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Soriano, Cristina

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Johnny J. R. Fontaine, Klaus R. Scherer, and Cristina Soriano

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Conceptual Metaphor Theory and the GRID paradigm in the study of anger in English and Spanish1

Cristina Soriano

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Abstract and Keywords

In this chapter, two methodologies in the study of emotion conceptualization are compared: the GRID paradigm, stemming from psychology, which looks at the meaning of emotion words using speakers' ratings of features, and Conceptual Metaphor Theory, developed within cognitive linguistics, which investigates regularities in the figurative expressions of a language. We compare the insight provided by each method on the conceptualization of anger in English and Spanish with respect to a number of affective 'semantic foci' or aspects of emotion, like intensity, control, or positive/negative evaluation, frequently highlighted by metaphor in the emotional domain. We first provide a characterization of anger according to these foci, as afforded by conceptual metaphor. The GRID is then shown to tap on the same foci, providing results coherent with those from metaphor analysis. Approach-specific insights are also discussed. The semantic foci are proposed as a viable *tertium comparationis* for interdisciplinary communication and cross-fertilization.

Keywords: Conceptual Metaphor Theory, GRID, semantic focus, anger, English, Spanish

28.1 Introduction

Over the past two decades numerous disciplines in the brain and human sciences have experienced the “affective revolution,” a shift of focus from the purely cognitive to the affective component of human behavior that has given rise to the growing field of the Affective Sciences (cf. Davidson, Scherer, & Goldsmith, 2003). Emotions have become an issue of particular interest in psychology, linguistics, anthropology, economics, and the neurosciences, to cite just a few of the involved disciplines. This shared interest is fortunate because a cross-disciplinary approach is necessary to address the multifaceted nature of emotion, and because it facilitates result triangulation and disciplinary cross-fertilization. In this paper, we compare two language-based methodologies in the study of emotion conceptualization stemming from psychology and linguistics, respectively: the GRID paradigm presented in this volume (see Chapter 5) and Conceptual Metaphor Theory.

The primary goal of the GRID paradigm is to investigate the meaning of emotion words, because the meanings are expected to reflect people’s folk models of the emotions labeled that way. In turn, Conceptual Metaphor Theory (henceforth CMT), looks at the metaphors we use to talk about any given conceptual domain (e.g., emotion) under the assumption that regularities in the figurative language we use to talk about that domain, inform us about the way it is conceptualized.

In this work, we compare the insight provided by the GRID paradigm and CMT using the notion of “semantic focus” as *tertium comparationis*. Semantic foci are here understood as important aspects in the conceptualization of an emotion (e.g., causation, intensity) that are frequently highlighted by the source domains employed in its metaphorical representation. “Source domain” in CMT refers to the conceptual space from which structure and knowledge are borrowed to represent another domain metaphorically (e.g., conceptualizing emotions in terms of “physical forces,” or in terms of “disease”).

CMT and the GRID paradigm will be compared in their account of anger.² In psychology, anger is claimed to be one of the basic or universal emotions (e.g., Ekman, 1984, 1992; Izard, 1977; (p.411) Johnson-Laird & Oatley, 1989). Linguistics has also observed that an *anger*-like emotion term exists in all languages of the world (Wierzbicka, 1999a). The GRID study itself constitutes empirical evidence of the semantic overlap between English words like *anger* and *irritation* and their closest counterparts in more than 20 other languages all over the world (see Chapters 6 and 7). Thus, a cross-cultural “ANGER” concept³ seems to exist that is lexically instantiated

(in similar, but not identical ways) in many languages. The object of study in this chapter is the cross-cultural category ANGER as instantiated in (American) English and (Spain) Spanish.

The remainder of the paper will be organized as follows. We will first explain the notion of conceptual metaphor in some more detail and introduce the inventory of most representative ones reported in the previous literature for the conceptualization of anger in English and Spanish (Section 28.2). These will be analyzed in terms of their main *semantic foci*, in order to provide a profile of the emotion concept along these parameters (Section 28.3). The same foci will then be investigated using the GRID questionnaire as a testbed for the hypothesized profile (Section 28.4); convergences and discrepancies will be discussed. In subsequent sections we will explore the unique contribution of each methodology, first reviewing some features revealed by the GRID paradigm that escape the scope of metaphor analysis (Section 28.5), and then some aspects captured by metaphor that remain unaccounted for by the GRID data (Section 28.6). We will conclude with a summary of the major findings and an evaluation of the merits and limitations of each approach.

28.2 Conceptual Metaphor Theory and the study of emotion conceptualization

Conceptual Metaphor Theory (CMT) is one of the most popular branches of cognitive linguistics.⁴ Within this approach, regularities in the figurative expressions we use to talk about a given domain are believed to reflect the way the latter is conceptually represented. For example, across languages anger-related words and expressions appear associated to the idea of “heat.” Examples in English include the phrases *hot-headed*, *hot temper*, or *hot under the collar*, but also verbs like *sizzling*, *boiling*, and *steaming*. According to CMT, these regularities in language reveal a conceptual association between the domain/concept ANGER and the domain/concept HEAT. Many of these associations in language seem to be grounded in experience. For example, the association between HEAT and ANGER may be based on the experiential correlation between an anger episode and an increase in body temperature, the later being a well-known physiological response to the emotion (e.g., Ekman, Levenson, & Friesen, 1983). But this conceptual association between heat and ANGER is not mere declarative knowledge that “one gets hot when angry.” Recent experimental studies have shown that the very cognitive representation of anger is systematically linked to that of heat in such a way that activating one concept automatically activates the other, leading to facilitation effects in their recognition and influencing reasoning (Wilkowski, Meier, Robinson, Carter, & Feltman, 2009). Additional empirical evidence has started to accumulate in the past few years on the psychological reality of many of the conceptual metaphors that were first hypothesized on the grounds of linguistic observation (e.g., Meier & Robinson, 2004; Meier, Robinson, & Clore, 2004; Soriano & Valenzuela, 2009; Williams & Bargh, 2008; Wilkowski et al., 2009; Zhong & Leonardelli, 2008). (p.412) What is more, since conceptual metaphors are ways of thinking – and not just fancy or anecdotal ways of speaking – the conceptual associations they reflect can also be found in gesture (Cienki & Müller, 2008), images (Forceville, 1996), the rhetoric of publicity (Ungerer, 2000), ritual, social behavior, and even in the objects we make for everyday use (cf. Kövecses, 2000 and Soriano, 2005 for examples of conceptual metaphor in these and other realms).

