Notes on reasoning and argument

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Abstract: The paper addresses the question of the relation between reasoning and argument that is raised by the absence of extensive references to reasoning in Plantin's *Dictionnaire de l'argumentation.* This absence might seem surprising, given the apparent connection between the two, but it is argued that there is a reasonable explanation. Still, several connections worth noting are discussed: arguments justify and explain reasoning; there is reasoning within arguing; and the norms governing the two are similar.

Key words: argument, argumentation, reason, reasoning, Christian Plantin.

1. Introduction

If one visits Christian Plantin's remarkable *Dictionnaire de l'argumentation* (2016) one finds, as expected, an extensive entry under "*argumentation*", including a masterful catalogue of concepts and theories of argumentation. However, there is no general heading at all for "*raisonnement*" or "*raison*". Yet these two concepts seem, *prima facie*, to be closely related. At least the activity of reasoning seems to be intertwined with the activity of arguing. For instance Pinto (2001) has contended that in addressing an argument to another person in an attempt to convince him or her, you are inviting that person to draw an inference, that is to reason that your grounds justify him or her in accepting your conclusion. When you are trying to make a decision, you reason from the options available, your pertinent interests and values, and your objectives to what seems to you to be the best choice, and if someone questions your choice you might well argue in its defence by presenting the doubter with the reasoning that led you to it, or, at least, reasoning that you think will justify it in the doubter's eyes. What, then, is the connection between reasoning and arguing? Or, to put the same question another way, what is the best way to think of the connection between reasoning and arguing?

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This is a big philosophical question, and it is far too ambitious to propose to address it in this brief note. To be sure, it is also a big question for cognitive psychology as well. A collection of important papers on reasoning from these two fields runs to more than 1000 pages (Adler and Rips, 2008). Now, the psychologist must presuppose some philosophical analysis of the concepts of reason and argument. This intriguing question has spurred me, as an exercise in the analysis of our ordinary language concepts, to some somewhat scattered reflections. Perhaps I can use the occasion of this celebration of Professor Plantin's seventieth birthday to borrow a justification for this less than rigorous approach. After all, a crowning achievement of Professor Plantin's academic career is the incredibly learned *Dictionnaire*, but for all that, a book that moves from one insight on to another, associated by no other connection than alphabetical order of the first letters of their identifying labels. I borrow only the principle of unconnected remarks; the model of erudition can only be admired from afar.

In the paper I argue, first, that ordinary language reflects confusion in our folk understanding of the relation between reason and argument. Second, I review a recent examination of the relation from a psychological perspective that theorizes plausibly that, although they are related, reasoning and arguing are functionally different, and that lends support to Plantin's choice to focus on just one of them. Third, I argue that there is an often-overlooked constitutive connection between the two, namely that the process of the activity of arguing places numerous demands on the arguer's reasoning. Fourth, I argue that the norms formulated by theorists for theoretical and practical reasoning and arguing share much in common with those negotiated by theory-innocent reasoners and arguers.

2. Reasoning and arguing

Reasoning and arguing share the property of being activities, but they are activities of different kinds. A solitary person can be said to reason, just as he or she can be said to imagine, or remember, or think. It's an ordinary event. Whereas when a solitary person (that is, someone without an interlocutor) is said to argue, we expect a qualification or explanation of this unusual event. Often an imaginary interlocutor is mentioned, such as a second self. "He is arguing with himself whether to try to see Sheila again". Some (e.g., Perelman and Olbrechts-Tyteca 1958: 40ff.) hold that solitary argument assumes an imaginary or projected "other" interlocutor. While two people can reason together while not arguing, we regard such events as a bit out of the ordinary, and when they do occur, people's reasoning together is regarded as a cooperative activity. On the other hand, it's the normal occurrence for two or more people to argue, and their arguing *with* one another

is the normal configuration. It is expected to be agonistic rather than cooperative, even though it entails the cooperation required for turn taking and responding to what the other person said in the previous turn. It is treated as a sort of competitive activity, whose participants can negotiate rules as they go (van Eemeren and Grootendorst 2004).

