

# A Unitary Schema for Arguments by Analogy

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**Abstract:** Following a Toulminian account of argument analysis and evaluation, I offer a general unitary schema for, so called, deductive and inductive types of analogical arguments. This schema is able to explain why certain analogical arguments can be said to be deductive, and yet, also defeasible.

**Résumé:** En suivant l'approche de Toulmin pour analyser et évaluer des arguments, je vous propose un schéma général unitaire pour les soi-disant types d'arguments par analogie déductifs et inductifs. Ce schéma est en mesure d'expliquer pourquoi certains arguments par analogie peuvent être considérés comme déductifs, et pourtant révisables.

**Keywords:** analogies, analogical argumentation, argument analysis, argument evaluation, deductive analogical argumentation, inductive analogical argumentation, linguistic-pragmatic normative models of argumentation, Toulmin's model of argument

## 1. Introduction

In “Analyzing and classifying analogies” (1989), Govier said:

The trick about analogies—and their charm as well, I think- is that we are often able to see or sense important resemblances between cases without being able to spell them out exhaustively in just so many words. (Govier, 1989: 148)

To this, Waller (2001) responded: “We should not, however, exaggerate either the charm or the persuasiveness.” The main goal of this paper is to provide a general framework for the study of analogical argumentation that is able to make full sense of that which is both tricky and charming in analogies, while retaining the possibility of determining, for each case, the value of analogies as argumentative resources. To this end, I will analyze Govier and Waller's positions as paradigmatic. My proposal will also shed light on another point of controversy between

Govier and Waller, namely, their discrepancy on whether we can say of certain arguments by analogy that they are deductive.

Govier and Waller agree that arguments like “the abolition of war is, in many respects, like the abolition of slavery; consequently, it might be achieved by citizen action and widespread reforms” are inductive, because their conclusions are meant to be established just with a certain degree of likelihood or probability. Yet, they are particularly concerned with another type of analogical arguments—paradigmatically coming from the fields of law and ethics—whose conclusions are not meant to be established probabilistically. Arguments such as Judith Jarvis Thompson’s far-famed comparison between the right to abort when you become pregnant as a result of rape and the right to disconnect yourself from a violinist, and let him die thereof, when you have been involuntarily connected to him, would be an example of this type of non-inductive analogical argumentation.

Govier and Waller agree that this type of analogical argumentation involves, one way or another, general claims—i.e., claims stating something like “things that share properties  $x$ ,  $y$ ,  $z$  also share property  $p$ ,” which Govier calls U-claims (Govier, 1989: 148). As they both see it, in the last resort, such general claims would sanction the inference from adducing that  $A$  is like  $B$  to concluding something about  $A$ . However, Govier is particularly sensible to the fact that such general claims are seldom part of non-inductive analogical arguments, as actually stated by speakers. In Govier’s view, this type of arguments “does involve us in some universalist commitments, but these should not be regarded as unstated or missing premises of the argument” (Govier, 1989: 149). On this view, in offering non-inductive analogical arguments, speakers would *imply*—not *adduce*—such general claims.

Govier argues that such general claims may, in fact, be unknown to speakers themselves and, therefore, they cannot be a part of what they say. Because of this, she contends that reconstructing these arguments as having such general claims among their premises is unwarranted. Actually, she claims that such a reconstruction would destroy the distinctive force and charm of analogical argumentation, which is a matter of the fact that comparisons of particulars can make us see that which is general in them without spelling out exhaustively what they have in common “in just so many words.” Given that we are not allowed to reconstruct this type of analogical arguments as involving U-claims among their premises, Govier concludes that we cannot really say that they are deductive—but, at best, *a priori* (Govier, 2002: 156).

For his part, Waller considers that *a priori* analogical arguments are not only *a priori*, but also deductive, as their conclusions are meant to be established in a categorical way, i.e., as something that follows of necessity. In his view, “analyzing an *a priori* analogy is not a matter of finding the fixed and final universal principle that rightly governs the analogy; but underlying universal principles are an integral part of *a priori* analogies, and should not be banished to the fringes of “merely implied.”” (Waller, 2001: 2007). On Waller’s view, it is only by being able to determine which principle the analogy is (implicitly) appealing to that we can determine its real value as a reason. This is why he proposes the following reconstruction of non-inductive analogical arguments:

1. We both agree with case *a*.
2. The most plausible reason for believing *a* is the acceptance of principle *C*.
3. *C* implies *b* (*b* is a case that fits under principle *C*).
4. Therefore, consistency requires the acceptance of *b*.

In this schema, principle *C* would be the U-claim that Govier takes to be implied but not adduced by the speaker and whose inclusion as a part of the premises set destroys the characteristic charm and power of this type of argumentation. Waller acknowledges that, in many cases, determining the particular principle at stake may be something difficult to achieve. But he also says that this is a crucial step for setting the *structure* of this type of arguments so as to properly represent the argumentative force that certain analogies are able to confer on their conclusions.

In my view, the intuition that U-claims are not part of analogical argumentation in general and the intuition that certain type of analogical argumentation characteristically aims at establishing deductively its conclusions are both correct and one of my goals in this paper is to explain how is this possible.

Much of the discussion between Govier and Waller is, in the end, a discussion about the way we should interpret and reconstruct this type of analogical argumentation. Govier’s and Waller’s proposals are based on their corresponding assumptions that U-claims are/are not part of the logical structure of such analogical argumentation. Following these assumptions, they offer alternative schemas for reconstructing this type of analogical argumentation. And these schemas, effectively, turn the corresponding analogical argumentative discourses into non-deductive and deductive arguments, respectively.

For my part, I think that an adequate response to the question of whether this type of analogical argumentation is deductive or not requires a model of interpretation and reconstruction that does not beg the question in this sense. That is, we should

be able to find a rationale for interpreting and reconstructing analogical argumentation that does not depend on potentially controversial assumptions regarding what is the “real” structure of argumentation by analogy.

