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No More Charity, Please! Enthymematic Parsimony and the Pitfall of Benevolence

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ABSTRACT: Why are enthymemes so frequent? Are we dumb arguers, smart rhetoricians, or parsimonious reasoners? This paper investigates systematic use of enthymemes, criticizing the application of the principle of charity to their interpretation. In contrast, I propose to analyze enthymematic argumentation in terms of parsimony, i.e. as a manifestation of the rational tendency to economize over scant resources. Consequences of this view on the current debate on enthymemes and on their rational reconstruction are discussed.

KEYWORDS: enthymemes, reconstruction, principle of charity, bounded rationality, parsimony, trust, testimony

1. INTRODUCTION

It is a well-known fact that arguments in ordinary conversation are frequently put in enthymematic form, i.e. with at least one of their premises or conclusions left implicit. It is also widely acknowledged that arguers do not seem to have any major problem in understanding each other while using enthymemes – a reality that we can witness every day, and that has been confirmed by empirical research (Garssen 1999). In the face of these combined facts, the main priority of argumentation theorists has been so far to understand *how* this might happen – that is, what are the mechanisms, skills, and principles underlying the correct interpretation of enthymemes, and how they ensure that this process of reconstruction is, on average, pragmatically felicitous.

According to Susanne Gerritsen, there are two main reasons for the lasting interest on enthymemes in argumentation theory:

The first reason is the need to have a proper method for the identification of unexpressed premises based on a satisfying theoretical explanation. The unexpressed premise is seen as an essential part of an argumentation, and in order to be able to analyze and evaluate that argumentation, the unexpressed premise must be satisfactorily identified. This, however, is difficult. Because the analyst is dealing with something that is implicit, he or she must furnish something that originally was absent. [...] The second reason why unexpressed premises are of interest to various theorists is the need to explain unexpressed premises as language phenomena. Language users in everyday contexts express certain things explicitly while leaving other things implicit. They do so without giving it much thought, and usually this does not pose any serious communication problems. [...] Theoretically, however, it is not easy to explain how the involved thought processes operate, and on what basis the language users arrive at their interpretations (2001, p. 51).

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Both these lines of inquiry concentrate on proper *reconstruction* of what is left unstated in enthymemes: this problem is first considered from the perspective of argumentation theorists (what kind of normative standards should be applied to enthymeme interpretation?), and then from the standpoint of the arguers themselves (what kind of normative standards are in fact applied to enthymeme interpretation, such as to ensure that communication is usually felicitous?). This problematic core in the study of enthymemes has been recently labelled as the *attribution problem*:

The most general issue in dealing with incomplete arguments is how a statement can be attributed to an arguer as part of her argument if she never went on record as making that exact statement explicitly. It could be called the problem of attribution. The problem of attribution is one of interpreting a claim supposedly made, based on a quotation, or given text of discourse, recording what the arguer actually said or wrote (Walton and Reed 2005, p. 361).

This emphasis on how enthymemes work in everyday argumentation produced a wealth of theories on the principles involved in the reconstruction of incomplete arguments, that will be very briefly summarized in section 2. However, my main interest in this paper is rather to shift the focus towards a different (although related) question – that is, *why* arguers resort so frequently to enthymemes, and *why* their audience is usually so prone to provide missing premises and/or conclusions for incomplete arguments? In turn, concentrating on the *reasons*, instead of the mechanisms and principles, behind the pragmatic success of enthymemes will have several interesting consequences for our understanding of this phenomenon: among other things, it will produce a shift towards a notion of bounded rationality, yield different standards of normativity for argument evaluation, throw a new light on the role of burden of proof in enthymematic argumentation, and undermine the very notion of ‘charity’ usually invoked by pragmatic accounts of enthymeme reconstruction. Ultimately, this different approach to enthymematic argumentation will also have significant import for the canonical concern of argumentation theorists, i.e. the problem of argument reconstruction: indeed, it will be suggested that the main concern of a language user exposed to an enthymeme is not so much about reconstructing the ‘right’ or ‘best’ sense of someone else’s incomplete argument, as *constructing a good argument for its own sake*, i.e. progressing in a process of reasoning that has its own ultimate aims, largely independent from what was intended or may be attributed to the arguer who first proposed the enthymeme in question.

2. THE PRINCIPLE OF CHARITY AND THE PROBLEM OF RECONSTRUCTION

In a Gricean vein, it is often suggested that the reconstruction of an enthymeme should be inspired to the so called *principle of charity* (Davidson 1967), according to which, whenever engaging in the interpretation of a given text, we should try to make the best possible sense of it. Applied to enthymemes, this would imply completing the argument with those premises that are needed for it to be at its best. However, this immediately raises the problem of what is to be considered ‘the best possible sense’ in this context: should we aim at identifying implicit elements that are consistent with the presumed intended meaning of the original arguer, or should we try to reconstruct the argument in such a way as to maximize its strength? If the latter is the case, what ideal of

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argumentative strength should be used as frame of reference? Deductive validity, inductive force, abductive plausibility, or something else? Although similar issues have long been debated in informal logic and argumentation theory, they remain still problematic nowadays. According to Johnson:

The issue of missing premises has obvious connections with the principle of charity, which, in turn, takes us to the issue of the purpose(s) for which we engage in argument analysis in the first place. Some take the view that the purpose of analysis is to get at the truth of the matter, so the argument should be reconstructed in a way that maximizes that goal, regardless whether the argument is the one intended by the arguer. The other view is that the purpose of analyzing the argument is to criticize the argument so that the arguer may improve it. On this view, it is crucial to reconstruct the argument in a way that is consistent with what is known about the arguer (2000, p. 132).

More precisely, it is possible to isolate three main problems that are linked with the application of the principle of charity to the reconstruction of enthymemes: first of all, there has been some debate on *what is really missing (if anything at all)* in enthymematic arguments (Govier 1987; Hitchcock 1998; 2003); second, it remains to be seen *what normative standard* should be used in filling the alleged gaps of enthymemes (Johnson 2000; Gerritsen 2001; Walton and Reed 2005); third, we need to face *the problem of unwarranted charity*, i.e. explaining how systematic application of the principle of charity does not degenerate in a charitable misinterpretation of the arguer's position, such as to reconstruct an argument which is structurally different (and usually stronger) than the original one (Walton 1998). Let us briefly discuss all these points in turn.

The idea that an enthymeme is an argument with some unstated premises is, in a sense, part of the original definition of this notion. It is, for instance, one of the two features¹ that Aristotle attributed to enthymemes:

The Enthymeme must consist of few propositions, fewer often than those which make up the normal syllogism. For if any of those propositions is a familiar fact, there is no need even to mention it; the hearer adds it himself (*Rhetoric*, I, 2, 1357a, 16-19; translated by W. Rhys Roberts).

Not surprisingly, this characterization of what an enthymeme is became standard in subsequent studies on the logic and pragmatic of argument, and it remains dominant also in current theories (see for instance Ennis 1982; Burke 1985; Gough and Tindale 1985; van Eemeren and Grotendorst 1992; Groarke 1995; Walton 1996).

Nevertheless, some doubts have been voiced on whether it is correct to interpret enthymemes as "arguments with something left implicit", or instead this understanding is in danger of biasing our interpretation, forcing us to search for unstated premises that were not meant to be there in the first place. For instance, Trudy Govier, although making frequent use of the principle of charity in her treatment of enthymemes, is also quite prudent in endorsing its unchecked application:

¹ The other feature emphasized by Aristotle is that enthymemes are merely probable and not necessary syllogisms (*Prior Analytics*, II, 27, 70a-70b). For detailed discussion of Aristotle's position on enthymemes and the history of its (mis)interpretation, see Burnyeat 1994.

Are there gaps in arguments? Or are they projected by the critic? They are really there, provided all the critic/s interpretative and theoretical judgements, employed to identify the gaps, are correct. They are not “just-there” in a theory-neutral sense. Dogmatic pronouncements to the effect that arguments surely have this or that missing premise should always be regarded with suspicion... Whether a statement is a missing premise in some argument depends on our theory of argument, our purpose in analyzing an argument, and much else (1987, pp. 102-103).

On the one hand, such a statement of prudence is refreshing and pragmatically very wise. On the other hand, one cannot help but wonder whether the very notion of ‘missing premise’ is still heuristic, in light of all the additional provisions that are needed to identify what exactly is missing in an enthymeme.

