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On the Difference between Fallacy and Sophism

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Abstract: The translation into French of the English word “fallacy” opens a discussion on the difference between fallacy and sophism in English. The two words are sometimes synonyms, but a difference is sometimes made on the ground that a sophism is deliberate and a fallacy is non-deliberate. In a second part of the paper this distinctive criterion is taken seriously to discuss the relative frequency of sophisms and of fallacies for a typical kind of fallacious argument. I claim that this aspect should be taken into account by a theory of fallacious argument.

Keywords: Fallacy, sophism, fallacious argument

1. Introduction

The starting point of this paper was the translation into French of the English “fallacy.” In spite of a few cases of translation by *sophisme* during the three last centuries, there is no established tradition. More generally, there is no French tradition of interest in fallacies or sophisms. As far as I know, no important study has been published on this topic since several centuries. You can only find a few pages, here and there, in old logic books.¹ A possible explanation of this void is the cliché that at least since Descartes, France is said to prefer mathematics to logic. Yet, a quick survey of the most exhaustive catalogue of French books² shows an impressive number of titles using the terms *sophisme* or *sophiste*, always addressed to an Opponent on a disparaging and accusatory tone.

2. Sophism, fallacy, *sophisme*, *fallace*, what difference ?

In 1866, in his French translation of J.S Mill's *A System of Logic*, Louis Peisse chose to translate *On fallacies*, the English title of Book V, by *Des sophismes* (Mill, 1866). About ten years before, Thomas S. Baynes had published a translation of *La Logique ou l'art de penser (Logic or the Art of thinking)*, better known as *Port-Royal Logic* published in 1662 by Arnauld and Nicole. Two chapters of this book are devoted to *sophismes* that Baynes translated by “sophism” (Arnauld and Nicole, 1850). The authors of *Port-Royal Logic* sometimes use the Latin word *fallacia* which is the root of the English “fallacy” to recall the ancient name of a sophism. You can read, for instance: “this sophism (*sophisme*) is called by the Schoolmen³ *fallacia accidentis*.” Ten years before Baynes, in 1840, Etienne Dumont published a double book including Jeremy Bentham’s *Book of Fallacies* of 1824 and his *Anarchical Fallacies* of 1816 under the title *Traité des*

¹ “Old” means dating from the XIXth century or before.

² The French Collective Catalogue: *Catalogue Collectif de France* (CCF).

³ Baynes translates the French singular “in the school (*dans l'école*)” by a plural “in the schools.” I suggest it is a mistake, for “l'école” is likely to mean here “the scholastic tradition.”

sophismes politiques et des sophismes anarchiques (A treatise on political sophisms and anarchical sophisms) (Bentham, 1840).

In 1995, in their book *Fallacies*, Hansen and Pinto (1995) published an excerpt from Baynes' translation of *Port-Royal Logic*. This suggests that “sophism” and “fallacy” are synonyms in English. To clarify this point, I had a few informal discussions with English native experts in argumentation theory. It revealed two tendencies: either embarrassment or the idea that a fallacy is not deliberate while a sophism is deliberate. Yet, according to the O.E.D, “fallacy” means “1. Deception, guile, trickery; a deception, a trick; a false statement, a lie” and also “3.a. A deceptive or misleading argument, a sophism.”

A few years ago Christian Plantin suggested to forge a new French name, *fallacie* to translate the English “fallacy.” He was inspired by *fallace*, an old French noun that is not used anymore⁴ although the adjective *fallacieux* which means deceptive or fallacious, is quite common but not used by anybody. His idea has the virtue to avoid unfortunate interferences between scientific and folk concepts or taxonomies, but it has the drawback to create a single term to translate an ambiguous one. In his *Dictionnaire de l'Argumentation*⁵, Plantin (2016) claims that in French nonacademic contexts, the nouns *sophisme* and *sophiste* are not only pejorative but presume an intention to deceive. I agree that it is generally the case. Yet, a presumption of intention does not entail that there is an intention. Does intention matter? That's the question.

Now, if we turn to books old enough to meet the old word *fallace*, it appears to be a synonym of *sophisme*. In 1600, Scipion Dupleix, counsellor of Henry IV and private tutor of his son, published a book called *La Logique ou art de discourir et raisonner (Logic or the art of discourse and reasoning)*. The last part of this very Aristotelian flavoured book is devoted to ways to protect oneself from sophists. Dupleix writes: “After having dealt with mistakes, surprises and fallacies (*fallaces*) simply coming from words, we still have to speak of those which come from things themselves: their number is seven: Accident ...” (p. 351). After a few examples of *fallacia accidentis*, he goes on: “To solve these sophisms you have to remember that...” (p. 352). So, he does not hesitate to shift from *fallace* to *sophisme* to refer to the same objects.