This idea underlies my strategy for providing a general unitary schema for analogical argumentation. Such schema is based on a linguistic-pragmatic model for the interpretation of argumentation, that is, a model that, in characterizing, in general, the speech-act of arguing, provides guidelines to interpret real argumentative practices. In other words, this model is meant to determine the *meaning* of acts of arguing, not their alleged logical structure. This is why it makes no assumption regarding such logical structure—i.e., regarding whether U-claims are part of the “deep” logical structure of analogical argumentation or not.<sup>1</sup> The elements of this model of argumentation are meant to be constitutive of any communicative move that counts as argumentation. However, at the same time, these elements are the linguistic-pragmatic correlates of the elements of Toulmin’s model of argument, as presented in *The Uses of Argument* (1958), and because of this, we will see, this model for interpreting argumentation also serves the purposes of analyzing and appraising it.

As I will try to show, according to this model, both inductive and *a priori* argumentation by analogy have the same structure and normative conditions. In addition, as Govier maintained, we will see that, in general, it is not necessary to incorporate U-claims as part of what speakers adduce when they argue by analogy. As Govier would point out, the fact that we do not have to have U-claims in order to make inferences from analogies explains their charm and rhetorical power.

Yet, following Toulmin’s account of inference and a Toulmian-inspired model for the semantic appraisal of argumentation, we will see that, contrary to what Govier seems to assume, we do not have to incorporate U-claims as part of the premises in order to regard certain analogical arguments as deductive, i.e., as arguments whose conclusions are meant to follow necessarily. However, we will see, the particular features of analogical argumentation will result in the paradoxical outcome that deductive analogical argumentation is, nevertheless, defeasible.

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<sup>1</sup> Actually, Govier’s criticism of Waller’s proposal appeals to what speakers are supposed to be actually saying; that is, whether or not U-claims are part of what they actually state (Govier, 2002: 156).

## 2. The cognitive power of analogies

### Discursive and non-discursive uses of analogies

One of the most interesting things about the use of analogies is their ability to make familiar to us new objects and phenomena: by thinking of a new cell phone as relevantly similar to an old one, we learn to use it much more easily; by thinking of umbilical cord cells storage as relevantly similar to blood storage, we understand better the former phenomenon and the sanitary and legal questions associated with it and we can also guide our expectations and decisions. This is why analogies have a widespread *cognitive-exploratory use*, especially in those fields in which novelties abound.

Actually, analogical mapping is a very common cognitive process in which individuals make successive and, eventually, complementary comparisons in order to apprehend the particular intricacies of the novelty they try to deal with. Characteristically, this cognitive-exploratory use of analogies does not pursue finding that analogue that better suits the novelty; rather, it pursues checking the extent to which the novelty and the analogue are alike, and then leave the door open for finding new analogues able to capture other relevant properties of the novelty that do not perfectly fit former analogies. In this cognitive process, one single analogy is not meant to do all the work: after all, if a single analogy were enough to fully characterize the new object, it would not be a proper analogy, but an identity statement; and identity statements have a very different kind of utility as cognitive tools. In sum, as authors like Hofmann, Solbakk and Holm (2006) have pointed out, analogical mapping is a gridded process in which, by means of more and less successful comparisons, we become familiar with novelties.

Remarkably, analogies, like metaphors, have more of cognitive proposals than of mere ascertainment of similarities. In other words, at least in their cognitive uses, analogies do not stand for a definite list of the properties that two things would have in common. This indefinite character of the content of analogies is a necessary condition of their cognitive-exploratory power: after all, if, in order to formulate an analogy between A and B, we had to be clear about the set of properties that A and B have in common, analogies would not be useful as tools for investigating novelties and making them familiar to us, for we had to already know that which is, in turn, what we want to know, i.e., an account of the relevant properties of the novelty. As we are going to see, such indefiniteness of their content is idiosyncratic of analogies and metaphors in general, and explains not only their cognitive-exploratory potential but also their communicative-rhetorical power.

Now, apart from these non-discursive, cognitive-exploratory uses, analogies can be used discursively as powerful pedagogical and explanatory devices. By pointing out that *A* is like *B*, we usually make our explanations of *A* clearer and more vivid than by merely stating a list of *A*'s properties. Waller (2001: 200) calls this type of use of analogies *figurative*.

No doubt, merely pointing out that *A* is like *B* is, in principle, quite an uninformative move: we can say of almost any pair of things that one of them is like the other. Discursive analogies usually inherit the semantic indefiniteness of non-discursive analogies—which is part of their potential as cognitive tools, as we have seen. Like cognitive analogies, explanatory analogies stand neither for identity statements nor for lists of properties that certain things would have in common.<sup>2</sup>

However, when we put forward an analogy, we do it within a certain context and with certain purposes. Such context and purposes point at the way or ways in which the two elements of the analogy are said to resemble each other. Waller, for example, cites Samuel Johnson's analogy between arguments as arrows shot from a crossbow and testimony as arrows shot from a long bow, whose power depends on who makes the shot. It is in the context of comparing argumentation and testimony that we understand the sense in which arguments and crossbows, on the one hand, and testimony and long bows, on the other, are said to resemble each other.

Apart from these figurative, explanatory and pedagogical uses, analogies in discourse can be used as argumentative tools, i.e., as means to show further claims to be correct. And, with Waller, I take it to be very important to distinguish between explanatory and argumentative analogies in order to avoid making misleading criticisms: explanatory analogies are not argumentative; they do not amount to reasons for a claim, in the sense of considerations that show this claim to be correct. Actually, if we think of them this way, we may interpret the corresponding argumentation as question begging because, in their explanatory uses, there is no other claim that the analogy is meant to support, apart from the comparison itself. As Waller says, "if you are not independently convinced that testimony depends for its reliability on its source, while argument must stand or fall on its own merits, then Johnson's analogy offers nothing to persuade you" (Waller, 2002: 200).

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<sup>2</sup> At the end, this is the reason why I think that Guarini's attempt to mediate between Govier and Waller's controversy does not work: his proposal for the analysis of analogical argumentation also requires to specify the set of properties that the two analogues would have in common (Guarini, 2004: 161). But this is something that may be completely alien to the meaning of the arguer's actual words.