In this vein, David Hitchcock has advanced doubts on the fact that enthymemes rest on unstated premises: instead, he suggested that the validity of an enthymeme depends on some extra-logical element that is shared by the (explicit) premises and conclusions of the argument as stated. Moreover, he suggested that such an extra-logical component should be identified with a warrant in Toulmin’s sense, i.e. a rule of inference that creates and justifies an argumentative link between two or more statements. According to Hitchcock, a warrant “does not answer the question ‘What have you got to go on?’ but rather the question ‘How do you get there?’”, i.e. how do you get from your premiss(es) to your conclusion” (1998, p. 28). Once the argument is so reconstructed, the conclusion follows from the premises not necessarily in terms of logical consequence, but in terms of what Hitchcock calls enthymematic consequence, and which falls in the generic definition of consequence that he develops:

A conclusion is a consequence of given premisses in the revised generic sense if the argument has a general feature which is incompatible with the argument’s having true premisses and a false conclusion, even though it is both compatible with its having true premisses and compatible with its having a false conclusion. It is a logical consequence if the general feature includes no reference to any extralogical constants in the argument. It is an enthymematic consequence if the general feature includes a reference to at least one extralogical constant in the argument (1998, pp. 32-33).

While Hitchcock’s alternative analysis of what is missing in enthymemes is fascinating in its own right, it does not bear too much on the kind of charitable inclination which is supposed to be at work in reconstructing an enthymeme. The principle of charity is assumed to apply whenever the best possible reconstruction of the proponent’s enthymematic arguments is spontaneously supplied by the respondent, and it matters little whether this amounts to provide a missing premise or to reconstruct a tacit warrant. In other words, although the specific outcome of our reconstructive efforts are not theory-free, as Govier and Hitchcock remind us, the charity that is supposed to inspire those efforts remains fundamentally unaffected by whatever theoretical framework we might apply. As long as an enthymeme is seen as an argument where something (a premise, a warrant, or anything else) is left unstated, some charity will be needed to reconstruct it in its best light.

But should we indeed reconstruct enthymemes in such a way as to maximize their validity? And what should be considered optimal, and why? This is the second key problem associated with the reconstruction of enthymemes: identifying the proper standard of inference that should guide the reconstructive process. In the literature, a rough distinction can be drawn between two dominant approaches (Gerritsen 2001, pp.

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55-59): *pluralists*, i.e. scholars maintaining that deductive validity is neither the sole nor the most appropriate standard to guide adequate reconstruction of enthymemes (Walton 1983; 1996; Govier 1987; Woods 1990), and *modern deductivists*, i.e. authors that defend the adequacy of logical deduction as a useful framework for reconstruction, although to be always tempered by pragmatic considerations (van Eemeren and Grotendorst 1992; Gerritsen 1995), and possibly applied to arguments with qualified conclusions² (Groarke 1995). Both these approaches, however, agree that recurring to straightforward standards of deductive validity is not the right answer for enthymeme reconstruction – since, among other things, unchecked application of such standards would allow to make trivially valid any enthymeme at all (Woods 1990; Walton 1998; but see Gerritsen 1995 for a critique of this claim). Hence many corrective measures to classic deductive validity have been suggested: some authors went in the direction of adding pragmatic concerns as an important driving force in argumentation in general, and enthymeme reconstruction in particular (van Eemeren and Grotendorst 1992; Gerritsen 1995), whereas others worked on expanding the range of argumentative standards to be applied for filling in the gaps of incomplete arguments (Govier 1987; Walton 1996). As a good example of the latter strategy, consider the recent proposal of systematically applying Walton’s argumentation schemes for reconstructing missing premises (Walton and Reed 2005). Finally, yet another complication has been raised by some authors, one that is transversal to both pluralist and deductivist approaches: the need to take into serious account the role of *context* in the process of enthymeme reconstruction (Gilbert 1991; Jacobs 1999; Gerritsen 2001, pp. 68-72).

Notwithstanding the variety of approaches on adequate standards of validity for guiding enthymeme reconstruction, notice that all these proposals still presuppose some charitable inclination of the interpreter towards the arguer. Whatever the standard to be applied, it is assumed that the interpreter will indeed apply it, and that significant efforts will be devoted to make the enthymeme meets that standard. Once more, it is apparent that the current emphasis in the study of enthymematic argumentation is focused on how it works, rather than why it works.

Finally, the third main focus of interest on enthymeme reconstruction concerns the “dark side of charity”, i.e. what happens when we are blinded by our charity, rather than being inspired by it, and how should a rational dialogue be construed in order to avoid this pitfall of our benevolence. This is known as the problem of unwarranted charity, and Walton describes it as follows:

The original argument may have really been weak, and by artificially making it stronger, the user of the principle of charity may be distorting it (...) committing a reverse version of the straw man fallacy by applying the principle to a given argument in a mechanical way. The user makes a bad

² For instance, Groarke (1992) claims that, insofar as the main difference between a deductive and an inductive argument is in the degree of certainty associated to the conclusion, the latter can be construed as a qualified version of the former, i.e. a deductive argument with a qualified conclusion (probably, usually, most times, etc.). However, this deductivist reconstruction is hardly applicable to those cases in which the proponent of the enthymeme seems incapable of assigning to it a specific degree of presumptive force, but just has the conviction (possibly justified, e.g. because acquired from reliable sources) that the enthymeme is warranted. As Scriven observes, “this leaves us holding an empty bag as far as identifying an ‘underlying assumption’ is concerned, since there is no formulable underlying assumption; [the arguer] just believes in the existence of a connection that he has illustrated with this example of an inference” (2002, p. 55).

argument look good by getting the arguer's position wrong. Such a misinterpretation is surely a kind of error (2004: 115).

Although I agree with Walton that, from a normative standpoint, unwarranted charity may constitute a fallacy, in this work I will be more interested by the fact that (1) it is a most frequent fallacy in enthymeme reconstruction (so much so that it is frequently actively exploited by arguers; see section 6), and (2) the ideal of rationality against which such a "fallacy" (as many others) is being judged is rather harsh and potentially unrealistic, insofar as it abstracts from the cognitive limitations of the agents involved in enthymematic argumentation (more on this in section 3). Walton's solution to avoid unwarranted charity in rational discussion is indeed indicative of what kind of demanding capacities he is attributing to the parties:

[O]ne would have to consider not only the dark-side commitments of the arguer, but also how those commitments could be clarified in embedding the PPD [Permissive Persuasion Dialogue] into a more sharply formulated and rigorous type of RPD [Rigorous Persuasion Dialogue] where the participant is forced to articulate the propositions that are his precise commitments in a more exact and rigorous manner. According to this solution, then, determining enthymemes in particular cases would be a kind of conditional judgement depending upon a subsequent embedding of a PPD into an RPD at some future point in a possible conversations between the two participants (1998, p. 62).

At the risk of sounding lazy, I am inclined to think that, if this is really what is needed to avoid unwarranted charity, then it would be much more charitable (for the interpreter!) to be unconditionally charitable towards the arguer, regardless any danger of misinterpreting his original position. Why? Because the cognitive resources mobilized by Walton's solution (e.g., conditional reasoning, suspension of judgement until further development in the dialogue, capacity to understand, foresee and manage dialectical shifts, massive use of memory space to remember past commitments, etc.) on average would largely exceed the costs of potentially misinterpreting the arguer's position. As I said, this may sound as an endorsement of laziness, but it is not – on the contrary, it is a praise of parsimony, i.e. the fact that real arguers must succeed in being effective while making use of only a limited pool of resources. In what follows, I will endeavour to argue that it is this fundamental concern, and not charity, the real driving force behind enthymematic argumentation. As a consequence, the danger of failing for "unwarranted charity" will be shown to be either a fair price to pay, or a nice bonus to exploit.

3. WASTE NOT! ARGUING WITH LIMITED RESOURCES

Notwithstanding all the open issues and loose ends sketched in section 2, the principle of charity still remains the standard framework for addressing the problem of enthymeme reconstruction. However, there is another fundamental question that cannot be answered by invoking this principle – that is, the reason why enthymemes are *so frequent* in human communication. Even assuming universal charity in interpreting each other's arguments, why do we indulge so often in enthymematic argumentation, and why are we so favourably disposed towards incomplete arguments? If charity is the rule, why is it so? And why do we systematically fail to utter our arguments in a more complete and explicit fashion, relying instead on the charity of the audience?

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To answer these concerns, the principle of charity is not enough – indeed, as I shall suggest in 7, it may even turn out to be quite misleading. Let us try instead a different approach to the arguers' performance, one that takes seriously the notion of *bounded rationality* (Simon 1955; 1956). Within the vast literature on bounded rationality (Newell and Simon 1972; Elster 1983; March 1994; Aumann 1997; Rubinstein 1998; Gigerenzer and Selten 2001; Kahneman 2003), here I shall focus on a single aspect: how the fact that agents (i.e. arguers) are *cognitively resource-bounded* affects their dialectic capacities, and how this same fact should thus inform a good theory of argumentative rationality.