Conceptual metaphors are conventionally represented in the CMT tradition by means of small capitals in a formula that explicitly relates the two domains at stake. The formula reads “[TARGET DOMAIN] IS [SOURCE DOMAIN].” The most salient conceptual metaphors specific to the representation of anger in English and Spanish are presented in Table 28.1 (cf. Lakoff & Kövecses, 1987; Barcelona, 1989a; Soriano,

2005). This inventory constitutes a revision of the original list proposed by Lakoff and Kövecses (1987).⁵

Table 28.1 Conceptual metaphors in the representation of anger in English and Spanish

ANGER IS A FLUID IN A PRESSURIZED CONTAINER
ANGER IS FIRE
ANGER IS ILLNESS
ANGER IS INSANITY
ANGER IS AN AGGRESSIVE ANIMAL
ANGER IS AN OPPONENT IN A STRUGGLE
ANGER IS A NATURAL PHYSICAL FORCE
ANGER IS A WEAPON
THE CAUSE OF ANGER IS PHYSICAL NUISANCE
THE CAUSE OF ANGER IS TRESPASSING A LIMIT

The metaphor ANGER IS A FLUID IN A PRESSURIZED CONTAINER reflects the conceptualization of the body as a container, and of emotions (anger among them) as substances inside (1). When the intensity of the emotion increases, the fluid rises in the person (2), until there is no more space (3) and it begins to exert pressure on the walls of the container. The person is expected to resist the pressure and keep the anger inside (4). But if the intensity becomes too high, the container breaks (5), that is, the person loses control over the emotion. An alternative and more desirable outcome is to communicate anger in a controlled fashion (6), for example avoiding the indiscriminate “explosion” by reducing the pressure (7).

1 *To feel anger inside, internal anger, anger within*

2 *Rising/towering anger*

3 *Full of anger, brimming with anger*

4 *To contain/refrain/suppress/repress anger, to keep anger bottled up inside oneself*

5 *To explode, to blow up, to blow one's top, to hit the roof*

6 *To learn to bring anger into the open, anger outlets*

7 *To vent, to let off steam*

Anger is also represented as a fire inside the person (8) and the effects of anger (physiological and behavioral manifestations) correspond to the physical effects of the flames: smoke (9), sparks (10), light (11). The

anger-fire can “burn” the person (12), and although the big flames typically do not last for a long time (because they “consume” the person and extinguish their fuel), a low-grade intensity “fire” can last for a long time (13).

8 *To kindle somebody’s anger, inflammatory remarks, to ignite, to incense*

9 *To fume*

10 *To sparkle with anger (the eyes)*

11 *To blaze, to flare up, to glow with anger*

12 *To burn with anger*

13 *To do a slow burn, to smolder*

(p.413) The anger-fire is not the only thing that can harm the person and those around. Anger is also conceptualized as an illness. As such, it is represented as damaging for the health of the person (14) and contagious (15, 16). The titles in the current self-help literature on anger management also reflect this view: anger requires healing (17-20) and it can be lethal in the long run (21).

14 *To be sick of it, to fester, to rankle*⁶

15 *“One or two angry people can take pent-up anger or stress and infect a whole room”*

16 *“Young Irish learn their history in school . . . anger becomes contagious”*

17 *Healing Anger: The POWER of Patience from a Buddhist Perspective* (by Dalai Lama, Snow Lion Publications, 1997)

18 *Brothers on the Mend: Guide for Managing & Healing Anger in African American Men* (by Johnson, Pocket Books, 1999)

19 *Healing Our Anger: 7 Ways to Make Peace in a Hostile World* (by Obsatz, Augsburg Fortress Publication, 2000)

20 *Anger Kills* (by Williams & Williams, HarperCollins Publishers, 1994)

21 *“Getting angry is like taking a small dose of some slow-acting poison — arsenic, for example — every day of your life [. . .]. Anger is a toxin to your body”*

Among the disruptions created by anger, one of the most salient ones in our folk model of the emotion is irrational behavior. This is elaborated in the metaphor ANGER IS INSANITY, where the irrational, violent behavior typical of the emotion is conceptualized as a direct result of transient madness (22-24). The anger-insanity, as any other psychological disorder, can be said to require therapy (25, 26).

22 *To be mad, to madden, to drive somebody crazy/berserk*

23 *To be fit to be tied, to be ready for a straightjacket*

24 *To lose one's head, to get out of one's mind*

(p.414) 25 " 'I have always found' he said, 'that the best therapy for outrage and anger is action' "

26 "Surely we are entitled to be a little bit uneasy about the potential therapeutic value - to a president afflicted by unfocused anger - of a largely unprovoked, open-ended naval confrontation with Khomeini in the Persian Gulf"

Irrationality and violence, typical of INSANITY, are also elaborated by the metaphor ANGER IS AN AGGRESSIVE ANIMAL. In addition, this metaphor communicates an idea of debasement: the angry person, when out of control, is more similar to an animal than to a rational human being. The metaphor evokes the idea of the "beast inside," the instinctual part of our nature that can override the purely rational and moral one. In a first variant of the metaphor, anger is viewed as an animal (27, 28) that has to be kept in check (29). In the second variant of the metaphor the person is already the animal, and angry human behavior is assimilated to all sorts of aggressive animal behavior (30).