At the same time, "a reason" and "an argument" can denote the same thing, as in "A reason not to swim too soon after a meal is that cramping is more likely while digesting" and "An argument for not swimming too soon after a meal is that the danger of cramping is greater while digesting". Just like a single argument, a single reason can be made up of one or more propositions. "He arrived at 14h00, but the meeting had started at 13h30" is "a" reason for claiming, no less than "an" argument establishing, that he was late for the meeting. So used, the terms denote the bases or grounds for the attitudes, beliefs and actions that are the conclusions of arguments. Still, there is not quite symmetry in such usage. For one or several reasons can constitute an argument; but we don't say that several arguments constitute a reason.

And then there is "reason", which in some psychologies constitutes a distinct faculty of the mind, for instance alongside "emotion". In this sense there is no corresponding or contrasting faculty called "argument". Some write in terms that personify reason, assigning it agency (see the title of Mercier and Sperber's 2017, IV: "What Reason can and cannot do"). Reason, it is said, cannot be trusted. Reason is cold and unemotional. Human reason is prone to make mistakes and to be biased. I think there is no harm in such locutions, as long as it they are simply convenient ways of talking, and are not meant or understood literally. It is *we* who can be cold and unemotional, who are prone to make mistakes. *We* are the ones who exercise such biases as the availability bias (the tendency to draw inferences based heavily on the evidence that is available or at hand, and to fail to make sure our evidence is thorough and complete) or the my-side bias (the tendency to look only for evidence that supports the position one is disposed to take, and to fail to look for evidence against it or in favour of alternative positions) (Kahneman 2011). Reason is the name for our capacity to recognize or to postulate implications and draw inferences.

Ordinary language, if these examples are indicative, suggests inconsistencies and confusions in our folk understanding of the relationship between argument and reasoning.

3. What psychology tells us

In *The Enigma of Reason,* Hugo Mercier and Dan Sperber (2017) propose that reasoning is inferring, that there are several categories of inference, and that many of our inferences are unconscious. One

piece of evidence for the claim that at least some of our inferences are unconscious (and one that does not require setting up an experiment and recruiting undergraduate students to take part and supposedly represent a cross section of the population) is provided by the phenomenon of reading. This is an example in addition to the many described by Mercier and Sperber.

When reading a text, one reads the first sentence of a paragraph and on the basis of it (and of broader contextual knowledge, if it applies) one formulates at least one hypothesis about the topic of the paragraph. The second sentence is interpreted in the light of this hypothesis and also sheds light on it. The initial hypothesis might be revised in the light of the second sentence, or it might be confirmed and reinforced. In addition, the second sentence might give rise to new hypotheses. The reader proceeds through a paragraph by forming hypothesis and confirming or revising them on the basis of subsequent sentences as he or she goes (Phillips *et al.* 2007).

The formation of hypotheses entails the drawing of an inference. We *infer* each hypothesis based on our understanding of the information supplied by the meaningful units of text as we read it. That is, we *reason* that the text has a certain meaning, based on its grammar and our understanding of the words composing it. We are unaware of any of this mental activity while it is occurring, at least not usually. It is happening unconsciously.

The same process occurs in reading single multi-clause sentences, and is illustrated by examples of ambiguity. De Sousa (1987: 192) in a footnote quotes an example he attributes to Paul Ziff: "I saw her duck when they were throwing rotten eggs, and then I saw it swim out into the middle of the lake". The fact that we are stymied for a microsecond when we read the second clause of this sentence shows that, having finished reading the first clause, we already have formulated the hypothesis that the sentence reports the writer observing a human female in whose vicinity rotten eggs were being thrown and who was ducking to avoid them. As we read on, we revise that hypothesis in light of the information incompatible with it provided in the second clause of the sentence, which is summed up by saying that the word 'duck' there refers to an aquatic bird. Further revisions would be required were the text to continue in a way that is inconsistent with the second hypothesis, for instance, if the next sentences were these: "I was amazed. But there was no doubt about it. The little bundle of synthetic feathers with its plastic beak, rubber legs and wind-up motor inside it was actually swimming across the lake, quacking cheerfully to its natural cousins".

