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Arguing by metaphors

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In classical argumentation theory, metaphors usually lead to fallacies of reasoning: metaphors are governed by heuristic rules that never guarantee preservation of truth (TINDALE 2003, FISCHER 2014, 2015). However, in recent decades, frameworks of cognitive linguistics and embodied cognition have strongly influenced the concept of language and reasoning, which are no longer conceived as the processing of logic-formal systems (KAHNEMAN 2003, EVANS & FRANKISH 2009). Moreover, varied disciplines have demonstrated the productive use of metaphors in reasoning: physics (HESSE 1996), biology (KELLER 1995), psychology (GENTNER & GRUDIN 1985), etc. Metaphors are highly creative and might have a positive role in reasoning, as the history of science testifies (KUHN 1993, BOYD 1993). Metaphor is indeed based on a cross-domain mechanism of projection (*mapping*), which preserves relations from a source to a target domain, thus favouring analogical reasoning (BLACK 1962, GENTNER & JEZIORSKY 1993, LAKOFF & JOHNSON 1980/2003).

While the role in metaphor in reasoning is quite well established, what requires further clarification is its role in argumentation. As metaphors might require imagination as their main source of understanding, they have been considered as being too subjective and emotionally-driven to be investigated under the lenses of argumentation theory (ERVAS, GOLLA, ROSSI 2015). It has been argued that the intuitive nature of metaphors clashes with the reflective nature of argumentation (ERVAS, GOLLA, ROSSI 2016). However, they are not necessarily antithetical and, in case of live metaphors, imagination might deeply influence the intuitions of truth in argumentation (CARSTON 2002, 2010, ERVAS & SANGOI 2014). In this perspective, metaphors can elicit a more creative and productive argumentation style. Thus, metaphor should not be interpreted as a trap leading to fallacies, but rather as a helpful means for creative thinking (BLACKBURN 1984). The papers collected in this special issue precisely aim to show the ways metaphor acts as a powerful argumentative device in different fields, ranging from science to politics.

As Jean Wagemans argues in his groundbreaking article, «Analyzing metaphor in argumentative discourse», even though there are plenty of studies on how metaphor is important for understanding and reasoning, metaphor theory has paid little attention to argumentation theory, which aims at providing a scientific analysis of reasoning schemas. At the same time, argumentation theory considers metaphor just

as a rhetorical embellishment without exploring its argumentative potential. Wagemans aims at bridging the gap between metaphor and argumentation theories by showing that metaphor can be analysed as (1) (part of) a standpoint and (2) as (part of) an argument. He considers a variety of examples for the above two mentioned categories:

- (1) We should not think of *ourselves as machines*.
- (2) Thinking of *ourselves as machines*, is undesirable, because thinking of *ourselves as machines* will diminish our sense of responsibility.

Furthermore, he shows that in such cases metaphor does not only have an ornamental but also an argumentative function. For him, the argumentative function of metaphor is not limited to argument schemas based on analogy. His analysis thus aims at providing a new method to identify the different roles metaphors might assume in argumentative discourse.

Scientific language is at the heart of the issues related to the relationship between argumentation and metaphors. In science it is mandatory to distinguish truthful reasoning (carried out through a strong and valid argument) from persuasive ones (rhetorically effective). Metaphor, instead, has been classified often as a tool for oratorical purposes than as a cognitive and logical device. In her paper «Metaphor: the Good Argument in Science Communication», Giulia Frezza examines the controversial role of the metaphor as a scientific tool used in scientists' texts but in an invisible and deniable way. Frezza illustrates some examples that display four main behaviors towards scientific metaphor. During this analysis she highlights specific properties of metaphor use in scientific argumentation. In particular the polysemy of metaphorical meanings turns out to be very useful for the construction of shared meanings necessary for scientific development, in contrast with the traditional assumption that considers communication as a way to reducing multiple meanings. Scientific rigor, from this point of view, should not be considered only as a matter of finding non ambiguous words which express concepts in a clear, generalized, and valid way. Scientific knowledge is not only a process of discovery of new concepts that are true in abstract sense, but it is also the outcome of an interactive talking-and-thinking process. In this necessary interaction, the communication process mediates conceptual alterity of participants (teacher and students), by taking advantage of both deliberate (STEEN 2015) and conventionalized (LAKOFF & JOHNSON 1980/2003) metaphors.

Science and law have a complicated, often conflicting, relationship, which often results in communication problems, such as the attempt to put together genetics and food safety policies; a situation that Ivo Silvestro defines as being "awkward" in his paper «A metaphorical history of DNA patents». In the paper he tries to understand why this happens. There is, of course, a general problem, which is related to the differences between lawyers and scientists: "lawyers do not know science and scientists do not know law", Silvestro writes. But there are deeper reasons, which have to do with economics, industrial progress, and scientific discoveries. For example the birth of the information theory influenced a lot of other disciplines, which have used it as a source domain for their terminology (as in the words 'code' and 'transcription' in genetics). But the specific issue of Silvestro's analysis is the role that words and concepts, based on conceptual metaphors, play in legal decisions of the patent office and the Courts. For example certain entities (like synthetic