27 *Ferocious/fierce/monstrous temper*

28 *To whip up anger*

29 *To keep one's anger in check, to unleash one's anger, to fly off the handle (one's anger), unbridled anger*

30 *To get one's hackles up, to bristle with anger, to ruffle one's feathers, to put one's back up, to bare one's teeth, to bite somebody's head off, to chew somebody out, to snap, to snarl, to growl, to bark*

The idea of control is further elaborated by a very recurrent metaphor in which anger is personified as an opponent in a struggle (31-33) (ANGER IS AN OPPONENT IN A STRUGGLE). If anger wins the fight (34), it rules over the person (35).

31 *Anger invades the person, to be seized by anger*

32 *To struggle/wrestle/fight with one's anger*

33 *To conquer/subdue one's anger*

34 *To be overcome by anger, to succumb to one's anger, to surrender/yield to one's anger, to take control of the person (anger)*

35 *Acts dictated by anger, to be governed by anger*

When the person is out of control, the feeling of powerlessness is strong. In this case anger is also conceptualized as a natural physical force (ANGER IS A NATURAL PHYSICAL FORCE) (36, 37) that sweeps the person away (38), causing behaviors that are violent and dangerous (39, 40).

36 *Wave of indignation, rising tide of anger, inner storm*

37 *“Act nothing in a furious passion. It’s putting to sea in a storm”*

38 *A wave of anger surged through/washed over him*

39 *To fulminate against somebody,⁷ to thunder, to erupt*

40 *“Filch’s pasty face went brick red. Harry braced himself for a tidal wave of fury”*

Finally, anger is a high-power emotion that can help us achieve our goals. Since the prototypical anger scenario involves a wrongdoer that creates a disadvantage for the person, the first goal in anger is to oppose him or her. This whole situation allows us to conceptualize anger as a weapon (ANGER IS WEAPON) that we use against a target (41–43).

(p.415) 41 *To aim anger at somebody, to be the target of one’s wrath, to direct anger at somebody, to focus anger on somebody, to turn anger against somebody, to go ballistic*

42 *“Every woman has a well-stocked arsenal of anger potentially useful against those oppressions, personal and institutional, which brought that anger into being”*

43 *“The unexpressed anger lies within them like an undetonated device, usually to be hurled at the first woman of color who talks about racism”*

The metaphors seen so far provide in some occasions an implicit understanding of what the causes of anger might be *like*: awakening the sleeping beast inside us, kindling an all-consuming fire, etc. But two specific metaphors proposed by Lakoff and Kövecses (1987) tell us what the causes of anger are *about*. In the first one, the cause of anger is metaphorically construed as trespassing a physical limit (THE CAUSE OF ANGER IS TRESPASSING A LIMIT) (44). In the second one, nuisances of any sort are metaphorically represented as physiological harm (THE CAUSE OF ANGER IS A PHYSICAL NUISANCE) (45, 46). Notice that *literal* physical injury is frequently quoted in the expert literature as a cause of anger (Alschuler & Alschuler, 1984; Schimmel, 1979). The difference is that, in folk models, any kind of anger-inducing event or situation can be metaphorically conceptualized as an injury.

44 *This is where I draw the line*

45 *To irritate, to gall, to be a pain, to be a pinprick, to be a thorn in the side/flesh, to nettle, to touch on the raw, to step on somebody's toes/corns, to rub the wrong way, to chafe*

46 *"I think of such incidents puncturing my spirit each day like needle jabs, then multiplied by weeks and years. I sense how my anger would accumulate as a result of the injustices"*

Each of these metaphors picks up and expands different aspects of our folk-understanding of anger. But they do not provide independent characterizations; on the contrary, they converge in a unified picture of the emotion. For example, Barcelona (1989a) and Soriano (2005) have shown for Spanish how the various metaphors contribute to the general anger scenario suggested by Lakoff and Kövecses (1987) in English. In this chapter, we further propose that the metaphors contribute coherent information along a number of relevant *semantic foci* or relevant aspects of emotion. The following section will define those semantic foci and describe the contribution of each metaphor to them.

28.3 Semantic foci in the metaphorical representation of anger

Many of the metaphors discussed above are not specific to ANGER, but apply to other emotions as well. According to Kövecses (2000), these common source domains highlight a number of aspects important in most emotion concepts. From the list of aspects suggested by Kövecses (Ibid. pp. 40–46), a subset can be selected that is specifically relevant for ANGER: Intensity, Evaluation (positive/ negative), Difficulty to cope, Control, Desire, and Harm.⁸ One more aspect can be added to the original inventory: Causation.

Intensity is an emergent subjective feeling constructed by a person on the grounds of cumulative information from the various emotion components (e.g., appraisals of gravity, high physiological activation, abundant expressive behavior, strong action tendencies etc.) (see Scherer, 2004). However, emotional intensity tends to be most strongly associated to high physiological AROUSAL. In the metaphorical expressions we use to talk about anger, Intensity is implied in the reference to AROUSAL and to the grave effects of the emotion (physiological or behavioral). AROUSAL is often (p.416) metaphorically represented as heat (e.g., *hot anger*) and the disruptive and aggressive effects of anger are metaphorically represented as a strong force. Many metaphors elaborate on these ideas: FIRE (e.g., *burn with anger, flare up*), AGGRESSIVE ANIMAL (e.g., *ferocious anger*), INSANITY (e.g., *to madden*) and NATURAL PHYSICAL FORCE (e.g., *to storm, to erupt*).

Together these metaphors forcefully communicate an image of anger as an intense experience.