The notion of resource-boundedness expresses a simple fact of life: we have to perform our daily activities, including cognitive tasks, making use of a finite set of resources – including the most diverse quantities, such as space, time, breath, available information, the computational capacity of our brain, the size and plasticity of our memory, the amount of money in our bank account, the range of our social network, and many more. All these resources, however, are finite, and frequently even scant: hence the need to be parsimonious in their use is inherent to the rationality of all our actions – including, of course, arguing.

In this perspective, a rational arguer is such only if he³ manages to be a rational agent in a broader sense, i.e. if he is capable of successfully performing, while arguing, also many other essential duties, like paying attention to the environment (e.g., selecting relevant information from the constant stream of perceptual data), listening to what others are saying and monitoring what they are doing (e.g., making sense of their remarks and following their movements), coordinating his motor-sensory behaviour with the present circumstances (e.g., avoiding obstacles and ensuring effective locomotion), making progress according to his own agenda (e.g., keeping track of intentional commitments and seeing to it that they are efficiently realized), and adjusting to relevant changes in the current situation (e.g., revising his beliefs and/or goals in light of new information). This list could be expanded almost indefinitely, but what really matters is that this great variety of demanding activities usually have to be performed in parallel by any rational agent, whether or not he is currently engaged in argumentation. In contrast with what the Ecclesiastes would have us believe, it is not the case that there is a time for everything (Ecclesiastes, 3: 1-8) – or, even if there is, the times for doing different things inevitably overlap with each other, and being rational also means being adept at managing many overlapping tasks at the same time.

Make no mistake, here we are not relinquishing normativity in favour of merely descriptive concerns. Instead, embracing a notion of resource-boundedness yields *a different set of normative constraints*, arguably closer to the kind of constraints that real agents must face in their everyday practices. The significant effect of scant resources on human reasoning, and its import for normative models of reasoning and argument, has been recently emphasized also by John Woods (2002; 2006):

Agents of all stripes, ourselves as well as NASA and MI5, operate under pressure of scant resources. These include *information, time* and *computational capacity* and, often enough,

³ To simplify the exposition, henceforth I will adopt the convention of referring to the arguer using the male gender, whereas I will use the female gender to refer to the interpreter, i.e. the agent engaged in making sense of an enthymeme uttered by someone else.

infrastructural and cultural support, and, of course, money. [...] Agents tend to set their targets in light of the resources available for their attainment. [...] Given the comparative scantness of his cognitive resources, an individual agent will set targets of concomitantly comparable *modesty*. Accordingly, with regards to most of their cognitive targets, individuals fall short of the standards championed by mainstream logicians. Even so, it is a considerable mistake to equate shortfalls from mainstream logic with the cognitively subpar, still less with failure of rationality (2006, pp. 386-387).

To my mind, this suggests that, whenever studying argumentation from a normative perspective, we should look for and test the rationality that governs *what kind of resources are allocated to a certain argumentative practice*, given the current context, and including in this context also the broader cognitive agenda of the subject. In contrast, rationality is frequently assessed under the assumption that an agent can devote either infinite or massive resources to the sole task of arguing – an untenable assumption, as far as cognitive agents are concerned.

Now, what are the consequences of these observations for our understanding of enthymemes? As I shall discuss in section 4 and 5, a *principle of parsimony* is supposed to be at work both for the ‘enthymematic arguer’, i.e. the proponent of a given enthymeme, and for the ‘enthymematic interpreter’, i.e. the agent who is presented with an enthymeme and should reconstruct its meaning. In a nutshell, my hypothesis is that both the frequent use of enthymemes and the principles governing their reconstruction are ultimately motivated by an attempt, from the arguer as well as from the interpreter, to save valuable cognitive resources, while performing their given tasks. So it is parsimony, rather than charity, to ultimately inspire our enthymematic inclinations.

4. ENTHYMEMATIC PARSIMONY IN THE ARGUER

In order to show that parsimony is a truly basic mechanism of human cognition, in this section and in the next one I will confine my analysis to *minimally cognitive agents*, i.e. agents that are capable of generating, manipulating, and processing symbolic representations of the external reality, as well as acting upon them, but lack any meta-representational ability – that is, they cannot form representations about other representations, either their own or those of another agent. This restriction will be relaxed later on (section 6), since human agents are of course fully capable of metarepresentational reasoning, and they make extensive use of it in argumentation. But this capacity for higher-order speculation still relies upon more basic cognitive skills, and inherits some of their constraints and peculiarities – parsimony among them, as we shall see. Moreover, it is methodologically relevant to show that it is possible to outline an account of enthymematic argumentation which does not need to presuppose metacognitive capacities. This is in contrast with the Gricean mechanism endorsed by the principle of charity, which presupposes the interpreter to be capable of attributing the arguer a rich set of mental dispositions (e.g., being truthful, perspicuous, informative, and generally cooperative). Hence making an effort to develop a simpler explanation, i.e. one that makes less demanding assumptions on the cognitive skills of the agents, is valuable in its own right.

Considering first the standpoint of the arguer who utters an enthymeme, there are three situations that I shall distinguish and discuss in turn:

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- (A) the arguer is *currently aware* of all the necessary or relevant elements of his argument, *but decides to utter only some of them*;
- (B) the arguer leaves out of the utterance those elements of the argument that *he is not currently considering, but that he could retrieve* from his memory or through further reasoning;
- (C) the arguer leaves out of the utterance those elements that he *no longer can clearly recall, although he is still confident* in the overall validity of the argument.

Although it may be tempting to disregard (C) as a trivial case of bad reasoning and worse arguing, I will explain in a while why this is not the case, and why such a use of an enthymematic argument can still be justified and even proved rational, under appropriate circumstances⁴. However, let us first consider how considerations of parsimony may be relevant for cases like (A) and (B).

As for (A), the arguer would be in a position to utter the whole argument, but he decides not to: why so? Quite simply, it may be the case that he wish not to waste breath and time – his own as well as that of the audience. Just considering the standard example, it is obvious that uttering “Socrates is a man, therefore he is mortal” takes considerably less time than uttering any of its non-enthymematic versions, e.g. “Socrates is a man and all men are mortal, therefore he is mortal”. As long as the communicative results of these two alternatives are expected to be roughly equivalent, choosing to utter the former fully obeys to a virtuous principle of parsimony. Moreover, later on (section 6) I will argue that specific presumptions on the mental dispositions of the audience (e.g. assuming they share some of the arguer’s beliefs) make even more convenient to opt for the enthymematic version of the argument.

As for (B), here preferring the enthymematic version of the argument over its fully explicit formulation not only allows the arguer to economize on breath and time, but also to save many other valuable resources. For instance, he does not have to make the effort of retrieving or reconstructing from his long-term memory all the relevant elements of the argument, nor he has to infer them anew, in case he forgot them. Similarly, he can save the constrained space of his working memory for more relevant purposes, and focus his limited attention on other matters of greater urgency. The point is that not all steps in the inferential chain that sustains the argument’s claim need to be equally important for the arguer, and in fact usually they are not. When I utter an enthymeme like the following: “Given the unusually warm winter that we had this year, it is likely there will be a drought in the summer”, I do not need to have at the tip of my fingers all the additional premises (or warrants and backings) and inferential steps that make me convinced of its validity, although I could easily work them out, given sufficient time. But this is exactly where parsimony kicks in again – more often than not, we do *not* have sufficient time to perform unessential cognitive tasks at leisure, and even if we had, the resources that we would be using for them could have easily been devoted to better

⁴ Besides, a very similar predicament was discussed by John Woods with reference to our scarce capacity of ‘speaking our mind’, which again depends upon resource-boundedness. As he observes, “Inarticulation is no fleetingly contingent and peripheral phenomenon in human thinking and discourse. It is a substantial and dominant commonplace” (2002, p. 59).

purposes. Insofar as our resources are scant, it is highly rational to stick to the most relevant facts while arguing: in the example just mentioned, my conclusion concerning the likeability of suffering a drought this summer and the causal relation with the winter climate are much more relevant to me than all the intermediate steps that led me to establish such an inferential link. Obviously, these steps would *become* relevant, if my argument was to be put under critical questioning. But this is something that is conveniently left to the evolution of the dialogical interchange (if any), and should not be anticipated by the arguer when uttering his initial statement. As long as the arguer aims to express his line of argument, and not to put under debate the validity of such a line, an enthymematic formulation of his position is not only fully justified, but also extremely convenient in terms of parsimony.

As for (C), here the arguer is leaving unstated parts of his argument not because he prefers to do so, but because he would not be able to clearly recall or reconstruct such parts, even if asked to do so. Now, may there be still something resembling rationality in such a behaviour, and how would this relate with parsimony? Let us consider an example: an arguer puts forward the following enthymeme, “Since we are constantly polluting the environment, the climate is changing for the worse”, although he would not be able to reconstruct a convincing line of reasoning to link pollution with climate change – he would perhaps mention some specific case or general principle, but most of the inferential steps would still be missing in his own reconstruction⁵. Nonetheless, the arguer is firmly persuaded of the validity of his argument, and, although he cannot recall what made him so convinced, he did remember there was a time when he took into account pros and cons of the matter, and ended up being positive that pollution is worsening the climate. Under these circumstances, is this arguer justified in continuing to rely upon an inferential pattern that he no longer clearly recalls, and is he justified in using it to put forward an enthymematic argument?