Another example of synonymy can be found in J. Salabert who published in 1638: *Les adresses du parfait raisonnement, où l'on découvre les thresors de la logique françoise, et les ruses de plusieurs sophismes (The addresses of perfect reasoning where you discover the treasures of French logic and the guiles of several sophisms)*. The title of chapter XXVII is: “On three kinds of sophisms of compounded sense and of divided sense”. It begins with: “These sophisms are usually called: the fallacies (*fallaces*) out of diction” (p. 317).

Dupleix, Salabert and the Fathers of Port-Royal have a common source of inspiration: Aristotle's list of paralogsms, even if *Port-Royal Logic* twists its presentation and often “thinks with Aristotle against Aristotle,” for instance to support Galileo's view against Aristotle's sophism (*petitio*) about the center of the world.

What is the origin of the tendency to make a distinction between fallacy and sophism based on the intention to deceive? I do not know. Yet, Aristotle paves the way which makes it possible. In *On Sophistical Refutations*, he deals with deliberate fallacious arguments. However,

⁴ According to the *Trésor de la langue française*, a major reference dictionary of French language, the word “fallace” appears in around 1223 and means “deceit.” The T.L.F adds that it comes from the Latin *fallacia* which meant “tromperie, fourberie, ruse” (“deceit, trickery, guile”) which are intentional terms.

⁵ It should be published in 2016.

in several places he writes that if you are not careful enough you can deceive yourself with a paralogism during a solo reflexion (7. 169a36-b2, 16. 175a10-12). Logical self-deception is possible, but a deliberate self-deception seems more difficult to achieve than a mistaken one.

A naïve jump over centuries and borders and languages takes us to Immanuel Kant. He supports a distinction between fallacy and sophism based on the will to deceive. In his *Logic* he writes: “A syllogism which, though it has the appearance of a right one for it, is false in point of form, is termed a fallacy (*Trugschluss (fallacia)*). A syllogism of that nature, when one deceives himself with it, is a paralogism (*Paralogismus*)⁶; and when he endeavors to deceive others with it, a sophism (*Sophisma*)” (§ 90, p. 193).

Another jump over space and time and we meet D. Walton’s couple “error/tactic” which seems to meet the couple “non deliberate/deliberate.” Walton writes: “The paralogism is the type of fallacy in which an error of reasoning is typically committed by failing to meet some necessary requirement of an argumentation scheme. The sophism type of fallacy is a sophistical tactic used to try to unfairly get the best of a speech partner in an exchange of arguments” (2010, p. 171). Like in Kant, paralogism and sophism are here two subcategories of fallacy.⁷

3. On the possibility and frequency of fallacies and sophisms

Granting that a fallacious argument is an argument which appears to be a better token of its kind than it really is,⁸ let us now assume the possibility of a clear-cut classification of fallacious reasonings into deliberate and non-deliberate ones. From now on, “fallacy” will mean a non-deliberate fallacious reasoning and “sophism” a deliberate one. So, under the title “Fallacious argument” we can make two columns: “Fallacies” and “Sophisms.”

My question is: are the lists under the two headings the same? On the one hand, if one kind of fallacious reasoning were always intentional it would probably not have passed unseen; on the other hand, you can always suspect a fallacious argument to be a sophism. This is why I will assume that any fallacious argument can be deliberate or not. So, the list of fallacies and the

⁶ The possibility of (*a priori*) self-deception is essential for the “paralogisms of pure reason” of the *Critique of Pure Reason*.