Evaluation as a semantic focus in this paper refers to the positive or negative connotation that the emotion concept acquires as a result of being represented by metaphors whose source domain is intrinsically positive/pleasant or negative/unpleasant. According to Kövecses (2000), “emotions like anger [. . .] are not conceptualized as inherently good or bad” (p. 44) (see also Alschuler & Alschuler, 1984). However, none of the source domains in the metaphorical conceptualization of anger in English and Spanish are intrinsically positive (unlike other emotions, like love, which is commonly represented as a “treasure” or as a “valuable commodity” – see Kövecses, 1990). On the contrary, most ANGER source domains are intrinsically bad. The ANGER metaphors tell us the emotion is a physiological and a psychological disorder (ILLNESS and insanity), an aggressive beast (animal), an enemy (OPPONENT) and a harmful tool (WEAPON). NATURAL PHYSICAL FORCE also highlights the negativity of the emotion by elaborating on the powerlessness of the emoter to counteract the uncontrollable force of anger and its high potential for damage to the emoter and others around. Although some authors defend the presence of both positive and negative sensations associated to anger (Schimmel, 1979), most psychology theories tend to consider anger as a negative emotion as well.

The next semantic focus is elaborated by metaphors whose source domain invites the inference that the emotion can harm the person experiencing it and/or other people around. All ANGER metaphors elaborate this idea: anger (metaphorically) damages the person who tries to keep it inside (FLUID IN A PRESSURIZED CONTAINER, e.g., *bursting with anger*), removes one’s capacity to behave rationally (INSANITY, e.g., *insane with rage*), burns (FIRE, e.g., *consumed by anger*), makes the person feel ill (ILLNESS, e.g., *I’m sick and tired of this*), causes aggression (AGGRESSIVE ANIMAL, e.g., *to bite somebody’s head off*), is violent and unstoppable (NATURAL PHYSICAL FORCE, e.g., *tidal wave of indignation*), and is used to harm others (WEAPON: *aiming one’s anger at the wrong person*). In other words, **Harm** to oneself and to others is a salient focus in our metaphorical representation of anger. By contrast, psychological theories of emotion tend to highlight the second aspect only, that is, the aggression to others (Watson, 1929; Frijda, 1986; Mandler, 1984; Rubin, 1986).

Metaphors also tell us about the causes of anger (**Causation** focus), that is, the reason why the emotion comes into existence. According to the metaphors outlined above, the cause can be an event (e.g.,

trespassing a limit, starting a fire, awakening or whipping up a dormant animal, etc.) or a state of affairs (e.g., being exposed to a constant physical nuisance). The second, however, is less salient, since the majority of metaphorical expressions about causation depict an event. This insight is coherent with a view of emotions as short-lived states, in opposition to moods or affective dispositions (cf. Scherer, 2000c). It is also coherent with appraisal theories of emotion, according to which emotions are elicited upon evaluation of a given event as relevant for one's goals (cf. Scherer, 2001, 2009c; Ellsworth & Scherer, 2003). Without a specific event, we are more likely to experience a general mood than a prototypical emotional episode.

Metaphors not only tell us that anger is typically caused by an event, they also tell us what type of event. Most information is provided by the two metaphors that specialize on anger causation: ANGER IS TRESPASSING and ANGER IS PHYSICAL NUISANCE. The first tells us there has been some kind of violation of rules or standards, and the second that the eliciting event was unpleasant. Additionally, these and other metaphors (like FIRE, AGGRESSIVE ANIMAL, FLUID) suggest that the eliciting event is caused by others, rather than oneself - as hinted by the anomaly of sentences like (47-49).

- (p.417) 47 (?) *I kindled my anger*
48 (?) *I awakened my anger*
49 (?) *I filled me with anger*

Another semantic aspect elaborated by the ANGER metaphors is **Desire to act**.⁹ Most conceptual metaphors in the system convey the idea that the person experiences a drive to react, to engage in expressive (and sometimes aggressive) behavior (e.g., *to vent contained anger* - FLUID IN A PRESSURIZED CONTAINER; *to rave* - INSANITY; *to erupt*, *to thunder* - NATURAL PHYSICAL FORCE ; *to snap at somebody*, *to snarl* - ANIMAL; *to go ballistic* - WEAPON; etc).

An additional semantic focus in the metaphorical representation of anger is **Control**, that is, the attempt to regulate the felt intensity or the expression of the emotion. Three metaphors emphasize the need for down-regulation and no (or controlled) expression: PRESSURIZED FLUID, AGGRESSIVE ANIMAL, and OPPONENT. According to the logic of those metaphors, people should exert a counter-pressure against the anger inside them to avoid expression (e.g., *to repress/suppress anger* - PRESSURIZED FLUID), they should tame or keep harnessed the most instinctual part in themselves (e.g., *bridle*, *keep a grip on anger* - animal), and they should aim to defeat the emotion in a fight for self-control (e.g., *to struggle/wrestle with one's anger* - OPPONENT). Some

accounts of anger in the psychology models include this control component as well (Shaver, Schwartz, Kirson, & O'Connor, 1987; Russell & Fehr, 1994).

A last aspect highlighted by the metaphors in our folk model of the emotion is the difficulty inherent in controlling it. The **Difficulty to cope** focus is implicit in PRESSURIZED FLUID, AGGRESSIVE ANIMAL, and OPPONENT, which foreground the effortful opposition of two competing forces. But two other metaphors in the system take this dimension a step further and present anger as an intrinsically uncontrollable state. Control is not difficult, but rather impossible when the emotion is represented as a force of nature (*wave of indignation, flood of fury, anger storm* - NATURAL PHYSICAL FORCE) or a state of frantic delirium (*to be beside oneself with anger, deranged by anger, to have a fit* - INSANITY).