Both these questions may be answered affirmatively, although for partially different reasons. As for assigning validity to such an incomplete inferential pattern, it is a well documented fact that, over long periods of time, most of our inferential chains become condensed and truncated in this fashion, and again this process of compression is motivated by parsimony. Once we have applied our cognitive powers to derive a certain conclusion from a given set of initial premises, justifying step by step our reasoning, it is usually unnecessary to keep track of all these steps, especially if we ended up being fully confident in the outcome of our inferential processes. The fact that we still accept the validity of an inferential pattern that we now recall only partially is just an expression of the *trust that we put in our past self*: although I do not know now how I came to a certain conclusion, I am confident to have considered the matter carefully at the time when I reasoned on it, so that I can trust now what I did then. In fact, the way in which theorems are recalled, even by professional mathematicians, is a good example of this tendency: with very few exceptions, it is not the whole demonstration to be preserved in our

⁵ Of course any rational arguer in this position must still be able to offer, if required, the main premise (or warrant) left implicit in the enthymeme, i.e. that pollution is a cause of negative changes in the climate. What we are assuming here, though, is that he would not be able to go further, providing convincing reasons for justifying this implicit element – that is, reconstructing the reasoning process by which he came to be convinced of the inferential connection postulated by his enthymeme. In a Toulminian vein, we might say that here the arguer is leaving implicit a warrant for which he cannot recall any appropriate backing.

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memory, and sometimes not even the capacity of reconstructing it on the spot, but rather just the final statement that was proved, the fact that it was proved, and the basic inferential connection that the proof established. The obvious drawback of such a condensation is a loss of flexibility, as well as a diminished ability to convincingly persuade others of the same conclusion. But this limitation is a small price to pay, when compared with the alternative: encumbering our memory with a lot of unnecessary knowledge, that only rarely (if ever) may be of any practical use.

As for employing these compressed inferences for enthymematic argumentation, this of course puts the arguer in a sub-optimal position, insofar as he would be hard pressed in articulating a detailed reconstruction of his own reasoning, if submitted to critical questioning. Because of the incomplete nature of the cognitive structures that lie behind enthymemes of this kind, they necessarily tend to be dogmatic in nature. Nonetheless, three considerations may excuse this limitation. On the one hand, the arguer here has little alternatives, because the elliptic nature of his argument descends from the equally elliptic nature of his cognitive structures, and it cannot be amended at the time of the utterance. So either he accepts to express his convictions as they are, possibly exposing them to severe questioning, or he chooses to remain silent and not to argue at all. On the other hand, the arguer has the possibility of being candid on his own limitations, e.g. referring the audience to more competent sources for detailed explanation, and yet stating the fact that he was and still is ready to accept as valid the inferential link expressed by the enthymeme. Insofar as the arguer may be seen by the audience as an authoritative source, his incomplete statement will still convey some presumptive weight⁶. Finally, it is a fact that all arguments necessarily end up being partially dogmatic (and hence enthymematic), insofar as they must rely upon some undemonstrated assumption. Justification of an argument is notoriously a recursive process, but in practice recursion as to stop somewhere, for argumentation to be allowed to proceed – again, precisely because arguers are resource-bounded agents. In the words of Stephen Toulmin:

Some warrants must be accepted provisionally without further challenge, if argument is to open to us in the field in question: we should not even know what sort of data were of the slightest relevance to a conclusion, if we had not at least a provisional idea of the warrants acceptable in the situation confronting us. The existence of considerations such as would establish the acceptability of the most reliable warrants is something we are entitled to take for granted (1958/2003, pp. 98-99).

Hence the difference between the enthymematic use of incomplete inferential patterns and more explicit formulation of “complete” arguments is not absolute, but rather a matter of degree – a degree, of course, that can make a difference, once these arguments are put to the test of critical questioning. Nonetheless, the use of enthymemes appear justified, under certain circumstances, even in cases like (C), in which the arguer would no longer be able to supply full justification of what is left implicit in his argument. More to the point, also this kind of enthymemes appear to be ultimately motivated by principles of parsimony, that here apply not to the time of utterance, but rather to the previous

⁶ This mechanism has obvious similarities with several argument schemes identified in the literature, such as argument from expert opinion, from position to know, and from testimony (Walton 1996; 1998).

process of compression and reconstruction of the arguer's cognitive structures and inferential patterns.

Let us now sum up this analysis of the role of parsimony upon the performance of an enthymematic arguer. Whatever the circumstances under which the arguer happens to formulate an enthymeme, doing so expresses a tendency towards parsimony, either because it allows to save valuable resources at the time of the utterance, or because it is a consequence of previous application of the principle of parsimony to the arguer's cognitive processes and mental representations, as in case (C) above. Now, should we consider rational to follow such a tendency, that systematically favours an enthymematic formulation of our arguments, or should we not? The obvious answer is that it is certainly rational, *provided the communicative results of the enthymeme are no poorer* than those produced by an explicit formulation of the same argument. This additional provision is of paramount importance: saving resources and optimizing their consumption is a wise thing to do, but only when all other things are equal – in particular, only insofar as being parsimonious does not systematically hinder the communicative goals of the arguer. However, as I shall argue in the following sections, there are reasons to maintain that parsimony and effectiveness go well hand in hand, as far as enthymematic argumentation is concerned.

5. ENTHYMEMATIC PARSIMONY IN THE INTERPRETER

From the point of view of an agent that is presented with an enthymeme, the main problem concerns whether and how to construe what is not explicitly stated in the argument, and yet is needed in order to make sense of it. The interpreter's choice can be seen as involving two steps: first, she has the option of either accepting or rejecting the enthymeme as a potential source of information, i.e. either engaging in further analytical efforts, or dropping the issue as mere nonsense; second, if she decides to make an interpretative attempt, she has to devise a strategy to understand the enthymeme, i.e. to reconstruct it into an argument that makes sense to her. As I shall argue, parsimony is at work in both these decisional processes.

Concerning the first step, a drastic way of reducing consumption of cognitive resources would be that of refusing to process any argument which is not completely and correctly stated by the arguer. This would imply remaining (literally) deaf to all enthymemes, i.e. not wasting a single bit of cognitive effort on reconstructing and understanding them. Such a strategy would certainly endorse a kind of parsimony, but a very short-sighted one. In fact, enthymemes, as well as all arguments and any communicative message in general, are vehicles to convey one of the most valuable resources for a cognitive system – that is, *information*. Thus simply disregarding any enthymeme would lead to save cognitive effort at the cost of wasting potentially relevant information. This is certainly not the way in which parsimony constrains our reasoning process, since the mechanism applies to the overall economy of our resources, and not as a kind of single-minded avarice over a unique capacity. In other words, in communication, including enthymematic argumentation, we have to strike a delicate balance between the cognitive resources we use to interpret each other's messages, and the informational resources that we extract from them.

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This balance is especially hard to achieve due to the fact that the informational value of a given message usually becomes apparent only after its interpretation, i.e. after some cognitive resources have already been spent on it. In order to avoid wasting too much resources on processing messages that would result either irrelevant, false, or misleading, some heuristics for preliminary screening have been evolved in human communication: for instance, we listen less carefully to agents that are boring (e.g. because they are informing us of things we already know) or that we do not trust, either because of what we know (e.g. by reputation or through past experience) or might infer on them (e.g. lack of competence), and we may not listen at all to anyone when we are deeply involved and concentrated in some other demanding task (e.g. writing an essay). However, these heuristics for drastic parsimony in the interpretation of messages have a very limited scope in communication⁷, since, on average, it is not convenient to save cognitive resources at the price of remaining blind to potential sources of relevant information.

Therefore, in most cases parsimony will make the interpreter inclined to pay attention and devote some effort to understanding the enthymeme, to the purpose of extracting valuable information from it. But what kind of reconstruction should be attempted, in order to make sense of the enthymeme, and what role does parsimony play in this? In answering this question, let us recall that here we are assuming both the arguer and the interpreter to be minimally cognitive agents, i.e. agents devoid of any metarepresentational skills (see section 4). Applied to the interpreter, this implies that, in reconstructing the argument, she will not make use of any assumption on the mind of the arguer, and in particular she will not speculate on what he might have intended, believed, etc., at the time of utterance. In a sense, she will treat the arguer as any other non-social source of information, e.g. perception, and his enthymeme as a puzzling fact that needs to be interpreted, on a par with any other incompletely perceived event (e.g., the movement of a rolling ball disappearing for a time behind a screen). The guidelines for her interpretative process will then be taken from *her own repertoire of inferential schemes*, and not by attributing intentions and beliefs to the arguer.