### 3. The rhetorical power of analogies Explanatory and argumentative uses

As far as we use analogies with communicative purposes, that is, as part of processes where two subjects interact—i.e., a speaker that puts forward the analogy and an addressee that is put in a condition of either accepting or resisting the analogy thereof—both the explanatory and the argumentative uses of analogies involve rhetorical properties.

Actually, discursive analogies happen to be rhetorically powerful: as pointed out above, using analogies to explain the features of a certain object or phenomenon makes our explanations more vivid and efficient. And, regarding their argumentative role, given the fact that, by using analogies, we can show our claims to be correct, analogies are also valuable tools to make others to be persuaded of such claims. Yet, the rhetorical power of analogies goes further than this, both in their argumentative and their explanatory uses.

To begin with, it is important to keep in mind that, in principle, the persuasive effect of analogies is meant to be different when we use them with explanatory purposes than when we use them argumentatively. In their explanatory uses, analogies are not meant to induce a belief in anything other than the analogy itself. Explanatory analogies are persuasive in the sense of making more vivid the characteristics of that aspect of the target object or phenomenon that we try to illustrate by means of the comparison. As in the case of their exploratory uses, the fact that analogies do not exhaust the ways in which the analogues are supposed to be alike does not count as a problem, but as a virtue: by considering and pondering the possible resemblances between *A* and *B*, the addressee may find new explanations of *B*'s properties and get further knowledge of *B* by herself.

Contrastingly, when we use analogies argumentatively, persuasion is the expected effect of supporting a claim whose content goes beyond the content of the analogy itself: in these cases, speakers do not aim at persuading their addressees of the analogy itself but of a further claim whose acceptability is meant to depend on the acceptability of the analogy.<sup>3</sup>

When we succeed in *explaining* the features of a given object or phenomenon by means of an analogy, our addressees come to *see* this object or phenomenon as we suggest them to see it, in the direction or directions that our analogy points at.

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<sup>3</sup> As I see it, the fact that, contrary to explanatory analogies, argumentative analogies have a target content that exceeds the content of the very analogy explains why if we take explanatory analogies to be argumentative, they just seem question begging, as Waller pointed out.

Why is this so? In a few words, because the rhetorical power of analogies is a correlate of their power as exploratory mechanisms, and this power depends on the fact that analogies have an opened and indefinite content, as we have seen. Because of that, in order to understand a proposed analogy, the addressee has to supply the sense in which the two analogues are said to be alike. In doing so, the addressee herself works out the alleged similarities between the two analogues. For example, in conveying that time is money, we convey an idea of time being as money in some relevant sense; a sense that, on the other hand, has not been made explicit. What we convey is not mere information, but rather a cognitive proposal of seeing time as money in a certain way, i.e., the way in which the comparison is relevant. As far as the addressee fully understands the analogy, i.e., the relevance of comparing time with money, she is being thinking of time as money in this sense thereof. And yet, the speaker did not need to say what sense this was. This is why understanding an analogy is, at the end, falling, at least a bit, under its rhetorical spell.

This was, roughly, the view of metaphors that Lakoff & Johnson developed in their well-known *Metaphors We Live By* (1980). M. Black (1954) and D. Davidson (1978), among others, had already maintained similar views. On their perspective, it would be useless to try to find the truth-conditions of metaphorical propositions because “much of what we are caused to notice [in a metaphor] is not propositional in character” (Davidson, 1978: 33). Certainly, there is a key difference between metaphors and analogies: literally, metaphorical sentences are always false (time is not money) whereas, literally, analogical sentences are always true (there is surely more than one aspect in which time is like money). But as long as, literally, analogies are trivially true, current literature tends to cancel the distinction between metaphors and analogies, at least regarding the cognitive processes involved in understanding them. On this account, their content is not propositional, which is the reason why accepting or refusing an analogy or a metaphor is accepting or refusing a cognitive proposal rather than agreeing or disagreeing with a claim.

Now, in principle, the persuasive effect that we pursue when we adduce an analogy as a reason for a target-claim is different: in these cases, speakers are supposed to try to persuade their addressees, not of the analogy itself, but of a further claim whose acceptability allegedly depends on the acceptability of the analogy. However, an analogy is an analogy, and it does not lose its spell just because we are using it argumentatively. Argumentation is a justificatory and a persuasive device and argumentative analogies can be used, not only for justifying, but also



for persuading someone of our claims. Certainly, when we use an analogy for justifying a claim, we put at work its epistemic properties as a means to support this claim. Contrastingly, when we use an analogy for persuading someone of a further claim, we put at work its rhetorical properties as a means to induce beliefs and attitudes. No doubt, this distinction is merely conceptual: we normally use argumentative analogies with both purposes at the same time. However, it is important to keep both functions conceptually distinct in order to be clear that that which makes an analogy good as a justificatory device is not necessarily the same as that which makes it good as a persuasive device. When we use argumentative analogies for persuading, we have to take into account that proposing certain comparisons, despite their justificatory power, may be inadequate because they provoke incomprehension, rejection, distaste, etc, so as to finally make it more difficult to get the persuasion of our addressees. And, conversely: analogies that result inadequate from an epistemological point of view may happen to be powerful from a rhetorical perspective, for example because they appeal to strong feelings, norms, practices, institutions, etc., that we do not dare to criticise, or because they summarize well-established views, etc. It is precisely this distance between the rhetorical quality and the epistemological quality of argumentative analogies what poses the main legitimacy problem of their use in argumentation. Specially, when we take into account that putting forward an analogy is already pressing our addressees to see things in a certain way without actually saying which way this is. In other words, the legitimacy problem that analogies pose is not only a matter of the fact that, in general, *good* argumentation is not the same as *effective* argumentation. It is also a matter of the particular spell of analogies: as we have seen, to a great extent, understanding an analogy, like understanding a metaphor, is all the same as accepting it in some sense, namely, as a cognitive proposal. When we understand what does it mean someone's claim that time is like money, we feel inclined to agree that we should not waste it.<sup>4</sup>

This is why, as Waller urged us, it is important to be in a position to determine the acceptability of the argumentative uses of analogies for each particular case and their real justificatory power. In the following sections, I am going to propose a model for the analysis and appraisal of analogical argumentation that

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<sup>4</sup> Of course, we can always resist the analogy. Yet, this resistance cannot be a matter of appealing to the differences between time and money, which are evident (that is, it wouldn't make sense to reply "no, time is not like money"), but rather to the convenience of thinking of time as money.

deals with the question of the *content* of analogies and their functions within arguments.