As we read the first clause of Ziff's example we take the word *duck* to be a verb and infer that the person referred to as "she" was possibly the target of someone throwing rotten eggs, and we take the

writer to be observing this activity. When we read the second clause of the sentence, we are faced with an incongruity. Clearly *it* grammatically refers to "duck" but in the second clause the referent of *it* behaves as a noun denoting an aquatic bird, subject of the gerund *swimming*. Faced with this incongruity, we resolve it by inferring that the occurrence of *duck* in the first clause was also a reference to the noun, namely the aquatic bird. We revise our hypothesis about the meaning of the sentence accordingly. We draw these inferences in microseconds, and we are not aware of doing so.

Mercier and Sperber (2017) contend that we *argue* after the fact, to explain or justify our reasoning or inferences. Thus if someone unfamiliar with the English language were puzzled by this example, one might supply the following argument:

> The word 'duck' in English can be used as a verb referring to the act of quickly stooping to avoid having one's head hit or being hit by something, or it can be used as a noun referring to an aquatic bird, often with a broad, flat beak, that vocalizes by making a sound like *quack*. The first occurrence of 'duck' in Ziff's example made sense as a verb, since one would normally quickly stoop down to avoid being hit with a rotten egg being thrown in one's direction; while the second occurrence of 'duck' made sense as a reference to an aquatic bird, since such ducks swim. Therefore, there is an ambiguity in the use of the word 'duck' in Ziff's example.

This argument explains the ambiguity, without duplicating the initial reasoning.

Argument and reasoning are different, so it seems. Plantin's *Dictionnaire* is about argument and argumentation, not about reason and reasoning. Thus the lack of major reference to reasoning in it seems quite understandable and this is an entirely satisfactory explanation why there is little reference to reasoning in the *Dictionnaire*. However there are other, sometimes overlooked, connections between argument and reasoning worth noticing.

4. Reasoning within arguing

The arguments we make and deliver to justify or explain the results of our reasoning exemplify what might be termed an *instrumental connection* between the two. The reasoning occurs first, and because of some subsequent event, it is expressed later in an argument. Argument is the instrument used to explain and justify reasoning. In contrast, there is also what might be called the *constitutive connection* between argument and reasoning. In saying *constitutive connection* I have in mind the new reasoning that goes into the creation and execution, in other words the makeup of the argument.

In order for the whole business of arguing, that is to say, the giving and receiving arguments, to get off the ground, someone has to judge that an argument is desirable, that it is possible, and that its constructing and delivery is worth the trouble. In other words, someone has to decide, or assume, that the "economic" preconditions of an argument are present: there is a market (at least one seller and at least one buyer), and a price can be set or negotiated (payment due in attention and critical reaction). Put another way, there's a supply: a producer who has already made the argument, or one of the parties is willing to make it on the spot; and there's an expected demand: a consumer who will listen to or read the argument. So someone has to draw the inferences, to reason, that the preconditions for arguing are met.

Next, in repeating or creating an argument, someone has to decide what consideration(s) to use. What will the person or persons to whom the argument is to be addressed find to be compelling reasons, or at least plausible reasons, that support the claim in contention? If the people to whom her argument is addressed are familiars, that is, family members or close friends or colleagues (see Gilbert 2014), then the arguer knows well their beliefs, values and other cognitive and affective attitudes. She will have to reason, based on this background knowledge, about the appropriate content and the style of delivery of the argument's reasons or premises. For other interlocutors or audiences, the arguer will have to make judgements as best she or he can about what those particular respondents will find compelling. Numerous inferences will have to be drawn.