At this point, parsimony exerts again its influence, by making the interpreter inclined to follow the path of minimal resistance in her interpretative effort: among the various possible reconstructions of the enthymeme, she will choose the one that is more readily available to her mind. Notice that here ‘availability’ refers to a certain inferential scheme, and not to any specific content, e.g. knowledge or belief. Consider for instance the following enthymeme: “All butterflies are short-lived, therefore the *Psitticula krameri* is short-lived”. Here any competent interpreter would understand that the sentence “The *Psitticula krameri* is a butterfly” is part of the meaning of this enthymeme. This is not because the interpreter had any privileged access to this information beforehand, but rather because she was highly familiar with the following inferential pattern: From (Every X has property B) and (p is an X), it follows that (p has property B). According to

⁷ Analogous heuristics have a much broader scope in those informational processes, like perception, that, in contrast with communication, are continuous through the agent’s life. Since we are constantly exposed to a massive stream of perceptual data of various nature, we have evolved powerful and effective mechanisms to screen out all that is unlikely to be relevant. For instance, in vision, different clusters of stimuli within the perceptual stream are processed with various degree of depth (from very coarse to extremely precise), and several elements are not processed at all.

the principle of parsimony, it is familiarity with such an inferential mechanism that biases the reconstruction of the enthymeme, and not any previous knowledge on the matter under discussion – by the way, the *Psittacula krameri* happens in fact to be a parrot, so it is neither a butterfly nor short-lived.

Claiming that the reconstruction of enthymemes is guided by parsimony, so that the interpreter systematically resorts to her own most familiar inferential schemes, is of course just an hypothesis, and as such will have to be empirically tested. Although experimental validation of this supposition is beyond the aim of this paper, it may be interesting to preliminary compare it with other alternative criteria that have been proposed in the literature for the reconstruction of enthymemes. For this purpose, I will take an example recently discussed by David Hitchcock: “All monkeys are primates, so with certainty all monkeys are mammals”. With reference to this enthymeme, Hitchcock focuses on two different additional premises that, if added by the interpreter, would make the arguer’s statement logically valid:

- (a) All primates are mammals.
- (b) Either not all monkeys are primates or all monkeys are mammals.

Hitchcock is interested to compare these two alternative reconstructions in order to criticize Goddu’s claim that (a) is the weakest possible premise that makes this enthymeme valid (Goddu 2002). In fact, as Hitchcock shows, (b) happens to be weaker than (a), since the latter entails the former, but not vice versa. Nonetheless, the interpreter of the enthymeme would arguably prefer (a) over (b), therefore falsifying the hypothesis that enthymeme reconstruction is performed by using the minimal (i.e. weakest) additional premise as gap-filler. In contrast, Hitchcock maintains that we reconstruct the enthymeme not by providing any ‘missing’ element, but rather just understanding what is the general rule that must be non-trivially true in order to justify the (enthymematic) inference. Such a rule essentially plays the role of Toulmin’s warrant – so much so, that the celebrated Toulminian example of “Harry was born in Bermuda, so Harry is a British subject” is indeed an enthymeme where the warrant is left unstated. In Hitchcock’s own words:

The proposition which argument analysts intuitively supply is not the weakest validating premiss; rather, it is the expression of a general rule which would license the inference. The doctrine of implicit premisses is largely a myth. Theorists of argumentation and practitioners of argument analysis and evaluation should abandon it (2003, p. 4).

Here I agree with Hitchcock’s conclusions on the interpreter’s preference for enthymeme reconstruction, but I would suggest a different rationale behind her choice. Regardless that we conceive what is added as a missing premise, a necessary warrant, or a missing premise expressing the necessary warrant, my claim is that the interpreter will always favour that rule of inference, and perhaps even that particular formulation of it, which is most familiar to her, i.e. that she used most frequently and most successfully in her own past reasoning. In the example discussed by Hitchcock, the reason why (a) is preferred over (b) is that, between the following two inferential schemes:

- (a*) From (Every *A* is a *B*) and (Every *B* is a *C*), it follows that (Every *A* is a *C*)
- (b*) From (Every *A* is a *B*) and (Either not (Every *A* is a *B*) or (Every *A* is a *C*)), it follows that (Every *A* is a *C*).

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The latter is far less familiar to logically naïve reasoners, and in any case more cognitively demanding to compute. Therefore, when faced with the task of reconstructing this enthymeme, the interpreter will systematically go for the most familiar (i.e. inexpensive to retrieve and compute) scheme, in accordance with the principle of parsimony.

This hypothesis entails several specific predictions on the interpreter's performance, that could and should be tested empirically. For instance, it follows that some of the well-documented difficulties of people in reasoning with different types of conditional statements (for a recent survey, see Politzer 2007) should be mirrored in their interpretation of different types of enthymemes – e.g., reconstructing an enthymeme like “Jesus did not die, therefore he was not a man” should take more time and be more difficult than reconstructing “Socrates is a man, therefore he is mortal”. Moreover, cultural differences in familiarity with inferential patterns, as distinct from having just the same encyclopaedia, should also inform strategies, times, and difficulties in enthymemes reconstruction⁸. Finally, the same principle of parsimony would also be expected to bias and interfere with the reconstruction of an enthymeme, whenever a readily available inferential pattern seems to be (but is not) adequate for the purpose. For instance, when presented with the enthymeme “The *Drosophila melanogaster* is a butterfly, because it is short-lived”, the generalization “All butterflies are short-lived” may be expected to interfere with “All short-lived animals are butterflies” in the interpreter's performance, although the first does not make the enthymeme valid, whereas the second does⁹.

One last point remains to be discussed, before moving to consider how parsimony of the arguer and parsimony of the interpreter complement each other. So far, I argued that a mechanism of parsimony is at work first in prompting the interpreter to pay attention and devote resources to the understanding of an enthymeme, and later in making her opt for a certain type of reconstruction, i.e. the one who fits within her most familiar inferential pattern. But this implies that, in her effort to understand the arguer's enthymeme, the interpreter is always trying to make good sense of it, i.e. she works under the presumption that such an enthymeme expresses a coherent thought, and that its content may at least have a chance to be true, once adequately construed. Now, why and how should such a *presumption of truthfulness* be justified? And what may be the role of parsimony (if any) in determining this trustful inclination? Is the presumption of truthfulness yet another offspring of parsimony?

⁸ Two problems threaten this line of empirical validation, though: on the one hand, it may be hard to disentangle differences in inferential practices from differences in encyclopaedic competence, insofar as various cultures tend to differ in both these respects; on the other hand, it is still debated whether cultural differences in inferential practices exist at all – for two recent works in favour of this hypothesis, see Gärdenfors 1994 and Raven 1996. Incidentally, these two articles recently stirred quite a debate and some scepticism among analysts and practitioners of argumentation theory (see the archive of the mailing list ARGTHRY, run by Michael Gilbert).

⁹ Again, here it might be difficult to establish whether such an interference depends on the fact that the interpreter tends to use familiar inference patterns, or rather it is because she just uses her own knowledge to fill in the gap – since, in this example, “All butterflies are short-lived” is true, whereas “All short-lived animals are butterflies” is not (as a case in point, the *Drosophila melanogaster* happens to be a short-lived fly). However, content-free examples may be devised to overcome similar difficulties in the experimental design.

5.1. *Presuming truthfulness among resource-bounded agent: The parsimony of blind trust*

The tendency of the interpreter to reconstruct enthymemes as sensible arguments, i.e. arguments that have a fair chance of being true, must be framed within the broader debate on what it is that justifies our *generalized trust in testimony*. Taking here the liberty of simplifying a large and complex debate (for a recent critical survey, see Origgì 2004), the central problem in this domain is how to accommodate our tendency to trust the information we receive from each other with our autonomy of judgement as rational believers. Why and how can vicarious beliefs, i.e. beliefs acquired by trusting other agents, be rationally justified? Are those beliefs to be regarded as rational only when based on a critical assessment of the source, or should we consider *prima facie* justified also beliefs acquired through “default” or “blind” trust in others? This issue is crucial, insofar as most of our vicarious beliefs appear to be obtained in the absence of any specific reasons to trust or distrust their source. Hence either we consider them unjustified, i.e. irrational, or we must conceive a good reason to hold justified beliefs that are based on a mere presumption of truthfulness.

