrij & Elisabeth Piirainen. 2006. "Cultural knowledge and idioms." *International Journal of English Studies* 6(1), 27–41.

Dobrovol'skij, Dmitrij & Elisabeth Piirainen. 2022 [2005]. *Figurative language: Cross-cultural and cross-linguistic perspective*. Amsterdam: Elsevier.

Ekman, Paul, Robert W. Levenson, & Wallace V. Friesen. 1983. "Autonomic nervous system activity distinguishes among emotions." *Science* 221(4616), 1208–1210.

Ferrari, Federica. 2018. *Metaphor and Persuasion in Strategic Communication: Sustainable Perspectives*. New York: Routledge.

Gibbs, W. Raymond. 1994. *The poetics of mind: Figurative thought, language, and understanding*. Cambridge: Cambridge University Press.

Gladys, Ansah. 2011. "Culture in Embodiment: Evidence from Conceptual Metaphors/Metonymies of Anger in Akan and English." *International Journal of Cognitive Linguistics* 2(1), 61–80.

Grady, E. John. 1997. *Foundations of meaning: Primary metaphors and primary scenes* (Doctoral dissertation). University of California, Berkeley.

Harré, Rom. 1986. *Varieties of realism: A rationale for the natural sciences*. New York: Blackwell.

Jelčić Čolakovac, Jasmina. 2020. "Where Culture and Metaphor Meet: Metaphoric Awareness in Comprehension of Culturally Specific Idioms." *Open Journal for Studies in Linguistics* 3, 67–82.

Johnson, Mark. 1990. *The body in the mind: The bodily basis of meaning, imagination, and reason*. Chicago: University of Chicago Press.

Keltner, Dacher. & Jonathan Haidt. 2003. "Approaching awe, a moral, spiritual, and aesthetic emotion." *Cognition and Emotion* 17(2), 297–314.

Kövecses, Zoltán. 1986. *Metaphors of anger, pride, and love: A lexical approach to the structure of concepts*. Amsterdam: John Benjamins Publishing Company.

Kövecses, Zoltán. 2005. *Metaphor in culture: Universality and variation*. Cambridge: Cambridge University Press.

Kövecses, Zoltán. 2000. *Metaphor and emotion: Language, culture, and body in human feeling*. Cambridge: Cambridge University Press.

Lakoff, George. 1987. *Women, Fire, and Dangerous Things. What categories reveal about the mind*. Chicago: The University of Chicago Press.

Lakoff, George. 1993. "The contemporary theory of metaphor." In Andrew Ortony (ed.), *Metaphor and thought* (2nd ed.), 202–251. Cambridge: Cambridge University Press.

Lakoff, George & Mark Johnson. 2003[1980]. *Metaphors we live by*. Chicago: University of Chicago Press.

Lakoff, George & Zoltán Kövecses. 1987. "The cognitive model of anger inherent in American English." In Dorothy Holland & Naomi Quinn (eds.), *Cultural models in language and thought*, 195–221. Cambridge: Cambridge University Press.

Lakoff, George & Mark Turner. 1989. *More than cool reason: A field guide to poetic metaphor*. Chicago: University of Chicago Press.

Maalej, Zouheir. 2004. "Figurative Language in Anger Expressions in Tunisian Arabic: An Extended View of Embodiment." *Metaphor and Symbol* 19, 51–75. 10.1207/S15327868MS1901_3.

Matsumoto, David, Tsutomu Kudoh, Klaus Scherer, & Herald Wallbott. 1988. "Antecedents of and reactions to emotions in the United States and Japan." *Journal of Cross-Cultural Psychology* 19(3), 267–286.

Musolff, Andreas. 2017. "Metaphor and cultural cognition." In Farzad Sharifian (ed.), *Advances in Cultural Linguistics*, 325–344. Berlin: Springer.

Niedenthal, Paula M., Piotr Winkielman, Laurie Mondillon & Nicolas Vermeulen. 2009. "Embodiment of emotion concepts." *Journal of Personality and Social Psychology* 96(6), 1120–1136.

Ortony, Andrew & Lynn Fainsilber. 1987. "The role of metaphors in descriptions of emotions." *Metaphor and Symbolic Activity* 2(4), 239–250.

Palmer, Gary B. 1996. *Toward a theory of cultural linguistics*. Austin: University of Texas Press.

Pragglejaz Group. 2007. "MIP: A method for identifying metaphorically used words in discourse." *Metaphor and Symbol* 22(1), 1–39.

Sharifian, Farzad. 2017. *Cultural Linguistics*. Amsterdam and Philadelphia: John Benjamins.

Steen, Gerard J. 1999. "Metaphor and Discourse: Towards a Linguistic Checklist for Metaphor Analysis." In Lynne Cameron & Graham Low (eds.), *Researching and Applying Metaphor*, 81–104. Cambridge: Cambridge University Press.

Steen, Gerard J., Aletta G. Dorst, J. Berenike Herrmann, Anna A. Kaal, Tina Krennmayr & Tryntje Pasma. 2010. *A Method for Linguistic Metaphor Identification*. Amsterdam: John Benjamins Publishing Company.

Tangney, June P., Patrici Wagner & R. Gramzow. 1992. "Proneness to shame, proneness to guilt, and psychopathology." *Journal of Abnormal Psychology* 101(3), 469–478.

Tyanin, Li, & Yulia V. Bogoyavlenskaya. 2023. "Semantic transformation and cultural adaptation of metaphor and multimodal metaphor in multilingual communication from the perspective of cognitive linguistics." *Eurasian Journal of Applied Linguistics* 9(1), 161–189.

Yu, Ning. 1995. "Metaphorical expressions of anger and happiness in English and Chinese." *Metaphor and Symbolic Activity* 10(2), 59–92.

Wierzbicka, Anna. 2003. *Cross-cultural Pragmatics: The Semantics of Human Interaction*. Berlin: Walter de Gruyter.

Wierzbicka, Anna. 2014, "'Pain' and 'suffering' in cross-linguistic perspective." *International Journal of Language and Culture* 1(2), 149–173.