If the argument is presented orally and the audience is present, there is a constant stream of adjustments to be made responding to such signals from the audience as signs of inattention or incomprehension, of impatience or irritation. Each of these is to be noticed and a hoped-to-be appropriate response inferred. To be sure, arguing is an art, and one not readily learned. The beginner will fail to pick up on clues; the experienced arguer will process appropriate inferences from them unconsciously. The expert rhetorician is reasoning about his/her delivery, including about his/her word choice, about his/her voice modulation and physical movements and gestures, and indeed about his/her choice from a repertoire of arguments; at the same time that he/she is reasoning about the invention of new arguments and about the strengths and weaknesses of his/her arguments (and their impact on his/her audience) and the need to qualify his/her conclusion or to back up premises or inferences in anticipation of objections, all with little conscious reflection. Inferences of a wide variety of types and in great quantity are being processed by an experienced orator during the presentation of an argument or a case.

In other words, the act of arguing can involve constant and complex reasoning about both the process and the product. The

novice has to have the various signals and responses pointed out and to practice, receive feedback, and practice some more, until the appropriate inferences are drawn and adjustments are made automatically, "without thinking", but of course with a high level of concentration. Accordingly, learning how to argue well entails mastering a body of inferential skills. By "argue *well*" I mean argue convincingly, which in many contexts requires arguing both cogently and entertainingly. (A non-specialist does not read Immanuel Kant's great *Critiques* for entertainment, but one hopes to be entertained as well as educated while being convinced by articles in *The New Yorker* and similar publications). This internal connection is another, often unremarked, link between argument and inference or reasoning.[2]

5. Norms

Another aspect of the relation between reasoning and arguing is the question of their respective norms. Both are activities that can be performed well, indifferently or poorly. Are the criteria for good performance the same for both? If there are differences, of what do they consist? Are the sources of their norms identical or different, for example?

5.1. "Theoretical" *vs* "practical" reason

When people reason, tradition going back to Aristotle suggests that the appropriate norms depend to some extent on the subject matter. Reasoning about what to believe, "theoretical" reason, is considered to be different from reasoning about what to do, "practical" reason.

According to one way of thinking, exemplified by Descartes, the goal of theoretical reason is truth, and truth can be obtained only by reasoning with inferences that guarantee its transmission from antecedently established truths, namely, inferences that accord with the laws of deductive logic. A more permissive approach allows reasonable belief as another goal of theoretical reason, "reasonable beliefs" being those that have a high likelihood of being true, but that might nonetheless in fact be false. Inferences that yield such reasonable beliefs must accord with the rules of the probability calculus (see many 20th century epistemologists such as Audi 1998). Yet another approach would add to the goals of theoretical reason the achievement of plausible beliefs. Plausibility in this connection is variously understood, but one criterion is consistency with well-established beliefs (see Rescher 1976). Thus a candidate for belief

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[2] An excellent account of the complexities to be managed in arguing well is to be found in Gilbert (2014).

(say, the innocence of an accused) is plausible if it squares with what else has been determined to be reasonable to believe about the matter (such as the probability that the accused's alleged alibi is true). This criterion is akin to Aristotle's list in the *Topics* (1984) of the properties of a dialectical proposition: "something that is reputable to all men or to most men or to the wise, i.e., either to all, or to most, or to the most notable of these, provided it is not paradoxical, for a man would probably assent to the view of the wise, if it be not contrary to the opinions of most men" (*Topics*, Book I, 104ª 9-12). Inferences that qualify as plausible or ensuring plausibility would qualify as good theoretical reasoning according to members of this third camp.

So tradition holds that the criteria for good inferences in reasoning about what to believe can vary among deductive validity, inductive strength and plausibility, with each being appropriate for its own types of subject matter.

Reasoning about what to do sails in more troubled waters. For one thing, there is the problem of dealing with the contingency of events and the difficulties of foreseeing both future conditions for action and also future consequences of choices. For another, an ingredient in any such reasoning is reasoning about values, which includes considerations of which ones apply, and of those, how to rank them.

Whether values themselves can be reasoned about is controversial. Along with Scriven (1981), I believe that many types of value judgment can be assessed by criteria of reasonableness. For instance, foodstuffs are widely graded according to widely accepted criteria and standards. So are consumer goods, not only "big ticket" items such as computers, television sets, or automobiles, but also tools and small appliances like hammers, screwdrivers, handsaws; chef's knives, glassware and toasters, vacuum cleaners, snow shovels, and ... the list goes on and on. We evaluate physicians and surgeons, lawyers, teachers, auto mechanics, painters, plumbers and other tradespeople; and we do it using widely agreed-upon criteria (see Urmson 1950). Moreover, we modify our criteria as conditions change. So while our *preferences* might be "subjective", that is variable from person to person and not open to normative assessment, these examples show that we are nonetheless capable of "objective" *value judgments* in many, many spheres.