These issues stand at the core of *social epistemology*, and here I will not even begin to scratch the surface of this complex research area (for an excellent introduction, see Goldman 1999). Suffice it to say that such default inclination towards social trust has been justified in a variety of ways: as based on the intrinsic property of language to preserve meanings through communication (Burge 1993), as involving not so much trust in the truth of what we are told but rather in its relevance for our pragmatic purposes (Wilson and Sperber 2002; Origgì 2004), as dependent upon a tacit social convention (Lewis 1969), again as based on an extension of the principle of charity, insofar as we would not be able to understand each other without presuming the truth of most of what is said (Coady 1992), and of course as just one of the fundamental maxims governing the pragmatics of human communication (Grice 1989). In partial contrast with all these approaches, here I will briefly outline an argument to the effect that (1) default trust in the interpreter is *adaptively* (rather than rationally) justified by a concomitant tendency of the speakers to tell what they believe to be true, and (2) both these inclinations are based on the principle of parsimony.

As for the first claim, the social tendency to utter subjectively true statements has been defended, among others, by Thomas Reid (1970) and Alvin Goldman (1999), and criticized, among others, by Dan Sperber (2001). Here I do not intend to settle the score once and for all in favour of the former view, but rather to defend a more modest claim: abstracting from any consideration on the trustfulness of the hearer, *sincerity is cheaper than deception for the speaker*, i.e. it costs him less efforts and wastes less resources. Obviously, considerations on the hearer’s trustfulness do play a role in the final decision of the speaker to be either sincere or deceptive, but they are *not* the only relevant factor: the greater parsimony of sincerity has also a role to play, and this role should not be marginalized by giving sole prominence to social-oriented strategic reasoning. In this, I believe, Sperber is wrong:

From the point of view of the communicator, the payoff of communication depends not on her own truthfulness or untruthfulness but solely on the addressee’s trust or distrust. The communicator, whatever she chooses to communicate, is better off if the addressee is trusting and worse off (in that her effort is thwarted) if he is distrusting (2001, p. 405)

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This claim is false, for the following reason: uttering a sincere statement only requires to convert into a communicative signal (e.g. a speech) what we believe to be the case, i.e. a representation of the world that we already have in our mind, more exactly as one of our beliefs. In contrast, being insincere involves also generating *a new representation*, that must be kept separate and not confused with what the speaker actually believes – otherwise the liar would end up believing his own lie. At the very least, this implies a split frame of mind, and quite often the cognitive load is worsened by the need to have ready at hand also some justification for the false claim – and, again, the speaker must invent them, instead of just retrieving them from his memory. Indeed, as any professional liar knows, the most difficult things with lies is keeping accurate track of them, lest we fall in contradiction under questioning. The objective advantage of sincerity is in that we already have clear in our mind both the content of our utterance, since it is one of our beliefs, and usually also some justification to support it, i.e. the reasons that made us convinced of such a belief: hence they are ready to be used to back up our claim whenever needed. In contrast, the liar must either engage in a complicated book-keeping of his own lies, or be ready to invent on the spot new fabrications and excuses to sustain his own deceit. This is definitely hard work, by all standards.

Once more, let me insist that this is *not* meant to suggest that lying is impossible (which is certainly not), nor that under appropriate circumstances a liar may not be better off than a sincere arguer. The point is rather that, in the absence of any such circumstance, deception is objectively more costly than sincerity. This fact, I argue, may be enough to explain a default inclination towards sincerity in the speaker, especially if it should turn out to be paralleled by a concomitant tendency towards trust in the hearer.

Considering now the predicament of the hearer, and applying a similar line of reasoning, it seems warranted to maintain that *taking at face value a given report is less costly than suspecting it to be either mistaken or deceptive* – as usual, all other things being equal, i.e. before and without having any indications on the sincerity/insincerity of the speaker and the correctness/incorrectness of the report. A trusting attitude results in incorporating in the hearer's mind exactly the mental representation that she extracted from the speaker's message. Paraphrasing a famous formula in computer science, here "what you understand is what you get", pure and simple. In contrast, refusing to take at face value the received message implies regarding it as being either mistaken or deceptive. In the first case, the hearer will have to develop either a split frame of mind, similar and complementary to the one involved in lying, or a meta-assessment of what she understood: either she understands a certain content but believes differently (e.g. understanding "John is Scottish" and believing "John is Swedish"), or she understands a certain content and at the same time believes that content to be false (e.g. understanding "John is Scottish" and believing "It is not the case that John is Scottish"). If the hearer assumes the message to be deceptive, the situation is even more intricate, because the speaker's intentions will come into play: not only the hearer has to entertain a representation of reality which is different from the meaning of the speaker's message, but she also has to attribute him the goal of having her believe otherwise¹⁰.

¹⁰ Clearly, minimally cognitive agents, as the ones assumed here, cannot regard any message as being "deceptive" in a proper sense, insofar as they are incapable of attributing mental states to others. Nonetheless, I thought useful to mention also this case here, for the sake of completeness.

Notice that, even if the hearer should just discard the content of the utterance without generating any additional mental representation, she would have nonetheless wasted the resources used to understand the utterance in the first place (see also section 5 on this point). A mental representation is in any case generated by effect of merely understanding the utterance: thereafter, discarding that mental representation is equivalent to renouncing to make further use of the resources already spent for it.

To sum up: whatever the outcome of suspecting another source of information, this process remains intrinsically more expensive than trustfulness, insofar as it forces the hearer to activate, entertain and process a much richer cognitive structure. Again, it is a platitude to observe that such higher costs can be perfectly justified in a variety of relevant contexts, e.g. in hostile environments, in view of previous experience with defective information sources, in the face of manifest contradiction between the new information and previous knowledge, and so on. However, the point remains that default trustfulness *per se* is more parsimonious than generalized scepticism, and as such is rationally endorsed by social agents, whenever they lack any positive reason for doing otherwise.

Now it is easy to see where this line of reasoning is leading us. Both *trust* and *sincerity*, in this hypothesis, are *default attitudes* among social agents not in virtue of any benevolent inclinations of such agents, but rather *because these strategies are on average cheaper than their alternatives*. Hence trustfulness and sincerity stem from the same basic cognitive constraint, i.e. scarcity of cognitive resources, and the resulting need for optimization and parsimony. However, these two patterns are, in origin, *independent* from each other. As far as cognitive resources are concerned, trustfulness is *objectively* cheaper than scepticism for the hearer, and whether or not she attributes sincerity to the speaker does not alter this fact. As for the speaker, he certainly saves resources by saying what he believes instead of something else, and this again is independent from the attitude of the hearer. So “cheap trustfulness” and “cheap sincerity” *generate* default trust by the very fact that they match with each other – but of course it is precisely this match that allows default trust to be *maintained* and *reinforced* over time. As soon as the speaker realizes that the utterance is successful, i.e. it is accepted by the hearer, he will have proof that cheap sincerity is not only cognitively economical, but also socially effective. Even more so for the hearer, when she realizes that her cheap trustfulness is “rewarded” (i.e. matched) by the cheap sincerity of the speaker. Both strategies are reinforced by their complementarity, and default trust is built on this virtuous circle. Notice that this works even *before* and *without* any cooperative intention or reciprocal stance from the agents: here cooperation is a truly emergent effect and its roots are merely individualistic – it works just because it is parsimonious, both for the speaker and for the hearer.

Indeed, the claim that default trust does not require any particular inclination for cooperation is demonstrated by the fact that the whole interaction was here analyzed with reference to minimally cognitive agents, i.e. agents that cannot represent each other’s mind. So here we are assuming that both speaker and hearer are concerned only with their own practical goals and with the general constraints of cognitive economy, and with nothing else. In particular, they do not have further goals concerning the mind or the behaviour of the other agent: the speaker is not interested in whether or not the hearer is going to believe him, and he has no specific desire or advantage in leading the hearer

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astray, i.e. having her believe something different from what the speaker believes; similarly, the hearer has no presumption on whether the speaker is trustworthy or not, e.g. she does not take into account any past history of the speaker as a source of information. These assumptions, although strong, are totally warranted in this case, because they are precisely the assumptions we need to make in order to distinguish *default trust* from *critical trust*. Default trust is, by definition, what happens when the hearer has no reason to suspect any mistake or misgiving from the speaker. As for assuming the speaker to have no interest in deception, this is again a necessary assumption to understand whether and how, in the absence of further motives, the trustful stance of the hearer is met by sincerity, so that testimony works as a belief-sharing mechanism. Of course, then the problem arises of what happens to this social mechanism, when deception becomes convenient for the speaker, e.g. to facilitate his own practical ends. Here the only possible adjustments and countermeasures will be social, e.g. retaliation, spreading of bad reputation, ostracism, and so on. But the point that needs emphasizing here is that deception, in the absence of further motives, is *not* convenient – quite the contrary, it is sincerity to be the cheaper option for the speaker. This, together with the hearer's convenience to trust the counterpart, are the ultimate cognitive foundations of default trust.