⁷ Walton uses a similar distinction in other places, but it is not always the same and clear-cut. For instance in *A Pragmatic Theory of Argument* (Walton 1995), you can read in the Preface: “A fallacy is regarded as an argumentation technique, based on an argumentation scheme, misused to block the goals of a dialogue in which two parties are reasoning together” (p. xi). Here, a fallacy is intentional (“to block”). This is less obvious on next page “A fallacy is either a *paralogism*, an argumentation scheme used in such a way that it systematically fails to answer a critical question appropriate for that scheme, or a *sophism*, a more extended misuse of a scheme, or sequence of them connected together, that has been twisted or used incorrectly in a dialogue, as evidenced by a distorted profile of dialogue or that is called an argumentation theme” (p. xii). What makes the failure “systematic”? Why is the sophism “used incorrectly”? Does it come from the irrelevance of the argument or from its kind? Does it come from an eristic attitude of the arguer who intends to block at any rate? On the other hand, a “twist” of a scheme seems intentional, however if it is only “misused” it can be a mere mistake. Next page we find again the contrast error/tactic: “The paralogism type of fallacy is a systematic, underlying type of *error* or reasoning in an argument. The sophism type of fallacy occurs where a scheme is used as a deceptive *tactic* to try to get the best of the other party unfairly” (p. xiii). See also Walton’s long discussion (pp. 244-249) and his wish to discard the psychological problem (intentional/ non intentional) by a principle of “externalization” inspired by pragma-dialectics to avoid a psychological approach that would be “a severe obstacle to the development of fallacy theory as a branch of logic” (p. 248). What is the most important: to understand fallacies or to develop a branch of logic? In my opinion fallacies are an interdisciplinary challenge.

⁸ I borrow this wording from H. Hansen.

list of sophisms *a priori* have the same items, but the question now bears on the relative frequencies of each fallacy listed and the corresponding sophism.

Even if you can suspect any fallacious reasoning to be a sophism, you sometimes need time and resources to design a fallacious argument. You can be a great sophist at your desk, but you will be a more impressive one if you can quickly and deliberately provide any kind of fallacious argument in the heat of an oral dialogue. This suggests that my question is more interesting in a context of bounded rationality⁹ and also that it may have different answers in oral or written contexts.

A naïve empirical investigation of the relative frequency of fallacies and sophisms would certainly face three major difficulties, especially if the inquirer is involved in the exchange. In the first place, is the argument fallacious? Secondly, assuming that it is, is its author ready to acknowledge it? You can doubt it. Thirdly, even if the author has a minimal idea about the meaning of “fallacious argument” and agrees that her argument is fallacious, you can doubt the truthfulness of her answer when you ask her whether she intended to deceive.

A way to avoid these difficulties could be self-examination. Unfortunately, this solution too is not very promising. You can try to remember all the sophisms you made today, but to remember one’s own fallacies is pretty hard, if not impossible since, more generally, it is difficult, if not impossible, to identify one’s own (uncorrected) mistakes.

Both lie and sophism presuppose the speaker’s duplicity, namely an important and relevant difference between what he says and what he thinks of what he says (Saul, 2012). The intention to “pretend,” i.e. to deceive another person, is also common to skillful sophisms and lies, for both require the plausibility of what is said. Yet, there are at least two important differences between them.

The first one is what I will call the easiness of performing the act. I am not sure that it is always easy to lie but it often seems so. You can improve your skill to lie but children do not need to learn to lie and they are quickly efficient. On the contrary, it seems to me that it is not always easy to produce a sophism. Of course, it may depend on the kind of sophism and this has a direct consequence for the relative frequency of fallacies and sophisms sharing the same name. Conversely, there are not so many kinds of lies: you do not find long lists of types of lie in specialized books as you do with fallacious arguments. This is why to devise a new token of this or that kind of sophism is sometimes more difficult than to devise a sophism of any kind. Hence, if I ask you new examples of sophism, it is likely that some kinds will be more frequent than others. Yet, this is an empirical question which requires an empirical answer.

A clue that it is not always easy to produce some kinds of sophism, especially in the heat of a dialogue, is that, sometimes, it is not easy even when you have more time to think about it. Another clue is the return of the same examples in the literature on fallacious arguments. For instance, Augustus De Morgan was puzzled to find in Whately’s *Elements of Logic* the same old example of *fallacia accidentis* as in a book dating from 1496¹⁰ (De Morgan, p. 251). How come that this example, or Whately’s *petitio* which plays on the Saxon and Norman origin of English words (Whately, III.13, p. 203), can still be found in contemporary books? Do writers on

⁹ The notion of bounded rationality is often vague, victim of its own success (Gigerenzer 2001). Here I take it mainly as time-limited rationality.

¹⁰ “Yesterday you bought raw meat, you eat today what you bought yesterday, therefore today you eat raw meat.” De Morgan probably did not know that that you can find this example also in old French books and could not have known that it would still be around in 2016.

fallacies have difficulties to find new examples? If this is the case, it could be a hint that it is not that easy to find telling examples of some kinds of fallacious reasonings.