5.2. Sources of norms

Presumably only a tiny minority of people have any familiarity with the philosophical literature, yet most people are able to manage their *reasoning*, for the most part, more or less competently; well enough "to get through life", and often to thrive. Somehow, we acquire,

we internalize, criteria for reasonable belief and reasonable action and with them we learn to navigate the choices of belief and action we are faced with or take on voluntarily in our lives. Ruling out some indiscernible innate capacity, which, as an explanation is equivalent to throwing up our hands, it seems instead that the likely way we learn such criteria is by having them modelled and copying the models, or else by having our successful reasoning praised and our errors corrected, or both. We can be asked to explain or to justify our reasoning, and where it is problematic, we are challenged. We respond by engaging in *argumentation* about the quality of our reasoning. Since these are norms of reasoning, they apply equally to the reasoning of *arguments* used to point out faults in our reasoning. Consistency requires that the critic abide by the norms he or she seeks to enforce by his or her criticisms.

5.2.1. Acceptable, probative, adequate grounds

The very nature of *argument* dictates some of the norms that apply to its use. Arguing consists (in part) of making arguments and delivering them to an interlocutor or interlocutors. An argument relies on a foundation of proposed grounds alleged to be acceptable, that, the arguer maintains, support the contention that is at issue, namely the position that is being defended or supported by the allegedly acceptable starting contentions. Thus, for one thing, an argument relies on its supporting grounds. If these "premises" are in doubt, their assertion cannot serve to lift the doubt. They must be at least as reasonable or worthy of acceptance as what they are adduced to support. This has been called the *acceptability* criterion (see, e.g., Johnson & Blair 2006).

We have numerous expressions for pointing out flaws in the grounding considerations: "wait; that's not true either", "but that's just as doubtful as what you're trying to prove with it", "I don't believe that either", "that's a pretty weak reason" and the like. The person who has to be satisfied is one who is challenging the argument in the first place. The challenger is entitled to dismiss the grounds offered if he or she is not convinced that they are true (or probable, or plausible). He or she can say, "I know you and other people believe that, but I don't. So I just don't find it a persuasive basis for your argument".

A second criterion of a "good" argument arising from the very nature of arguments is that the considerations put forward as support have actually to bear probatively on the claim at issue. By "bear probatively" I mean they actually must go some way towards supporting that claim. Our everyday arguing practices are often far from ideal. Our minds are prone to free-association. We bring up topically related points that are associated with the claim but that do not serve in any way to show that it is true or acceptable. As with

criticisms of the grounds themselves, we have numerous ways to express doubts or reservations, or stronger dissatisfactions, with the probative bearing of the adduced grounds on the claim at issue. We say things like, "That may very well be true, but it doesn't prove your point at all", or "but that's beside the point", or "what's that got to do with anything?!", or "it doesn't follow". Again, it is the person or persons we are trying to convince, which includes our critic, whom we must satisfy. This has been called the *relevance* criterion (see again Johnson & Blair 2006).

Can an argument offer just one consideration in support of its claim or conclusion? Can there be single-premise arguments? The answer is obviously "Yes". Here is one, argument A: "Pierre works out at his gym every day, so he must be wonderfully fit". "Ah, yes", you may say, "it's true that A has just one premise, but is A a *good* argument?" Pierre could work out daily, but exercise very lightly, and meanwhile over-eat and drink too much wine and never get enough rest. Perhaps he just started his daily workouts last week! His working out every day is consistent with his being wonderfully fit, but by itself fails to establish the conclusion. In raising these points, you have listed possible objections to my argument and I can save my argument by meeting or overcoming those objections only by supplying additional evidence and thus having more than one premise.