#### 4. Speech acts of arguing Ontological and epistemic qualifiers

In *Giving Reasons* (2011), I have proposed a characterization of argumentation as a second order speech-act complex, that is, a speech-act composed of a speech-act of adducing and a speech-act of concluding.<sup>5</sup> On this account, acts of adducing and acts of concluding are constatives, but they are second order constatives because they can only be performed by means of first order speech-acts. Paradigmatically, such first order speech-acts are also constatives, but there are other possibilities. For example, in “I’ll take care, don’t worry,” two first order speech-acts, i.e., a promise and a request, turn into the constative speech-act of adducing that the arguer commits herself to take care and the constative speech-act of concluding that the addressee should not worry.<sup>6</sup> Illocutionarily, acts of arguing, so characterized, count as attempts at showing a target-claim to be correct. To the extent that they succeed in this, they will be said to be good argumentation.

In *Giving Reasons*, I followed an extension of Bach & Harnish’s Speech Act Schema (SAS)—as presented in their *Linguistic Communication and Speech-Acts* (1979)—in order to provide guidelines to interpret and analyze particular acts of arguing. In principle, the extended SAS is meant to be powerful enough to deal, among other things, with the interpretation and analysis of indirect and non-literal argumentation, and that includes argumentation using metaphors and analogies.

In general, the idea behind this model is that when we argue, two constatives (whether directly or indirectly performed, literal or non-literal) become an act of adducing, *R*, and an act of concluding, *C*. This happens because of their relationship with an implicit inference-claim whose propositional content is “if *R*, then *C*.” In a few words, it is because we can attribute to the speaker the implicit inference-claim “if I commit myself to take care, then you should not worry” that we can interpret her utterances of “I promise I’ll take care” and “don’t worry,” as a single argumentative speech-act.

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<sup>5</sup> Pragma-dialectics also considers argumentation as a speech-act complex, but there are important differences between Pragma-dialectics and my account (see Section 3 of Chapter III, of Bermejo-Luque (2011)).

<sup>6</sup> Notice that these speech-acts are second order, not indirect speech-acts: they are assertions (at a first, sentence level) and acts of adducing and concluding (at the higher, argumentative level).

According to this, inference-claims are constitutive of acts of arguing. And, as I have argued elsewhere, they are necessarily implicit in it.<sup>7</sup> At any rate, normally, it is the fact that the speaker has used some epistemic qualifier (like “probably,” “necessarily,” “evidently,” etc.) or an illative expression like “so,” “therefore,” “since,” “consequently,” etc. what authorizes us to interpret the speaker’s performance as an act of arguing. In this, I follow D. Hitchcock’s (2007) view that inference-claims generally stand for the “so,” the “therefore,” the “consequently,” etc., of ordinary acts of arguing.

Inference-claims are also constatives. Thus, just like any other constative of the act of arguing, the type and degree of constative force of the inference-claim may vary. In principle, we can make explicit the variety of ways in which we can put forward a certain semantic content  $p$  in constative speech-acts by saying things like “ $p$  is true,” “ $p$  is (more or less) probable,” “ $p$  is (more or less) acceptable,” “ $p$  is (more or less) plausible,” “ $p$  is necessary,” “ $p$  is possible,” etc.

In my account, the qualifiers by means of which we put forward any of the constatives constituting the act of arguing, including the inference-claim, are *ontological qualifiers*: after all, constatives are speech-acts meant to communicate *how the world is*.<sup>8</sup> In making explicit the ontological qualifier of our first order constatives, we make plain, first order constatives, such as the claim that  $p$  is true, or that  $p$  is probable, or possible, or plausible, or necessary, etc. In turn, when we put forward a propositional content with the qualifier that such propositional content actually deserves, we make first order constatives that are (ontologically) *correct*.

Contrastingly, the qualifier that expresses the force with which we draw our conclusion in the act of arguing is an *epistemic qualifier*: it is meant to communicate our credentials for concluding, i.e., the type and degree of support that our reasons are supposed to confer on our target-claims because of our inference-claims. In saying that a claim holds truly, necessarily, possibly, plausibly, probably, etc. (or alternatively, that likely  $p$ , that it might be the case that  $p$ , that certainly  $p$ , etc.), we are saying something about the status of this claim as knowledge, about the confidence we should put on it or our entitlement to it. Epistemic qualifiers are meant to communicate how good our rea-

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<sup>7</sup> I have argued for the idea that inference-claims are necessarily implicit in acts of arguing in Bermejo-Luque (2004) and (2007)

<sup>8</sup> In turn, I am assuming that constatives like “this is good,” “you should go,” etc. are proper constatives, i.e., expressions of which it makes sense to say that they are true or false. Notice, however, that in saying that constatives aim to say how the world is, I am not committing myself with semantic substantivism.

sons are for our claims. And, as we are going to see, they are a function of the ontological qualifiers that correspond to the implicit inference-claim and to the constative being the meaning of the speech-act of adducing. Thus, in any target-claim we can find, either explicitly or implicitly, not only its ontological qualifier as a first order constative, but also the epistemic qualifier that signals the force with which this claim is concluded in the whole speech-act of arguing.

Noticeably, in acknowledging different types of ontological qualifiers I am endorsing the view that constatives can have values other than true or false. And assuming probability values is not the only way to endorse this view. For example, we can also acknowledge ontological plausibility values. Thus, a claim like “John is bald” may also be a better or worse representation of John’s amount of hair at the present time, and in case we cannot take it to be as plainly and simply true or false, we can take it to be just plausible to some degree in this ontological sense. Notice that, on this account, the degree of plausibility of a representation is a measure of its value as such representation, not a measure of its fulfillment of epistemic standards. As we are going to see, this kind of ontological qualifier, i.e., plausibility, is particularly adequate for qualifying analogies and metaphors when used as reasons. But, of course, analogical and metaphorical claims can have other kinds of ontological qualifiers.