So far we have described how an analysis in terms of conceptual metaphors of the figurative expressions we use to talk about anger can inform us about the way the emotion is represented in our folk models. We have specifically described how the metaphors coherently highlight seven important aspects of the emotion that we have labeled “semantic foci.” An important question at this point is how useful these semantic foci are for the study of emotion at large. A first answer was already proposed by Kövecses (2000: 47): some of the foci - like **Evaluation**, **Intensity**, or **Desire to act** - match Wierzbicka’s semantic universals (cf. Wierzbicka, 1995b; see also Chapter 27). This would mean that aspects like evaluation, intensity, or desire to act are universal in emotion conceptualization. But the applicability of these foci outside linguistics and for all emotions also finds (partial) empirical support in the psychological literature on emotion. First, factorial or dimensional analyses of emotion lexicons around the world (e.g., Church, Katigbak, Reyes & Jensen, 1998; Fontaine, Poortinga, Setiadi, & Markam, 2002; Galati, Sini, Tinti, & Testa, 2008, Herrman & Raybeck, 1981, Russell, 1980; Shaver et al., 1987) have yielded the uncontested conclusion that **Evaluation** (also called axiology, VALENCE, or pleasantness) is one of the strongest dimensions underlying our representations of the emotional domain.

(p.418) Secondly, another widely-observed dimension is AROUSAL (also called activation or activity). It refers to the level of “excitement” accompanying the emotion, typically sympathetic activation like increased heartbeat or breathing rate. AROUSAL is related to the semantic focus **Intensity**, although Intensity comprises more than AROUSAL (since “intense” emotions are also those with no physiological excitation, but with strong effects, as is the case for

depression). In spite of the lack of perfect match, in as much as Intensity includes AROUSAL, Intensity can be considered a universal meaning focus in the conceptualization of emotion.

Thirdly, **Desire to act** finds its psychological counterpart in Frijda's Action Tendency theory (e.g., Frijda, 1986, 2007a). According to Frijda, emotions are best defined in terms of the actions (or motivational inclinations) they spur. In this sense, Desire to react is another viable candidate to universality. Furthermore, the GRID study reported in this volume (see Chapter 11) has provided evidence that action tendencies are tightly related to POWER or potency, a third and crucial dimension in the representation of the affective domain that is also found cross-culturally.

Three related semantic foci from Kövecses' inventory remain unaccounted for: **Harm**, **Control**, and **Difficulty** to cope. Kövecses himself suggests that these may not be universal aspects in the metaphorical representation of emotion, but typical of the occidental "emphasis on controlling emotion and regarding the emotions as things that are harmful to the proper functioning of the Western ideal of a rational person" (Kövecses, 2000: 48) (see also Solomon, 1993 for a similar account of Western thought). Kövecses may be right concerning the Western saliency of rationality, but emotional control should also be relevant for non-Western cultures that value interdependence among their members, as in those contexts the appropriate regulation of emotion would be particularly valued as a means to preserve societal harmony.

28.4 Testing semantic dimensions with the GRID paradigm

The GRID study reported in this volume employs an online questionnaire for native speakers of a language to rate how likely it is for a number of features to be part of the meaning of emotion words (see Chapter 5 for details). The semantic foci discussed above can be explored using the GRID paradigm because many of the features in the questionnaire refer to such aspects too.¹⁰ Two of the words investigated in the GRID study were related to anger (“anger” and “irritation”). If the metaphor analysis revealed a semantic focus to be relevant for the characterization of anger, we expected the GRID features related to that focus to be perceived as salient in the meaning of the anger words (Hypothesis 1). The GRID scale ranged from 1 (= “extremely unlikely”) to 9 (= “extremely likely”), with a middle point 5 (= “neither likely, nor unlikely”) (see Chapter 5). The mean rates for the features were zero-centered (subtracting five from them) and a t-test was used to determine which of them were salient. A feature was considered salient if it scored significantly above or below 0 (middle neutral point of the scale). Based on the previous metaphor analysis, we also hypothesized that some would be perceived as likely and others as unlikely (Hypothesis 2). Likely features were those scoring significantly above 0 (positive centered mean). Unlikely features were the ones scoring significantly below 0 (negative centered mean). Not all features in the questionnaire were analyzed. A selection was made a priori with those explicitly related to a semantic focus (N = 41). All semantic foci and their corresponding features can be found in Table 28.2 with indication of the expected effect (likely feature or unlikely feature), 0-centered mean rates in each language, and significance level.

(p.419) (p.420) Three groups of native speakers were used in this study: a sample of English speakers from the USA (N = 59), a sample of Spanish speakers from the Basque Land (a Northern region of Spain) (N = 56), and a sample of Spanish speakers from several regions in the South of Spain (N = 30).¹¹ Two Spanish samples were chosen to provide a geographically varied account of peninsular Spanish, but they were treated as the same language group. The ages of the participants ranged between 13 and 57; mean ages (and SDs) were as follows: 18.37 (0.71) for the USA; 23.21 (6.32) for Northern Spain; 32.46 (13.47) for Southern Spain.

We collapsed responses for the two anger words in the GRID set: *anger* and *irritation* in English, *ira* and *irritación* in Spanish. The responses were collapsed because we were interested in features typical of both

terms, as those are more likely to be relevant for the ANGER category as a whole than features characteristic of one term only.

Table 28.2 Relevance of the features pertaining to the various semantic foci highlighted by metaphor (t-test)

#	Feature	H	0-centered mean	
			Spanish	English
<i>Intensity</i>				
116	the person was in an intense emotional state	P	2.19***	1.88***
<i>Evaluation</i>				
118	the person felt good	N	-3.13***	-2.49***
128	the person felt positive	N	-2.71***	-2.44***
18	the event had consequences positive for the person	N	-2.94***	-2.24***
19	the event had consequences positive for somebody else	N	-2.21***	-0.75*
50	the person smiled	N	-3.15***	-2.97***
114	the person wanted to sing and dance	N	-3.22***	-2.71***
133	the person felt bad	P	1.79***	1.42***
123	the person felt negative	P	1.79***	2.34***
20	the event had consequences negative for the person	P	2.17***	2.56***