My first example of a single-premise argument proves that there can be single-premise bad / poor / weak / inadequate arguments. But can a *good* argument offer just one consideration in support of its claim or conclusion? Can there be single-premise arguments *that succeed* in establishing their conclusions? Well, consider the following example, argument B: "This argument has only this one premise, so it is possible for an argument to have only one premise". B is not only an argument with a single premise, but also a strong argument for its conclusion.

While good single-premise arguments such as B are possible, more often the situation is like argument A, where one piece of evidence by itself fails to establish the claim. Arguments like A show that a third criterion must be met by any argument for it to count as a good one, that is, as successfully establishing its claim. In addition to being based on grounds that are acceptable and that are probatively relevant, in order to be good an argument needs to supply *enough* information to justify its addressee in accepting the claim the argument supports. We have stock questions or challenges when responding to a tendered argument that seems to be weak in either respect: "That's not nearly enough to prove the conclusion" or "Aren't there counterexamples?" or "Is that *all* you've got?"

There must be enough evidence in two respects: both quantitatively enough and qualitatively enough. We want to know

more about Pierre. He works out every day, but does he use heavy enough weights to get fit? Is his actual workout long enough, or does he spend most of the time sitting around chatting with other "gym rats"? And, as already noted, we need to know that Pierre doesn't habitually engage in behaviours that undercut the gym work. This third requirement, which I will call the *local sufficiency* criterion, is also discussed in Johnson and Blair (2006).

There is one further requirement that is sometimes counted as another aspect or type of the sufficiency criterion. It can be explained as follows. Suppose we are forming a leisure-time football team and we want to know whether Pierre is a good candidate to invite to join us. We discuss him at a team meeting. One of us, Anton, argues that Pierre is really fit and cites as evidence that he works out in the gym every day, that he goes through a rigorous group of full-body conditioning exercises each day and doesn't waste time standing around chatting. Anton moves that Pierre be invited to join the team. Before a vote is called for, Dmitri speaks up. "Doesn't Pierre have a reputation for taking over and dominating any group he's a part of?" he asks; and he goes on: "Didn't he let down the reading group he joined last year by taking off on a visit to out-of-town friends just when it was his turn to present? And doesn't that obnoxious girlfriend of his always accompany him everywhere, and ruin the fun for other people? And finally, does anyone know if Pierre is actually any good at football?" Dmitri raises three objections to Anton's motion and one question that could lead to a fourth objection. Now if Anton is to support his motion, he has to refute Dmitri's objections. So his initial argument for inviting Pierre to join the team turns out not to have been enough overall. The evidence he mustered made a quite extensive case in favor of Pierre from the point of view of his physical fitness, but Dmitri alludes to doubts about other criteria, including Pierre's sociability, his reliability, his effect (via his girlfriend) on the enjoyment of the group, and his skill, that are also pertinent to Anton's motion. Dmitri has made four arguments against Anton's motion, so Anton needs to produce arguments against them to establish his claim that the group should invite Pierre to join.

According to Finocchiaro (2013), a "ground-level argument" is a reason that directly supports or opposes a claim. (A reason *directly* supports or opposes a claim if the claim, or its denial, follows without any intervening steps). Anton produced four ground-level arguments in favor of Pierre, and Dmitri produced three ground-level arguments against Pierre and raised the possibility of a fourth. A "meta-argument", according to Finocchiaro, is an argument in support of or opposing either any of the premises, or else the inferential bearing of the premises on the claim, of a ground-level argument. In order to make his case for inviting Pierre, Anton must find meta-arguments

that refute or undercut the doubts raised by Dmitri's ground-level arguments opposing his proposal.

Anton's case, unless he can refute Dmitri's doubts, lacks what might be called *dialectical sufficiency*. Why "dialectical"? As Christian Plantin's *Dictionnaire* points out (2016: 211): "*La notion historique de dialectique renvoie bien à un dialogue réglé mettant aux prises deux partenaires*" 'The historical notion of dialectic actually refers to a regulated dialogue between two partners who disagree'. While informal discussions, such as the football group's deliberations about whether to invite Pierre, are not formally regulated, they still for the most part respect such regulating norms as turn-taking, allowing space for objections, and allowing opportunities for members to respond to criticisms. And in the course of such discussions, members temporarily pair off as disagreeing parties and exchange back and forth challenges and responses, which is the situation that Plantin ascribes to the historical notion of dialectic.