At any rate, the distinction between ontological and epistemic qualifiers points out that, in valuing constatives, we can consider either their value as attempts to say how the world is or the credentials for putting them forward.

## 5. The meaning and function of analogies in argumentation

The constitutive elements of acts of arguing, as defined so far are: (1) a second order speech-act of adducing, (2) a second order speech-act of concluding, (3) an implicit inference-claim, (4) the ontological qualifiers of each first order constative of the act of arguing and (5) the epistemic qualifier of the act of concluding. These elements correspond, roughly, to the following elements of Toulmin’s model of argument: (1) the *data*, (2) the *target-claim*, (3) the *warrant* and (4) and (5) the *qualifiers*.<sup>9</sup> As far as arguments are representations of acts of arguing, these el-

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<sup>9</sup> Toulmin does not distinguish, at least explicitly, between ontological and epistemic qualifiers. In principle, his model only takes into account what I name “epistemic qualifiers,” i.e., the modal that qualifies the target-claim and expresses the force with which we put it forward. But the idea that the value of an argument is a function of this qualifier appears here and there in *The Uses of Argument*.

elements are also constitutive of any argument. In turn, as far as Toulmin's model of argument is adequate as a means to semantically appraise argumentation, our model for the interpretation of argumentation is also a model for its analysis and semantic appraisal.

Now, what is analogical argumentation, according to the above characterization of argumentation as a certain type of second order speech-act complex?

It is generally agreed that analogical argumentation is argumentation in which an analogy is adduced in order to support a further claim. What we have in these cases is, paradigmatically, acts of arguing of the form: "*A* is like *B*, therefore *A* is *Z*." When we represent such acts of arguing by using Toulmin's model, the analogy corresponds to the data, as it is the content of the speech-act of adducing. However, acts of arguing having the form "*B* is *Z*, therefore *A* is *Z*" can also be said to be analogical in particular conversational contexts. In this latter type of analogical acts of arguing, the analogy would correspond to the backing in Toulmin's model, i.e., the fact that stands behind the warrant. In these cases, the context can make it clear that there is analogy to be adduced as a reason for the inference-claim "if *B* is *Z*, then *A* is *Z*." "—why?" "—because *A* is like *B*."

According to this, in our model, there are two ways in which analogies can be adduced in order to show a certain claim to be correct, i.e., they can be reasons for the target-claim and they can be reasons for the inference-claim. But what does it mean to treat an analogy as a reason?

As we have seen, in principle, analogies, like metaphors, do not have a definite propositional content: most theorists agree that they do not count as plain assertions but rather as cognitive proposals. As argued above, this fact would explain their characteristic rhetorical charm. However, according to our proposed model for interpreting and analyzing argumentation, in order to take an analogy as constituting an act of adducing, we have to be able to treat it as a full-fledged constative. This means, among other things, being able to attribute to such analogical constative an ontological qualifier, i.e., being able to take its content as a better or worse way of saying how the world is.

In other words, because the analogy has been used as a reason, we have to think of it as having a definite propositional content. But how can we do this? Certainly, we have seen, in saying that *A* is like *B*, the speaker passes on the addressee the task of working out which are the ways in which *A* and *B* are alike. In fact, in being offered an analogy as a reason, the addressee cannot just reply: "no, *A* is not like *B*," because, in principle, analogies are trivially true. Likewise, in offering a metaphor as a reason, the addressee cannot just reply: "no, time is not

money,” because she will be accused of just not understanding. As we have seen, this is part of the tricking power of analogies and metaphors.

And yet, in order to take the analogy as an act of adducing, i.e., as a reason, we have to be able to interpret it as a full-fledged constative, as a propositional content ontologically qualified, either implicitly or explicitly. How can we make sense of both intuitions, namely, that analogies in analogical argumentation must be interpreted as constatives while preserving the indefiniteness that explains their particular charm and rhetorical power?

Let me offer this fascinating example from a pre-Han Confucian treatise, *The Works of Mencius*. In it, there is the following dialogue:

The philosopher Gao said, “Man's nature is like water whirling round in a corner. Open a passage for it to the east, and it will flow to the east; open a passage for it to the west, and it will flow to the west. Man's nature is indifferent to good and evil, just as the water is indifferent to the east and west.”

Mencius replied, “Water indeed will flow indifferently to the east or west, but will it flow indifferently up or down? The tendency of man's nature to good is like the tendency of water to flow downwards. There are none but have this tendency to good, just as all water flows downwards. Now by striking water and causing it to leap up, you may make it go over your forehead, and, by damming and leading it you may force it up a hill—but are such movements according to the nature of water? It is the force applied which causes them. When men are made to do what is not good, their nature is dealt with in this way.”<sup>10</sup>

In principle, there are two ways of understanding Gao's analogy: either as explanatory or as argumentative. As argued in Section 3, if we take it to be explanatory, we will interpret Gao's words as having no other persuasive aim than making clear or more vivid the way in which men behave: just like water whirling round in a corner. Contrastingly, in considering Gao's words as argumentation, we will take the analogy between men and water to be a reason for the claim that men do not have an intrinsic tendency towards good or evil (because, regarding their behaviour, they are like water). On this account, there would be two coordinated rhetorical aims in Gao's words: first, to induce the idea that men are like water and, second, to induce the idea

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<sup>10</sup> Works of Mencius. *Book VI: Gaozi*. Full text, bilingual edition in: <http://ctext.org/mengzi/gaozi-i>

that this shows that men do not have an intrinsic tendency towards good or evil.