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#	Feature	H	0-centered mean	
			Spanish	English
21	the event had consequences negative for somebody else	P	1.33***	1.1***
	<i>Harm</i>			
101	the person wanted to do damage, hit, or say something that hurts	P	3.21***	2.83***
112	the person wanted to destroy whatever was close	P	3.3***	2.69***
62	the person moved against people or things	P	1.76***	1.42***
110	the person wanted to be tender, sweet, and kind	N	-2.91***	-2.42***
	<i>Causation</i>			
26	event incongruent with own standards	P	1.76***	1.85***
27	event that violated laws or socially accepted norms	P	1.28***	1.53***
13	event that was caused by the person's own behavior	N	0.2	0.54

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#	Feature	H	0-centered mean	
			Spanish	English
14	event that was caused by somebody else's behavior	P	1.58***	1.93***
6	event that was in itself pleasant for the person	N	-2.71***	-2.08***
7	event that was in itself pleasant for somebody else	N	-1.45***	-0.37
8	event that was in itself unpleasant for the person	P	2.03***	2.25***
9	event that was in itself unpleasant for somebody else	P	1.2***	0.85***
<i>Desire to act (reaction)</i>				
76	the person wanted to go on with what he/she was doing	N	-1.63***	-1.44***
78	the person felt the urge to stop what he/she was doing	P	1.62***	2.02***
92	the person wanted to do nothing	N	-0.76**	-1.02***
88	the person felt an urge to be active, to do something	P	0.45	1.44***

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#	Feature	H	0-centered mean	
			Spanish	English
93	lacked the motivation to pay attention to what was going on	N	0.12	0.2
90	the person felt an urge to be attentive to what was going on	P	0.02	0.36
91	the person lacked the motivation to do anything	N	-0.1	-0.37
113	the person wanted to act, whatever action it might be	P	1.94***	1.92***
106	the person wanted to tackle the situation	P	1.17***	0.78*
86	the person wanted to submit to the situation as it was	N	-1.57***	-1.47***
79	the person wanted to undo what was happening	P	0.94***	2.17***
22	event that required an immediate response	P	0.63**	1.32***
	<i>Control</i>			

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#	Feature	H	0-centered mean	
			Spanish	English
82	the person wanted to be in control of the situation	P	1.38***	1.88***
138	the person tried to control the intensity of the emotional feeling	P	0.29	0.86**
	<i>Difficulty to cope with the emotion</i>			
122	the person felt powerless	P	1.9***	0.42
132	the person felt out of control	P	2.78***	1.83***
127	the person felt powerful	N	-0.47	-0.25
125	the person felt in control	N	-1.49***	-1.15***

Note: features were considered salient if their mean (zero-centered) deviated significantly from zero (Hypothesis 1): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ two-tailed. H = expected direction of the saliency (Hypothesis 2). P = positive mean expected (likely feature), N = negative mean expected (unlikely feature).

Three types of features were identified from the results of the t-test: salient features in both languages, non-salient features in both languages, and features salient for one language only. In order to explore the differences between the two languages, we conducted an additional analysis of variance, a two (English vs Spanish) \times two (*anger* vs *irritation*) MANCOVA, with mean rate as covariate in order to control for possible differences in scale use.

The first group of features was the most numerous. Thirty-two out of the 41 selected features were indeed significant in the representation of anger for both languages (Hypothesis 1) and in (p.421) all cases the effect followed the direction predicted by metaphor (Hypothesis 2). In one more case (feature #138), the results seemed not to apply for one of the languages in spite of the trend in the expected direction, but the MANCOVA revealed no statistically significant differences between the samples.

The second group was constituted by three features for which the t-test confirmed the expected saliency and direction in one of the languages only (being non-significant in the other). The MANCOVA confirmed these differences. A main effect of language was found for the feature “felt an urge to be active, to do something” (#88) ($p < 0.05$), more salient in English. In addition, “event was pleasant for somebody else” (#7) ($p < 0.05$) – which was rated as unlikely – and “feeling powerless” (#122) ($p < 0.001$) were more salient in Spanish. For the latter feature, an interaction was also found between language and emotion terms ($p < 0.05$), indicating that Spanish *ira* (*anger*) was rated as involving a feeling of powerlessness (mean *ira* = 2.37, SD = 0.27), while English *anger* did not entail such a feeling (mean *anger* = -0.18, SD = 0.35).

Finally, a third group emerged with five features that, contrary to expectation, did not reach statistical significance in either language. Three of them belonged to the meaning focus Desire to act (reaction). These are features pertaining to attention deployment (#90, #93) and motivation to act (#91). The other two referred to whether the emotion is caused by the person’s own behavior (#13) and whether he/she feels powerful (#127). In both languages, these features did not deviate significantly from the middle point of the scale (neither likely nor unlikely), indicating that they were not perceived as salient in the meaning of the two anger terms.

In summary, Hypothesis 1 concerning saliency was confirmed for 33 out of the 41 features (80.49%) and in all cases the effect followed the direction predicted by metaphor (Hypothesis 2), which indicates that, overall, elicited measures of meaning from naïve judges confirmed the

observations of CMT. In terms of semantic foci, our hypotheses concerning Intensity, Evaluation, and Harm were confirmed in their entirety for both languages. In the following section, we explore in more detail some of the differences in saliency observed between the languages and illustrate other insights afforded by the GRID paradigm.

28.5 GRID-specific insights

The metaphor systems in English and Spanish for the conceptualization of anger are roughly equivalent (Soriano, 2005). This makes metaphor-based predictions applicable to both languages. So far we have seen how the GRID data can confirm most of them. But the GRID has also revealed differences between the two languages that cannot be immediately observed with a traditional analysis of metaphor of the sort illustrated in 28.2. For example, as we saw in the previous section, the t-test identified three features that are salient in one language but not the other. In addition, the MANCOVA can reveal relative differences between other coherent features that are salient in both languages.