proteins) have been judged patentable or not in dependence of the implied metaphor: “cell is a living organism” (not patentable) or cell is a factory (patentable). Silvestro also shows the risk of metaphors usage in science, because they are often misleading. He concludes his interesting survey wishing that in cases like the DNA, in which we find the most common (and likewise misleading) metaphors (e.g. the “blueprint metaphor”), new intellectual property right will be expressly formulated to capture it. Maria Grazia Rossi, in her paper «Metaphors for patient education: a pragmatic-argumentative approach applying to the case of diabetes care», highlights the educative role of metaphor in argumentative discourse for patient care. More specifically, she investigates metaphors as argumentative devices in the context of communication in chronic (diabetes) care. She adopts a pragmatic-argumentative model of verbal communication useful to evaluate metaphors in clinical contexts. The argumentative theory of reasoning (MERCIER & SPERBER 2011), based on the idea that the main function of reasoning is arguing in communicative social contexts, is adopted as the main theoretical framework, where metaphors are described as framing and reframing strategies. Highlighting some features of the source domain (and hiding other features), metaphors provide a specific perspective under which interpreting the target domain. In this sense, metaphors play a constructive role in argumentation and – in the argumentative theory of reasoning framework – reasoning. In health communication, metaphors are quite widespread: their framing effects tacitly influence the way patient looks at her/his disease and may reinforce the way s/he experiences the illness, with potential bearing on the patient's sense of self. Even more important, metaphors have a perspective changing function in health communication. Following Gerard Steen's model of metaphor in language use (2008), Rossi argues that in health communication metaphors have a communicative function to offer an alternative perspective on the target of metaphor that occurs in doctor/patient interaction when a specific rhetorical effect needs to be achieved in order to make metaphor an effective educational tool.

Politics is another field in which argumentation strategies play a greater role not only in electoral campaigns, but also in citizenship discourses. Gabriele Tosato in the paper «Argomentazione metaforica in un corpus di assemblee politiche» analyses this aspect of metaphor through an analysis of a collection of the memoranda of an Italian council of foreigners, written between 2008 and 2014. In this corpus, metaphors are used mainly to describe what is the Council: its functions, its relationships with immigrants, society, parties and institutions in general. Counsellors are not professionals of politics and they need to find concepts that can give a meaning, and a conceptual background to their proposals, attitudes, and actions. Metaphors are a very good tool to express complex positions like these and are spontaneously used in council discourses. One of the counsellors, for example, says:

(3) io sono contento di stare qui come *portavoce* di tutti gli stranieri, sono orgoglioso di *portare avanti le idee* di tutti quelli che sono *dietro di noi* (Malick Kaire Gueye, 2008, 3: 4¹).

¹ [Editor's note] Gueye Malick Kaire is the name of the Counsellor, who intervened in the session of 10 April 2008 (page 4 of the memorandum) (Cfr. PROVINCIA DI BOLOGNA 2008-2013): http://www.cittametropolitana.bo.it/portale/Engine/RAServeFile.php/f/Consiglio_stranieri/Verbale3Se data10-04-08.pdf.

This sentence contains one of the metaphors that are used more frequently in the considered corpus, the “Transportation” metaphor, in which the source domain is a path in which we move. Other expressions that are frequently used in texts are the adverb ‘avanti’ in all its combination (“portare avanti, andare avanti”, etc.), and the verbs “mandare”, “guardare”, “farsi tirare”. In his paper Tosato shows how different metaphors, or different source domains, which enter in the process of interactive talking-and-thinking process (CAMERON 2003) of understanding the Council and the role of counsellors.

In the paper «Towards ‘Weight’ as a Rhetorical Concept», Curtis K.J. Hyra examines the concept of “weight” and its argumentative potential in politics. The author considers everyday physical conceptions of “weight”, for instance “weight” as mass, in order to understand what it means for concepts, arguments, to have weight. The author argues that the concept of “weight” and its framing devices are used to describe the deliberation process. The factors that influence a decision are the result of weighing the options on either side of an issue. The arguments have a “strength”, as every mass has, etc. The frames provided by the “weight” metaphor influences and changes the cognitive environment of an individual, as defined by Sperber and Wilson (1986), i.e. the set of facts, assumptions and beliefs that are manifest to a person. Analysing examples from politics (Donald Trump’s Election Campaign included), the author aims to show that, in a theory of rhetorical citizenship, the “weight” metaphor plays a role in rhetor’s agency and in the deliberation process, as it modifies the cognitive environment in the context of a deliberation.

“Metaphor” is an umbrella word, which includes many types of expressions and concepts. Argumentative discourse are part of our everyday life and they carry out general and specific characteristics in dependence of the domains of application: politics, science, health, citizenship, etc. For example, the different domains in which we conduct our reasoning and formulate our discourses have an impact on the outcomes of argumentation. The intersection of these factors stimulate different reflections in scholars that study the relationship between metaphor and argumentation. The papers collected in this volume explore some of these cases, showing the effects on social and personal decisions, the framing and other factors that intervene in deliberation processes, the emotional effects that are intimately entwined with metaphors, but also, more in general, with our rationality.

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