The latter seems to be Mencius' interpretation of Gao's analogy. He takes Gao's words to have two rhetorical aims; otherwise, he would not be in a condition to concede one of them, i.e., the analogy between men and water, but then resist the other, i.e., the conclusion that men do not have an intrinsic tendency towards good or evil. But this is exactly what Mencius does. Actually, he even counter-argues that, effectively, men are like water; therefore, they have an intrinsic tendency to good. How can it be? Because conceding an argumentative analogy is conceding that, regarding a certain aspect of the two analogues, they ran the same fate, or can be considered or treated the same.<sup>11</sup> Yet, it is not to concede which this fate is or how they should be considered or treated. For example, in the argument "aborting when you become pregnant as a result of rape is like disconnecting yourself from a violinist when you've been involuntarily connected to him; therefore, it is legitimate to abort when you become pregnant as a result of rape," the content of the analogy is "aborting in such and such circumstances is like disconnecting yourself in such and such circumstances regarding their legitimacy." A person thinking that abortion in these circumstances is legitimate and a person thinking that it is not may agree on this analogy if they think that both cases should be considered the same regarding their legitimacy, and yet disagree on whether they both are legitimate or illegitimate.

I contend that this is how we should interpret the meaning of analogies when used as reasons—either for the target-claim or for the inference-claim—in order to preserve both the intuition that analogical reasons are full-fledged constatives and also the idea that they are not mere nicknames for a set of similarities between the two analogues, which is implicitly acknowledged by arguers and addressees.

Thus, we can take the ontological qualifier of an analogical reason to be a measure of the plausibility of representing the two analogues as running the same fate in some respect, in the ontological sense of the concept "plausible" pointed out in the last section. At other times, it might be a matter of acceptability, of probability, of truth, of necessity or of presumptions (for example, when the claim that *A* is like *B* is not an analogy but a classification (*A* is a type of *B*)), etc.

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<sup>11</sup> Regarding moral argumentation, as M. Guarini puts it: "The point is that the two types of cases should be treated in the same way" (Guarini, 2004: 158).

## 6. The semantic evaluation of analogical argumentation Inductive and deductive arguments by analogy and degrees of support

I think that, in general, Guarini (2004) is right when he says: “a reconstruction of analogical argument needs to allow for degrees of strength” (Guarini, 2004: 159). Yet, contrary to what he suggests, I do not think that the feature that matters the most for determining the value of an analogy is the *degree of similarity* between the two analogues. Rather, I think that when we assess an analogy put forward as a reason for a claim, what we do is to take it to be (more or less) plausible or probable, true, assumable, etc., that the two analogues run the same fate regarding a particular aspect, or should be considered or treated the same regarding that particular aspect—whether this aspect has to do with having a certain feature or foreseeable outcome (descriptive and predictive argumentative analogies) or with deserving a certain moral, legal, etc. evaluation (normative argumentative analogies). After all, even if the idea of determining the *degree* of similarity between two things made sense in general, the truth is that two things may be very dissimilar and yet constituting quite an acceptable analogy—like in the case of the analogy between men and water mentioned above. And *vice versa*: despite their similarities, an analogy between two things that are almost the same kind of thing excepting for one feature may constitute a bad reason if this feature is, precisely, the one that matters. For example, an argument like “investigation with human embryos is like investigation with human foetus; therefore this research project (which involves the manipulation of embryos), must be cancelled” will be a bad argument because its reason—i.e., in our account, the claim that investigation with human embryos and with human foetus can be considered the same regarding their legality—is not true.

However, I think that Guarini is also right in saying that the degrees of strength of argumentative analogies have to do not only with the value of the analogy itself, but also with its value as a reason for a certain claim (Guarini, 2004: 160). Let me now explain how to articulate this idea within my proposal.

The general model for the interpretation, analysis and appraisal of argumentation proposed in *Giving Reasons*, follows Toulmin’s intuition that qualifiers are the key to the logical-semantic appraisal of argumentation—which is an aspect of argumentation evaluation that deals with arguments as representations of real speech-acts of arguing. In accordance with this, the model adopts Toulmin’s idea that the distinction between deductive and inductive arguments is a matter of the qualifier that corresponds to the warrant of the argument. Thus, arguments whose



warrants are necessary truths (ontological qualifier, in my account) entitle us to draw our conclusions with a “necessarily” (epistemic qualifier, in my account): they are deductive arguments. In turn, arguments whose warrants are just probable, plausible, acceptable, etc. (ontological qualifiers, in my account), entitle us to draw our conclusions only with a “probably,” a “plausibly,” a “likely,” etc. (epistemic qualifiers, in my account): they are non-deductive arguments.<sup>12</sup>

According to this model, the warrant of an argument is a representation of the inference-claim of the corresponding speech-act of arguing. As we have seen, this inference-claim is a linguistic presumption whose content is a conditional having as its antecedent the reason of the act of arguing (that is, its content and the ontological qualifier that represents the pragmatic force with which this constative has been put forward) and as its consequent the conclusion of the act of arguing (again, its content and ontological qualifier). Thus, warrants represent implicit conditional claims; and because these implicit inference-claims are claims, they can have as many types of ontological qualifiers as any other claim. Actually, it is precisely the ontological qualifier that correspond to the inference-claim of our act of arguing what entitles us to draw our conclusion “necessarily,” “probably,” “tentatively,” “possibly,” etc. Thus, for example, an act of arguing having as its inference-claim “if it rains, then streets will be wet,” will entitle us to conclude that “probably, streets will be wet” from “it rains,” because that conditional is (highly) probable. Contrastingly, an inference-claim like “if streets are wet, then it’s been raining,” will entitle us to conclude that “plausibly, it’s been raining” from “streets are wet” because that conditional is plausible rather than probable. Finally, an inference-claim like “if it is true that if it rains, then streets will be wet, and it rains, then streets will be wet” will entitle us to conclude that “necessarily, streets will be wet” from “it rains and if it rains, streets will be wet,” because that conditional is an instance of *modus ponens*, and for this reason, is not only true, but (logically) necessary.