Once again, this kind of point is routinely made in informal discussions entirely independently of any scholarly literature and there are locutions that typically signal it, such as: "You haven't considered all the factors"; "Your argument is good as far as it goes, but what about...?"; "Yes, but you're leaving something out..."; "You're not looking at the total picture"; "Aren't you forgetting...?"; "Yes, but that doesn't take into account..."; "I think there's another side to the story"; and others.

I am not at all suggesting that arguers have in mind explicitly the concepts I am calling acceptability, probative relevance, and local and dialectical sufficiency. I am suggesting that in responding evaluatively to arguments or to reasoning, critics make criticisms that can be analyzed as belonging to one or more of these categories.

5.2.2. Rhetorically adequate grounds

Associated with the very idea of argument is a notion that gives rise to these criteria for good arguments, namely the notion of a *burden of proof*. When there are arguments between disagreeing parties, either the critic or the proponent has to back up his or her viewpoint, for otherwise all that occurs is that a disagreement is noted, and perhaps repeated (as in: Proponent: "I'm right."; Opponent: "No you're not."; P: "Yes I am."; O: "Then prove it."; P: "No, you prove I'm wrong.", etc.). The question of which one, the proponent or the opponent, ought to do the justifying is discussed in the literature on burden of proof (see, e.g., van Eemeren and Grootendorst 2004: 140-141), but in everyday disputes between non-theorists, it has to be negotiated which party has to back up his or her claim. Does the very concept of argument supply any guidance here, as it does for the above-mentioned criteria of good

arguments? It seems to me that the circumstances of the disagreement and the situations of the disagreeing parties are determinative of burden of proof assignments, not the concept of argument. If you are criticizing an idea your boss has proposed, you had better have more to say than "That's a bad idea." On the other hand, if it's your boss who responds to a suggestion you make by saying "That's a bad idea," it is you who need to justify your request for an argument from your boss in support of his or her criticism. The power or authority relationship in such cases decides who has the burden of proof.

This pertinence of situation to the assignment of burden of proof brings up yet another kind of consideration that bears on the norms of argument and reasoning. Arguments are typically a kind of communication between two or more people in particular situations that are conditioned by a variety of factors (Tindale 2004). There is, first and foremost, the person or group to whom the argument is addressed, its *audience*. Its makeup is more or less known by the arguer. The arguer is advancing the argument to one person, or to a particular group, or to anyone who might read or listen to it. There is the *pretext*. Perhaps someone has questioned or challenged some claim the arguer wants to defend, or perhaps the arguer anticipates a challenge from whomever he or she is addressing the argument to. There is often a *history*. The position defended by the arguer might be one particular stance in a highly complicated and controversial issue that has been debated for days, months, or years. There is the *standing* of the parties. The arguer might have powerful prestige or might, at the other extreme, have little or no credibility. The audience who is the target might have the expertise capable of identifying the weak spots in any argument on the topic, or it might be already inflamed, gullible and ignorant. There is the *occasion* of the argument. Why does it occur at this moment? There is the *venue* of the argument. Is it on TV, in the town council chamber, in the café? There are the *institutional conventions* of argument that apply. Parliaments have strict rules regulating debate, as do law courts; union-management collective bargaining teams usually have established conventions; and so on.

If the arguer seeks to succeed, that is, to win over the audience or to elicit a concession from the interlocutor, he or she has to have an argument that meets additional criteria of merit besides acceptability, probative relevance, and logical and dialectical sufficiency. The argument must address the concerns of the audience and the constraints of the situation. In doing so, it must operate within the confines and take advantage of the opportunities of the audience's present knowledge and understanding. It must acknowledge the history of the topic. It needs to accord with the audience's interests. In a nutshell, it must be responsive to the audience and the situation. (Of course, Perelman and Olbrechts-Tyteca 1958 is the *locus classicus*

for modern discussions of audience; for more on responsiveness to audience, see Tindale 2004). This set of criteria (or family of criteria), can be called the *rhetorical* criteria of good argument.