It is now easy to apply these results to the more specific problem of the interpretation of enthymemes. The mechanism of default trust applies to all kind of informative messages, including enthymemes: so it makes good sense for the interpreter to make good sense of the enthymeme, so to speak, because assuming the arguer to be either mistaken, deceptive, or nonsensical would be much more costly, *ceteris paribus*. In this way, the invisible hand of parsimony manages to exert a relevant pressure over the whole process of enthymeme reconstruction, from its inception to its ultimate conclusions.

6. GENERALIZED PARSIMONY AND HIGHER-LEVEL EXPLOITATION

In the last two sections I argued that parsimony is a common concern for the arguer and the interpreter, insofar as each of them is objectively interested in minimizing the cognitive costs of their respective practices. It is now time to “generalize” the principle of parsimony – that is, to discuss whether and how the respective tendencies of the arguer and of the interpreter may interact with each other in enthymematic argumentation.

My claim here is that the arguer's parsimony and the interpreter's parsimony *reinforce* each other, so that parsimony is responsible for both the *genesis* and the *survival* of enthymematic argumentation. This depends from the natural convergence between these two tendencies, which in turn descends from their common origin. The arguer, on average, will put his argument as an enthymeme, to economize on scant resources. The interpreter, on her part, on average will take the pain of reconstructing the enthymeme according to her most familiar inferential schemes, for precisely the same reason – optimizing the management of her limited resources. This is enough to ensure, on average, that their interaction is successful, so as to reinforce their respective strategy. But let us see now in what sense generalized parsimony helps making enthymematic argumentation ‘successful’.

For an enthymematic arguer, ‘success’ here means that his argument is understood by the interpreter, instead of being merely rejected without further ado. On the other hand, the interpreter will count as a ‘success’ any attempt at reconstructing the enthymeme that does not result in utter non-sense. These standards of success are certainly minimal, but it is precisely at this level of abstraction that we are still comparing the relative fortune of enthymematic vs. non-enthymematic arguments. Whether or not enthymemes are successful with reference to the arguers’ dialogical goals (e.g. persuasion) is another problem, as well as the question whether enthymemes are more or less effective than non-enthymematic arguments in this respect. Both these issues are extremely complicated, and would not even make sense if applied to simplified agents like the ones we are still considering here: an agent that is incapable of representing the mind of the counterpart certainly cannot have goals over that mind. But even minimally cognitive agents can verify whether their performance results in having a message received (for the arguer) and coming to a reasonable reconstruction of it (for the interpreter).

However, although generalized parsimony can guarantee the mutual efforts of arguer and interpreter, it cannot guarantee that such efforts will converge on the *same* result, i.e. a reconstruction of the enthymeme which is adherent to the arguer’s intended structure. Quite the contrary: insofar as the interpreter’s parsimony tends to privilege her own familiar inferential schemes, it may well be the case that what is familiar to her is not familiar to the arguer, or in any case it does not coincide with what he intended with the enthymeme. In other words, parsimony does not necessarily enhance reliable transmission of the intended content of the enthymeme – nor does it hinder it, by the way.

Two observations are in order on this point. First, other factors may be responsible for ensuring that the interpreter’s reconstruction is close or identical to the arguer’s intention: for instance, insofar as both of them share the same inferential patterns with an analogous degree of familiarity (e.g., due to inclusion in the same culture, exposure to similar experiences, structural similarities in their cognitive systems, etc.), it is likely that they will converge on the same interpretation of the arguer’s enthymeme. Second, the fact that the interpreter’s parsimony may lead to misinterpret the arguer’s position does not necessarily result in jeopardizing the arguer’s dialogical goal – on the contrary, in some cases this possibility can even be actively exploited by the arguer to raise his chances of success, as I shall discuss in a while. More generally, it should be kept in mind that the interpreter is pressed by parsimony to apply her own inferential schemes to enthymeme reconstruction, and, although these schemes are fallible, they are likely to be regarded as highly reliable by the interpreter herself. So there is a concrete possibility that the interpreter will construe the arguer’s position in a way that is, in the interpreter’s subjective view, even stronger than what the arguer originally intended. The phenomenon of “unwarranted charity” (see section 2) exactly concerns this case.

To summarize on this point, generalized parsimony between the arguer and the interpreter systematically facilitate the (minimal) success of their enthymematic argumentation, insofar as the arguer’s enthymeme is understood by the interpreter – although not necessarily as it was intended by the arguer. This success provides a reinforcement for the parsimonious strategies that produced it, since it shows to the arguer that an enthymeme (as opposed to a fully explicit argument) is enough for communicating with the interpreter, and it confirms the interpreter that the reconstruction

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of enthymemes is a worthy effort, i.e. that something sensible can be extracted from these elliptic messages. This virtuous circle of parsimony (which is similar to the convergence between trustfulness and sincerity discussed in 5.1) offers a tentative explanation to the relative frequency of enthymematic arguments and to their usually felicitous interpretation – an explanation, of course, that will have to await further empirical corroboration before being taken as valid.

Finally, in order to conclude this short survey on the role of parsimony in enthymematic argumentation, let us relax the constraint that characterized the analysis so far, i.e. the choice of considering only agents lacking any metacognitive capabilities. Although parsimony was shown to be independent from such skills (an important result, since it reduces the number of assumptions needed by this hypothesis), it is certainly worth inquiring what may be the effects on parsimony in those agents, like ourselves, that are quite apt at representing each other's mental states. Is parsimony still a relevant concern for *metacognitive agents*, and how does it affect enthymematic argumentation between them?

The answer to this question is twofold: on the one hand, both the arguer and the interpreter acquire, through higher-order reasoning about each other's mind, *additional reasons to be parsimonious*, so that parsimony is reinforced by social metacognition; on the other hand, sophisticated strategies for *exploiting the parsimony of the counterpart* become available to metacognitive agents, for the arguer as well as for the interpreter. In both cases, metacognitive capacities *enhance* the impact of parsimony over enthymematic argumentation, rather than diminishing it.

Let us begin from the first point, i.e. how higher-order reasoning on the counterpart may reinforce the agent's own tendency towards parsimony in argumentation. From the standpoint of a metacognitive arguer, now he will have an interest to put his arguments in enthymematic fashion not only to save his own resources, but also not to waste those of the interpreter. For instance, "time is money", as they say, and this holds for both the arguer and the interpreter – and a metacognitive arguer can easily understand and attribute such a concern to the interpreter. So he will be perfectly aware that formulating an argument like "Since Socrates is a man and all men are mortal, then Socrates is mortal" would be considered by the interpreter as very long-winded, tedious, and pedantic – in other words, a real waste of time! In choosing instead to utter the argument as an enthymeme, e.g. "Socrates is a man, hence he is mortal", a metacognitive arguer is concerned not only with economizing his own resources, but also with helping the interpreter not to waste hers.

Moreover, whenever the arguer can attribute to the interpreter certain pieces of knowledge, or more generally a common background and shared assumptions, this gives him one more reason to be elliptic in his arguments and expect nonetheless to be perfectly understood. This is indeed the standard view of the enthymeme as "a logical inference in which one or more of the premises are omitted from mention on the ground that their truth is common knowledge and goes without saying" (Quine 1972, p. 169). This quality of the enthymeme was already clear to Aristotle, who also fully appreciated the rhetorical value of avoiding to state the obvious:

Thus we must not carry its [i.e. the enthymeme's] reasoning too far back, or the length of our argument will cause obscurity: nor must we put in all the steps that lead to our conclusion, or we shall waste words in saying what is manifest. It is this simplicity that makes the uneducated more

effective than the educated when addressing popular audiences – makes them, as the poets tell us, ‘charm the crowd’s ears more finely’ (*Rhetoric*, II, 21, 1395b, 24-29; translated by W. Rhys Roberts).

As for a metacognitive interpreter, for her to refuse or fail to reconstruct an enthymeme would imply attributing to the arguer either the incapacity to formulate a coherent line of reasoning on this matter (a supposition that may be deliberately and strategically exploited by the interpreter, see later), or the intention to deceive or to keep uninformed the interpreter. Again, both these suppositions are cognitively more demanding to entertain than just assuming the arguer to be truthful, i.e. to be trying to convey a sensible argument through his enthymematic utterance (see also section 5.1 on this point). Moreover, insofar as a metacognitive interpreter is capable of attributing to the arguer a concern for parsimony similar to her own, she will not only understand, but even *expect* an enthymematic formulation of his arguments. Why should I be surprised by your parsimonious use of words, time, and cognitive resources, as long as it obeys to the same principle that inspires my own actions?

Even more significantly, agents capable of representing each other’s mind will also acquire the necessary skills for *exploiting the general mechanism of parsimony to their own advantage*. Let us see how this works for, respectively, the arguer and the interpreter, confining the analysis to the context of persuasive dialogues – although similar considerations, with the adequate cares, could be easily extended also to other dialogical contexts (Walton 1998).