On this account, the validity of an argument is a matter of the correctness of its warrant, i.e., of the fact that the warrant represents an inference-claim that has been properly ontologically qualified in the act of arguing. Thus, having a warrant is not an exclusive property of

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<sup>12</sup> Actually, this model does not really make a sharp contrast between deductive and inductive inferences, in the sense of inferences whose conclusions follow of necessity and those whose conclusions follow less than certainly. For example, arguments whose warrants are presumptions will qualify their conclusions with a “presumably,” which is a kind of qualification that does not seem to fit well with one group or with the other.

good arguments: every argument has a warrant as far as it represents a speech-act of the form “reason, so claim.” In turn, semantically good argumentation will be argumentation whose inference-claim and reason are both correct, that is to say, that have been both properly (ontologically) qualified, so that they sanction the epistemic qualifier with which the conclusion has been drawn. In other words, on this account, the logical-semantic evaluation of argumentation is a matter of the correctness of the premise and the warrant. These conditions would make the conclusion, as qualified in the act of arguing, in fact correct. Let me explain all this in more detail by considering the following examples:

1. This case is in every relevant respect like *Chaplinsky v. State of New Hampshire* (1942). Therefore, the defendant is guilty as charged.
2. Having sex with people having severe mental retardation is like having sex with children. It is morally unacceptable.
3. This credit crisis is like a plague moving from one place to another by infecting new markets. Probably, nobody is safe.
4. He is behaving as if he were the person in charge here. Presumably, he should approach us soon.

Examples 1 and 2 are practical arguments whose conclusions are meant to follow non-probabilistically. Govier and Waller agree on this, but, as we have seen, Govier is reluctant to say of this kind of arguments that they are deductive. As we have seen, in her view, the general principle that would subsume the two analogues is not part of the premises and, consequently, the corresponding argument does not pattern a (formal) deductive form. In turn, the target-claims of 3 and 4 are explicitly qualified with a “probably” and a “presumably,” respectively. Assuming these (implicit or explicit) qualifications of the target-claims of these arguments and following the above account of the interpretation of analogies when used as reasons, we can represent the above acts of arguing by the following arguments:

#### Argument 1

Premise: “This case can be considered like *Chaplinsky v. State of New Hampshire* (1942) regarding its legal properties” is true.

Warrant: “If it is true that this case can be considered like *Chaplinsky v. State of New Hampshire* (1942) regarding its legal properties then (it is true that) the defendant is guilty as charged” is necessary.

Conclusion: Necessarily, (it is true that) the defendant is guilty as charged.

Argument 2

Premise: “Regarding its moral properties, having sex with people having severe mental retardation can be considered as having sex with children” is true.

Warrant: “If it is true that, regarding its moral properties, having sex with people having severe mental retardation can be considered as having sex with children, then (it is true that) this behaviour is morally unacceptable” is necessary.

Conclusion: Necessarily, (it is true that) this behaviour is morally unacceptable.

Argument 3

Premise: “This credit crisis can be considered as a plague regarding its way of expanding” is plausible.

Warrant: “If it is plausible that this credit crisis can be considered as a plague regarding its way of expanding, then (it is true) that nobody is safe” is probable (to a degree x).

Conclusion: Probably (to a degree x), (it is true that) nobody is safe.

Argument 4

Premise: “Regarding his behaviour here, he can be considered as the person in charge” is true.

Warrant: “If it is true that, regarding his behaviour here, he can be considered as the person in charge, then he should approach us soon” is a presumption.

Conclusion: Presumably, he should approach us soon.<sup>13</sup>

On this account, we will say the corresponding arguments to be valid when we take the corresponding warrants to be properly qualified from an ontological point of view. That is, in 1 and 2, when we take the claims “if it is true that this case can be considered like *Chaplinsky v. State of New Hampshire* (1942) then (it is true that) the defendant is guilty as charged” and “if it is true that, regarding its moral properties, having sex with people having severe mental retardation can be considered as having sex with children, then (it is true that) this behaviour is morally unacceptable” as necessary truths. In these cases, they would be legal and moral necessities, respectively.

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<sup>13</sup> For the sake of clarity, I’ve used examples in which all the target-claims are put forward with the ontological qualifier “it is true that,” which is redundant (this is why I put it in brackets). But, of course, target-claims may be qualified with other ontological qualifiers.

In turn, cases 3 and 4 will be said to be valid if we take the claim “if it is plausible that this credit crisis can be considered as a plague regarding its way of expanding, then (it is true) that nobody is safe” to be probable (to a degree  $x$ ) and we take the claim “if it is true that, regarding his behaviour here, he can be considered as the person in charge, then he should approach us soon” to be a correct presumption to make. In other words, for an argument to be valid, its conclusion must have been qualified with the epistemic qualifier that corresponds to the ontological qualifier that its warrant actually deserves. If, because of concluding that “necessarily  $p$ ,” we have to ontologically qualify our inference-claim as necessary, whereas, in fact, if it is only true, or probable, possible, plausible, etc., then our act of arguing will be semantically flawed. On this account, this is the reason why, as Finocchiaro (1981) observed, we can turn any argument into a good one by adequately weakening its conclusive force, and *vice versa*.

Remarkably, the warrant incorporates the condition that the reason has to be correctly qualified too from an ontological point of view, because the inference-claim that it represents is nothing but the conditional that would eventually sanction the inference from the reason, as put forward, to the target-claim, as put forward. In example 3, if we are not willing to say that the claim “the credit crisis is like a plague moving from one place to another by infecting new markets” is plausible because, for example, we take the expansion of the crisis to be intentionally induced to certain markets but not to others, then we will criticize the argument by saying that its reason is irrelevant for showing the conclusion to be correct: we could agree with the arguer that her inference-claim “if it is plausible that this credit crisis can be considered as a plague regarding its way of expanding, then (it is true) that nobody is safe” is correct, and yet resist her argument by saying that this crisis is not like a plague regarding its way of expanding, so that her inference-claim does not apply.