As in the case of the norms of good argument discussed earlier, we have numerous ways as critics to express reservations about how well an argument satisfies the criterion of responsiveness to the audience and the situation. Examples include: "Your argument doesn't speak to so-and-so's concerns"; "That argument is insulting (condescending...)"; "The argument was over the heads of the audience"; "The argument overlooked (some of) the reasons for the audience's reservations"; "The argument repeated well-known and widely discredited reasons; it broke no new ground"; "The argument was preaching to the choir / pushing on an open door; it won't change the minds of doubters"; "The argument was too technical"; and so on.

In sum, given what an argument consists of and purposes for which it is typically used, the virtues of a good argument are evident to those who use arguments to engage in argumentation with others and moreover they are applied or enforced in the course of that activity.

6. Arguing and reasoning

So far I have proposed that there are norms of arguing and argument that arise from the very concept of what an argument is and is supposed to do, as well as some norms that are conditioned by the relations of arguer and critic. I have suggested that arguers' and reasoners' recognition of these norms is integral to understanding the very concept of argument. The point is that arguing makes sense only if these norms are understood and more or less respected. People recognize when they are violated and call out violations, as evidenced by the many critical phrases that we find in the language. (I am not assuming that only English has such critical resources.) Critical arguments must respect these norms no less than the arguments or reasoning they are used to critically assess.

If Mercier and Sperber are right that we develop and sharpen our reasoning ability by arguing in defence of our reasoning and by arguing in criticism of that of others, then if the preceding reflections are right, the norms of good reasoning derive from the norms of good argument. The logical and dialectical norms of argument seem readily to transfer to reasoning. In drawing substantive inferences, we want the data from which we infer to be true, or probable, or plausible; we want them to bear on the inferences we draw from them, and we want there be adequate grounds of the right kind of data to justify the inferences drawn from them.

Is there also a rhetorical dimension to reasoning? In some cases, it seems not. When you are trying to think where you left your

apartment keys, for instance, there is no audience whose opinions and other attitudes you need to keep in mind. On the other hand, while the engineer who calculates the size of girders needed for the span of a new bridge does not seem to have the expectations of an audience influence the result, the engineer knows that his/her calculations will be checked and must meet the approval of various inspection bodies. Moreover, when the object of reasoning is an argument or some other form of communication, the reasoner needs take into account the properties of the audience and the other circumstances of the occasion of the argument's, or the communication's, delivery. So it seems that even the rhetorical norms applicable to arguments can have application to reasoning as well. While reasoning and arguing may be distinct, there seems to be a close connection between their norms of adequacy.

7. Concluding summary

This has been a rambling essay, occasioned by the question of the relationship between reasoning and argument. An initial foray reviewing some of the uses of these terms in ordinary language revealed inconsistent views about their connection in our everyday thinking. Some very recent psychological theorizing by Mercier and Sperber included the hypothesis that reasoning is a complex of often unconscious inferring. Evidence for the counter-intuitive view that reasoning can be unconscious comes from the familiar activity of reading. Mercier and Sperber maintain that it is in arguing that we exercise our faculty of reason most reliably in explaining and justifying our reasoning to others. Moreover, there appears to be not only an instrumental connection between argument and reasoning, but also a constitutive connection. When it comes to the question of the norms of reasoning and argument, a quick review of the traditional division of theoretical and practical reason brought the reminder that the norms of the inferences in arguments about what to believe and what to do vary with the subject matter. Arguments, however, are subject to norms that emerge from the very nature of the concept and its use. These may be labelled acceptability, probative relevance, local and dialectical sufficiency and rhetorical adequacy. The suggestion was made that these norms are evident to those who engage in argumentation even though they are innocent of theoretical distinctions, labels, and speculation on the topic. Following Mercier and Sperber, these norms apply to the reasoning that we use arguments to explain and justify, and to the arguments themselves.[3]

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