As soon as the arguer comes to expect the interpreter to actively provide a reconstruction of his enthymemes along the lines of her own inferential schemes, he might conceive the plan of exploiting this fact for persuasive purposes – that is, literally putting the validity of his argument in the eyes (or brains) of the interpreter. Again, parsimony can be a relevant concern here: why should I devote precious resources to divine a complete argument that might satisfy your critical standards, when I can more easily feed you an enthymeme and leave it to you to provide a convincing reconstruction of it? This strategy would amount to deliberately take advantage of the so called phenomenon of “unwarranted charity”.

By way of example of this widespread enthymematic strategy, let us take one of the enthymemes discussed by Cicero in his *Topics* (§§ 55): “Do you condemn the woman whom you accuse of nothing?”. As Manfred Kraus has convincingly showed (2006), the fact that Cicero decides to frame all his examples as rhetorical questions is very significant, insofar as it serves the precise function of putting persuasive pressure on the interpreter, preventing her from questioning the validity of the implicit warrant – that, in this case, would turn out to be rather weak. Moreover, rhetorical questions, and enthymemes as well, allow sophisticated forms of tactical manoeuvring (van Eemeren and Houtlosser 2002), in particular shifting and evading the burden of proof (Kraus 2006, p. 322). This is precisely the kind of persuasive effects that enthymemes have the tendency to trigger, and that a metacognitive arguer may come to expect and exploit, therefore acquiring additional strategic reasons to opt for enthymematic argumentation.

As for the interpreter, her metacognitive capacities allow her to speculate on why the arguer happened to put his argument in enthymematic form. In general she will presume he is acting under the pressure of scant resources, but, depending on the frame of mind she attributes to him, her own strategy might change: if she believes him to be

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saving just breath, time, and cognitive resources (cases A and B in section 4), she will have no convenience in refusing to reconstruct his argument; but if she presumes him to be no longer able to recall the complete structure of the inferential process hinted at by his enthymeme (case C), then she will have an interest to turn this to her advantage – e.g., by inviting the arguer to be more explicit, and by probing more deeply into his line of argument. In other words, a metacognitive interpreter may use the enthymeme as a clue of the arguer’s weaknesses, and decide to act upon that clue.

More generally, the interpreter has always the opportunity to use the ambiguity of the enthymeme to her advantage, either invoking the incompleteness of the argument as a reason to reject or downplay its presumptive weight, or by reconstructing it in a way that is deliberately different from (and subversive of) the arguer’s intentions, as understood by the interpreter. The latter is an effective countermove against the arguer’s attempt of using an enthymeme to put validity in the eye of the interpreter. In retaliation, the interpreter may take this chance for “hijacking” the arguer’s reasoning, reconstructing his enthymeme in a way that leads to a different conclusion, one that is more convenient to her. By way of example, consider the following situation (which is also a famous joke)¹¹: a couple, John and Nancy, is at a restaurant, and there are two apples on the table. One apple is small, wrinkled, and not appetizing at all, whereas the other is large, ripe, and mouth-watering. Without further ado, John grabs the nice apple and proceeds to eat it, leaving the other on the table. Nancy resents this selfish behaviour and reprimands John for his lack of manners. To this, John objects by asking: “If you had the first pick, which apple would you have taken?”. When Nancy replies that she would have graciously taken for herself the worse apple, John smugly concludes: “Well, then you should be satisfied, since that is precisely what you ended up with!”. Here John is deliberately misinterpreting Nancy’s unstated claim, reconstructing it as “I prefer for myself the worse option”, whereas the intended meaning of Nancy was something like “I prefer for myself the worse option when I am free to decide and it is not imposed upon me”. Hence this case can be construed as the intentional exploitation of an enthymematic ambiguity, perpetrated by the interpreter at the expenses of the arguer.

Finally, the interpreter may just refuse to take the enthymematic bait offered by the arguer, therefore being less pro-active than usual in reconstructing his enthymeme, precisely because “she knows herself” (i.e. she has a metarepresentation of her own cognitive processes) and wants to avoid undesirable consequences of parsimonious reconstruction of the arguer’s enthymemes. For instance, with reference to the burden of proof, the interpreter might refuse to adopt it, leaving to the arguer the full responsibility of supporting his arguments – as it should be, by the standards of critical discussion. It is important to clarify here that part of the arguer’s burden of proof, in enthymematic argumentation, is frequently *adopted* by the interpreter, rather than being automatically shifted. Enthymemes by themselves do not shift the burden of proof: the proponent of an enthymematic argument is still responsible for providing all its missing parts and implicit warrants, if asked to do so. What is fascinating, though, is that most of the times the interpreter does not ask for what is missing and/or implicit, but instead tries very hard to provide it autonomously. So what happens is a form of benevolent *adoption* of the burden of proof, with the interpreter stitching patches over the arguer’s gaps, in such a way as to

¹¹ I am grateful to Cristiano Castelfranchi for sharing with me this joke – which I find most instructive, not only on enthymematic argumentation, but also on the subtle rationale of social conventions.

make good sense of the final result. Even more remarkably, this effect, which is due to parsimony, applies also to adversarial contexts, such as persuasion: but in these circumstances trying to make good sense of the arguer's enthymemes is equivalent to make them harmful for one's own case, which means stretching "charity" for the opponents to the point that it becomes detrimental for our self-interest. An interpreter who is aware of these unintended consequences of parsimony will have good reason to refrain from extending it to the counterpart's argument. In fact, as it was frequently mentioned before, parsimony guides our choices only insofar as it does not hinder more relevant practical concerns, e.g. winning the argument in an adversarial context.

To summarize, agents endowed with metacognitive capabilities are still subjected to the constraints of parsimony in argumentation, but in addition they are able (1) to exploit each other's parsimony to their advantage, and (2) to overrule their own parsimonious inclination, whenever it threatens to jeopardize their argumentative goals. This makes the task of developing a comprehensive account of enthymematic argumentation much more complex and fascinating, since several strategic considerations will have to be added to the general picture outlined here. Nonetheless, the cornerstone of these further layers is still the same: the need to administer parsimoniously the scant resources available to both the arguer and the interpreter. This is, I maintain, the ultimate reason behind their inclination to frequently use and actively reconstruct enthymematic arguments.

7. CONCLUSION: IS CHARITY A MISTAKE OR A MISNOMER?

The bottom-line of this essay is that parsimony is the main force at play behind the workings and the frequency of enthymematic argumentation. This line of analysis is not unheard of in argumentation theories, but I believe it is fair to say that it is still marginal. To the best of my knowledge, so far only John Woods (2002) explicitly linked the cognitive constraints of human arguers with their frequent and successful use of enthymemes. In this paper, I elaborated further on this intuition, developing it along partially different lines from those he suggested. To my mind, the dynamics of enthymematic argumentation basically depend upon what Woods might have called "scarce-resource compensation strategies" (2002, pp. 61-63), i.e. all those resource-saving mechanisms and heuristics that I have gathered here under the overarching category of 'parsimony'.

In the end, one last score remains to be settled. What is the import of this analysis upon the good old notion of charity? As the title of this essay already suggested, I am under the impression that the notion of charity has been largely abused, as far as enthymematic argumentation is concerned. Pace Davidson (1967) and his followers, it is not charity that makes us inclined to put our arguments in enthymematic form, not it is charity that motivates our efforts at reconstructing each other's enthymemes. Much more prosaically, it is parsimony that drives us, acting as a basic, automatic, and largely unconscious urge to minimize the unnecessary consumption of valuable and scant resources. And even if the notion of 'charity' is intended only as a metaphor, to indicate an impersonal and involuntary mechanism akin to the one described here, then it is a poor and misleading metaphor, and also in this respect 'parsimony' would serve us better. Charity, I maintain, is either a wrong explanation for enthymematic argumentation, or a

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bad misnomer of it – insofar as it inevitably suggests the idea of an inclination that is both socially oriented and intrinsically benevolent, whereas the interests served by enthymematic argumentation appear instead to be highly self-centred.

Once more, and by way of conclusion, I need to emphasize that parsimony should never be confused with laziness. Insisting on the practical urge to devise “cheap” heuristics to face our communicative needs and satisfy our dialogical goals do not lead to forsake demanding standards of validity, correctness, and justification of our arguments. Parsimony does not subvert rationality: it simply provides the factual boundaries within which rationality is to be exerted. This applies also to enthymemes, and to argumentation in general. In both reasoning and dialogue, the possibility of critical discussion is certainly a blessing and a precondition of democracy. The continuous practice of critical discussion, however, would mostly result in a waste of time. Hence the wise policy of making frequent use of our enthymematic talents.

[link to commentary](#)

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