The saliency of English Desire to act and Spanish Harm

One of the differences between the two languages concerns a relatively higher importance in English of features pertaining to the focus Desire to act. In addition to the already identified saliency in English (vs Spanish) on the feature “felt an urge to be active, to do something” (#88), the MANCOVA revealed differences for four other features. In spite of being relevant in both languages, the English ratings were significantly more extreme than the Spanish ones in the features “wanted to undo what was happening” (#79), more likely in English ($p = 0.001$), “wanted to do nothing” (#92), less likely in English ($p(0.05)$), and “felt the urge to stop what he/she was doing” (#78), for which an (p.422) interaction effect was also observed ($p < 0.05$) (while in both languages “irritation” was more likely related to this feature than “anger,” the difference was small in Spanish and very large in English). Spanish only scored higher on the feature “wanted to tackle the situation” (#106, $p = 0.005$) and an interaction with the emotion term was also observed ($p < 0.005$): “anger” scored higher than “irritation” in both languages. All in all, more features emerged in the semantic focus Desire to act for which the English lexemes obtained significantly more extreme ratings than the Spanish ones.

Spanish, on the other hand, showed comparatively higher ratings for features related to the focus Harm. The MANCOVA revealed that the languages differed significantly in three features, all of them more likely in Spanish for both emotion terms: “wanted to do damage, hit, or say something that hurts” (#101, $p = 0.005$), “wanted to destroy whatever was close” (#112, $p = 0.001$) and “moved against people or things” (#62, $p < 0.05$). A main effect of emotion term was also found in the latter case: “moving against people or things” was more likely for “anger” than “irritation” in both languages ($p < 0.05$). In summary, the results of both the t-test and the MANCOVA reveal a greater saliency in English of features pertaining to a generic desire to react, while in Spanish greater importance is given to the aggressive tendencies of this reaction and the harm they cause.

The saliency of “others” in Spanish

One of the observed differences in Section 28.4 concerns the relative saliency in English vs Spanish of anger-eliciting events that affect “others” (and not only oneself). A traditional analysis of conceptual metaphors does not afford us any insight in this respect. By contrast, the GRID revealed that events that are pleasant for somebody else are more salient in our semantic representation of anger in Spanish than in English. The MANCOVA confirmed this observation and revealed an additional significant difference in the likelihood that anger would be elicited by an event with positive consequences for somebody else (#19, $p = 0.01$) (more unlikely in Spanish). This greater saliency in Spanish of events and consequences that affect others (rather than the person only) is coherent with the characterization of Spain as a more collectivistic culture in comparison to the more individualistic nature attributed to the United States (Hofstede, 1980). In collectivistic (or interdependent) cultures, the construal of the self involves not only the person, but the closest people in one’s core social circle, especially the kin. This means that, in principle, events that affect in-group people should be more likely to be interpreted with the same relevance as if they were happening to oneself. This might explain our results and is only suggested here as a post-hoc explanation requiring further investigation.

Feeling “powerless” in Spanish

Another interesting difference is found for the feeling of powerlessness, more associated to the emotion in Spanish according to the t-test. The MANCOVA confirmed this difference and revealed congruent relative differences in other features in our selection. First, a main effect of language was found for the feature “felt out of control” (#132), likely and salient in both languages but significantly more in Spanish ($p = 0.001$). Additionally, an interaction between language and term was found for the feature “felt in control” (#125, $p < 0.05$): while unlikely in both languages, Spanish *ira* is less likely to feel in control than English *anger*, although English *irritation* is less in control than Spanish *irritación*. The general saliency of powerlessness in Spanish is also coherent with the results of a previous study in which native speakers of English and Spanish were asked to label what one would feel in a number of emotion-eliciting situations (Ogarkova, Soriano, & Lehr, 2012). For the anger-eliciting contexts, the word “impotence” in Spanish (*impotencia*) was as frequently quoted as the most frequent Spanish anger word in the study (*rabia*). By contrast, *impotence* was hardly ever (p.423) used in English. Additional research is still necessary to clarify the exact nature of this “powerlessness,” that is,

what it is that Spanish speakers seem to feel powerless about, according to the meaning of the anger words in their language (cf. also Chapter 22).

28.6 CMT-specific insights

In spite of its usefulness, the current GRID questionnaire entails some limitations with respect to metaphor analysis as well. Metaphor highlights the existence of some aspects in our folk-understanding of anger that the current set of questions in the GRID instrument does not tap on. These include, for example, the damage that the emotion can cause *to the experiencer* of anger (an insight best captured by the metaphors ILLNESS, FIRE, or pressurized fluid) and the culturally-imposed evaluation of *debasement* that the person incurs if he/she lets the emotion gain control over him/her (as highlighted by the ANIMAL metaphor).

An additional aspect highlighted by metaphor is the *irrationality* involved in the emotion, mostly captured and elaborated by the metaphors INSANITY and ANIMAL. While salient in our folk representations, irrational behavior may not play such a central role in the scientific views of the emotion, as suggested both by the absence of features inquiring about rationality/irrationality in the GRID questionnaire and the figurative ways in which psychologists themselves talk about emotion, in comparison to laymen. In an analysis of English psychology guides and of websites where laypeople turn for advice on their psychological problems, Berger and Jäkel (2009) found that experts hardly talk about anger resorting to the INSANITY metaphor, while the strategy is common among laypeople. This may reflect a tendency in the expert discourse to foreground the general adaptive nature of emotion rather than the possibly negative consequences of appraisal biases and dysregulation.