On this account, the inference-claim of analogical argumentation says, in general, something like “if  $A$  can be considered as  $B$  regarding a certain value  $V$ , then  $A$  is  $V+$  positive,” which is right in case  $B$  is  $V+$  positive, but wrong in case  $B$  is  $V-$ . Now, if we take the moral or legal properties of  $A$  and  $B$  to be part of their essential features, then the claim “if  $A$  has the same moral properties as  $B$ , then  $A$  is good / permissible / fair / legitimate, etc.” will be true in every possible world in which the claim makes sense, i.e., in which  $A$  and  $B$  exist (and have, therefore, such and such moral or legal essential features). On this view, such inference-claim will be necessary in case of being true; but it may be false if it is true that  $A$  and  $B$  have the same

moral properties but *B* is not good / permissible / fair / legitimate, etc. For this reason, in the particular case of deductive analogical arguments, we can concede both the analogy (for example, that it is true that having sex with people having severe mental retardation is like having sex with children regarding its moral properties) and concede that if the inference-claim were true, it will be a necessary truth<sup>14</sup> and yet, resist the conclusion by saying that the inference-claim is false because, despite it is true that having sex with people having severe mental retardation is like having sex with children regarding its moral properties, both things are morally acceptable, not unacceptable—as Foucault, for example, claimed. This is why I contend that this type of analogical argumentation can be deductive (in the sense of its conclusion being meant to be established of necessity) and yet, defeasible: its defeasibility being a matter not of refusing the reason, i.e., the analogy, but of resisting the inference.

On the other hand, we have seen, on this account predictive analogies and normative analogies would have the same structure. The difference between them would be a matter of the ontological qualifier of their corresponding warrants. No doubt, as Govier insists, when we use analogies with predictive purposes, it is important to consider the actual features of both analogues.<sup>15</sup> Certainly, these features have a bearing on our evaluation of the plausibility of the analogy and the ontological qualifier of the inference-claim. But, as argued so far, this dissimilarity between predictive and normative analogies does not grant different “reconstructions” of both types of analogical argumentation, which is what Govier, Waller and Guarini assumed.

At any rate, the first step to determine whether a claim has been correctly qualified from an epistemic point of view is to outline the argument that embodies the relevant semantic properties of the corresponding act of arguing, namely, the propositional contents actually involved and the ontological qualifiers that the arguer ascribes to each of them, either implicitly or explicitly, in her act of arguing. If the reason and the inference-claim have both been correctly qualified from an ontological point of view, then the conclusion will have been correctly qualified from an epistemic point of view. Thus, our second task as evaluators will be to determine what the *actual* ontological qualifiers of the reason and the inference-claim are. And we would have three resources for doing this.

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<sup>14</sup> There are many propositions of which it can be said that, in case of being true, they would be necessary, even though we do not know yet whether they are true or false. Think, for example, of mathematical conjectures.

<sup>15</sup> However, I think that this may also be the case with normative analogies. Think for example of the importance of determining whether a particular case is relevantly similar to another one that had created jurisprudence.

First of all, we can ascribe these qualifiers as a result of our own direct judgments on the reasons and inference-claims. As pointed out in Section 3, in dealing with analogical argumentation, addressees are somehow a little bit pressed to concede the analogical claims adduced: they cannot just say “no, *A* is not like *B*” because there is probably more than one way in which *A* and *B* may be said to be alike.

We can also evaluate possible further reasons put forward for the reason and the inference-claim in the very act of arguing. Thus, as we have seen, *backings* would be reasons for the inference-claim—for example, general facts appealed to in order to justify it. We will also have reasons for the reason if the argumentative discourse that we are evaluating contains *serial argumentation*, i.e., argumentation composed of acts of arguing in which the target-claim of one act is the reason of a subsequent one. Alternatively, in appraising confrontation argumentative exchanges, we can take each party’s argumentation against the other’s reasons or inference-claims as a basis to determine their ontological values. We would thus appraise *defeaters*, *rebutting reason-defeating defeaters*, and the subsequent claims nested in the corresponding acts of arguing.

Finally, the evaluator may need to dialectically delve further into the act of arguing by his own. Argumentation is a recursive process; because of that, in order to determine the qualifiers that we should ascribe to the propositional contents of reasons and inference-claims, we, the evaluators, may need to produce further argumentation for them. In any case, this model assumes that in the end, every evaluation rests on a particular ascription of qualifiers that may be further questioned.

## 10. Conclusions

Govier, Waller and Guarini agree that there are two types of arguments by analogy. On the one hand, there are those whose conclusions are meant to be established in a tentative way (i.e., qualified by words like “likely,” “probably,” etc.). We can find this type of arguments in empirical reasoning and arguing, where they can justify predictions and expectations. On the other hand, there are analogical arguments whose conclusions are meant to be established in a conclusive way. They are arguments that come, paradigmatically, from ethical and juridical discourses, where they are meant to justify normative claims. The former type of arguments is usually called “inductive,” but, as we have seen, T. Govier, B. Waller and M. Guarini have had a controversy on whether arguments of the latter type can be said to be “deductive.”

As pointed out at the beginning, I think that in order to provide a solution to this discrepancy, it is necessary to appeal to models for argument reconstruction that do not rest on *ad hoc* assumptions regarding the logical structure of analogical argumentation. My proposal has been to adopt a pragmatic-linguistic model for the interpretation of argumentation as a speech-act. This model is meant to determine the meaning of acts of arguing, not their logical structure, and therefore, it makes no assumption as to whether analogical argumentation involves universal claims as premises or not. Following this linguistic-pragmatic model of argumentation interpretation, I have tried to show that both types of analogical arguments have the same structure. In turn, following Toulmin's conception of inference and a Toulmin-inspired account of argument evaluation, I have explained why certain analogical arguments can be said to be deductive, and yet, defeasible. This proposal avoids the need to appeal to general principles or explicit comparisons of properties between the two analogues (when they are not actually stated by speakers). As Govier pointed out, in giving up general principles and explicit comparisons as elements for interpreting analogical argumentation, we can better explain the particular charm and rhetorical power of this type of argumentation. Finally, our proposal enables us to deal with degrees of strength of analogical argumentation regarding not only the strength of the analogies used as reasons but also the strength of the inferences drawn from them. My goal has been to integrate what I take to be the main insights of Waller's account on the one side, and of Govier's, on the other, namely, that analogical argumentation is special, but not that much... .

### **Acknowledgements:**

I wish to thank Juan Gonzalo Lerma Pelaez for indicating me Mencius' men-water analogy and Esther Romero for a very instructive conversation on metaphors. The work presented in this paper has been financed by a *Ramón y Cajal Research Fellowship* by the Spanish Ministry of Science and Innovation and by the research projects FFI2011-23125 and FFI2011-24414 of the Spanish Ministry of Science and Innovation.

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