Some other features highlighted by metaphor are only implicit in the GRID questionnaire. One of them is the idea of *utility*. According to metaphor, anger is a tool - and more specifically a weapon - useful to empower the person to reach their goals (WEAPON, FUEL/SOURCE OF ENERGY - cf. Kövecses, 1990). Another aspect fully elaborated by metaphor but only tangentially approached by the GRID is the *necessity for emotional control or regulation*. Notice that the anger metaphors reported in this study can be broadly divided into three groups: metaphors that tell us what anger feels like (FIRE, ILLNESS), metaphors that tell us why anger happens (TRESPASSING, PHYSICAL NUISANCE), and metaphors that tell us what anger does (OPPONENT, ANIMAL, NATURAL FORCE, INSANITY, FLUID, WEAPON). The latter are the most abundant type, so it is the dynamics of emotional behavior and its control that these conceptual metaphors mostly elaborate on. By contrast, the current formulation of the GRID questionnaire devotes comparatively less attention to emotion control (only four features) and more to a different type of control: the "potency" or "POWER" to cope

with the circumstances in which the emotion has emerged and their consequences (cf. Chapter 5) (for suggestions on expanded versions of the GRID questionnaire see Chapters 3 and 22).

28.7 Conclusions

In this paper, we have explored how our folk representation of anger can be studied looking at language in two complementary ways: through key emotion terms and through figurative language. The link between both approaches has been a number of semantic foci or aspects of emotion frequently highlighted by conceptual metaphors across the emotional domain.

On the basis of linguistic observation of figurative language use, we first described the implicit conceptualization of anger in English and Spanish in terms of conceptual metaphors. Building on (p.424) this model, several hypotheses were proposed on the nature of the concept ANGER in English and Spanish in terms of Causation, Controllability, Desire to act, Evaluation, Harm, Difficulty to cope with the emotion, and Intensity. These semantic foci seem to have a very wide-spread scope and some of them resemble well-established constructs in psychology, like action tendencies and the VALENCE and AROUSAL dimensions. The GRID questionnaire was shown to be able to tap on the same semantic aspects and provide quantitative empirical evidence about them. A number of features from the questionnaire pertaining to the foci were selected and used to test the hypothesized saliency of the various aspects highlighted by metaphor in the meaning of two anger terms in English and Spanish: *anger/ira* and *irritation/irritación*. Most of the hypotheses were confirmed, but the GRID proved also capable of providing additional, more nuanced and language-specific insight about the meaning of the words, for example with respect to the relative saliency of aggression, feelings of POWER, or the emotion's social scope. Metaphor analysis, in turn, was capable of pointing out aspects of ANGER overseen (or underdeveloped) in the current GRID questionnaire, like the irrationality and debasement attached to the emoter, the need for emotional control, and the potential harm to oneself that are implicit in our folk models of the emotion.

Both approaches have advantages and disadvantages. A CMT approach as illustrated in Section 2 is limited in that it can only hint at likely and unlikely features, but it cannot *confirm* what is actually part of the representation of the emotion in the speakers' minds. A statistical corpus-based study of metaphor (cf. Chapters 29 and 30) or a testing tool like the GRID questionnaire are better equipped to provide quantifiable empirical answers in this respect. Conversely, the GRID instrument can only inquire about the features already built in. An examination of language use, like the one afforded by metaphor analysis, is better equipped to *explore* what areas of experience may be

relevant in the representation of emotion and thus in the meaning of words.

All in all, both methods have proven to be complementary, supplying converging evidence on a number of aspects concerning the representation of emotion, as well as supplementary approach-specific insight. Semantic foci also proved useful as *tertium comparationis* for a systematic comparison of both methodologies. This common ground or common language is desirable for interdisciplinary communication and cross-fertilization, very much in the spirit of the Affective Sciences, where the close collaboration between disciplines and the use of mutually informative methodologies continues to be the best resource we count on to advance in our understanding of emotion.

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Notes:

⁽¹⁾ Cristina Soriano. Swiss Center for Affective Sciences - University of Geneva. 7, Rue des Batoirs, CH-1205 Geneva, Switzerland.
Cristina.Soriano@unige.ch

⁽²⁾ Italics are used in this paper to refer to specific emotion terms in a language (e.g., English *anger*); small capitals are used for concepts and conceptual metaphors (e.g., the English concept anger). No specific format is used to refer to the emotion itself.

⁽³⁾ The cross-cultural concept “anger” is understood here as a prototype composed of frequent, but not necessarily sufficient or necessary features across all instantiations.

⁽⁴⁾ For an introduction to the basic features and tenets of cognitive linguistics, see Croft and Cruse (2004), Geeraerts and Cuyckens (2008) or - in Spanish - Ibarretxe-Antuñano and Valenzuela (2012).

⁽⁵⁾ The original inventory in English was offered by Lakoff and Kövecses (1987) in a seminal work that inspired Barcelona’s (1989a) analysis in Spanish. Soriano (2005) offers a revision and expansion of their findings in both languages based on a larger data pool and a more systematic methodology of analysis. Examples in this paper are taken

both from Lakoff and Kövecses (1987) and Soriano (2005). Due to space constraints, only examples in English are provided, but see Soriano (2005) for these and many other examples in English and Spanish.

⁽⁶⁾ Only etymologically. *To rankle* derives from Middle English *ranclen*, “to fester; become or make inflamed” (*Webster’s New World College Dictionary*, 3rd edition).

⁽⁷⁾ From Latin *fulminare*, to strike (said of lightning).

⁽⁸⁾ “Passivity” is another relevant semantic aspect in the conceptualization of anger, but it is excluded here because it cannot be directly explored by the current set of questions in the GRID instrument.

⁽⁹⁾ Kövecses identifies two versions of Desire: desire to react as a result of the emotion, and desire to have the emotion (2000: 45). Given that the latter does not apply to ANGER because this is conceptualized as a negative emotion, Desire in this study only refers to “desire to act” or “reaction”.

⁽¹⁰⁾ The features were not included in the questionnaire to address the foci reported in this paper, but they can be easily associated to them. Features were only retained if they referred to the foci under consideration literally.

⁽¹¹⁾ We would like to thank Phoebe Ellsworth and Itziar Alonso-Arbiol for allowing us to use their US English and Northern Spanish datasets, respectively.