A possible reason of this conservatism is that, since Aristotle, fallacious reasonings are often discussed in didactic contexts where you need easy examples making both the good and the bad side of an argument quite explicit and accessible. The fallaciousness of an argument can be seen in the very argument; a lie cannot be seen in a mere sentence. This leads us to the second important distinction between lie and sophism.

To lie is sometimes risky. But to produce a sophism is, I think, more risky. The requirement of “appearance to be good” also holds for a lie. However, a lie only bets on the ignorance of the interlocutor, while a sophism sometimes bets on her ignorance but mostly challenge her logical or linguistic competence. In Plato's *Euthydemus*, the very young Clinias is fooled by the sophist's sophisms, the young Ctesippus rebels after a first period of puzzlement and the old Socrates, like most readers, is not fooled at all. On the other side, the two sophists are pretty confident in the power of their tricks, but they are wrong and this is part of what makes them ridiculous. So, to use sophisms is risky, but is there any reason to believe that the risk is the same for any kind of sophism?

4. Three short discussions: equivocation – *petitio* – *non causa pro causa*

Equivocation

Aristotle's classification of paralogisms in two classes – *in dictione* and *extra dictionem* – has the virtue to stress that some fallacious moves depend on the specificities of a language. Translation provides ample evidence of it: translators sometimes have to be imaginative to produce a smooth translation that preserves the fallacious move. Who would suspect the Greeks of a deliberate massive sophistic equivocation because no single word of our barbarous languages can translate *logos*? We certainly prefer to think that our languages lack the resources to evaluate the fallaciousness of Greek arguments where the word “logos” would play a key role.¹¹ Does Greek itself fare better? No, since a necessary condition to unmask a homonymy is its public acknowledgement as it was the case with the ambiguous verb *manthanein* (meaning roughly either “to study” or “to grasp”) in Plato's *Euthydemus*. There, the sophists' equivocation is a sophism for at least two reasons. First, they proudly avowed their intention to fool the young Clinias. Second, their arguments appear in an eristic dialogue reported in a meta-dialogue which is itself a text designed by Plato¹². The sophistic equivocation worked because Clinias did not clearly know that the verb *manthanein* had two meanings.¹³ So, the sophists (or Plato) were successful because they overcame two challenges: first, to find a pragmatically adequate

¹¹ On this topic see Cassin (1989)

¹² The distinction between sophism and fallacy is the central issue of the debate about Plato's fallacious arguments. It began with R. Robinson's paper and then involved R. K. Sprague and G. Klosko, among other contributors. See (Robinson 1942), (Sprague 1962), (Klosko 1983, 1987).

¹³ “Public acknowledgement” of a case of homonymy is a vague notion. It does not entail that everybody knows that a word has several meanings but only that most speakers of the language know it. Clinias did not. Hamblin wrote: “...equivocation is a procedural, non-topical concept. The question of whether a given term is or is not (subtly) equivocal in a given context or family of contexts is not one that may be decided by looking at the term itself, but rather a question of how one may best order the discourses within which the word appears” (Hamblin, p. 301). Here, thanks to the sophists, the best order is the worst.

equivocal word and, second, to find a native speaker ignorant enough to be trapped. They were fortunate because they were divinely inspired by Plato who had time to devise all this.

Petitio

Like equivocation, *petitio* has many faces which increase the scope of my question about fallacies and sophisms. I will only focus on the most basic form of *petitio*, “*p* therefore *p*.” Is it an argument which looks better than it is? From the point of view of standard logic, it looks perfect. Could it be an error of reasoning? I don’t see how. On the other hand, it is commonly used in two deliberate ways. It can be an implicit avowal of ignorance in front of something claimed to be an ultimate fact “Why is the sky blue? Well ... it’s blue ... because it’s blue.” “Do you like spinach? No. Why? Come on, I don't like it because I don't like it!” However, sometimes you may be right to suspect a sophism which conceals a better reason: “Dad, why don't you want me to go out tonight? Well, because I don't.” Does the argument appear better than it is? It does not claim to be good, it claims to be decisive. It could be a way for the father to truthfully express his view that his will is free. But a Gricean minded child will suspect that her father’s argument is so obviously uncooperative that an implicature is probably lurking around, something like: “I have a better reason, but it's not your business.” If the child is right about the father’s better reason and if her guess meets the father’s intention, the argument now does not only appear to be good: it is a highly successful cooperative sophism by means of its blatant epistemic flaw.

Non causa pro causa

I take this fallacious argument in the sense it has in Aristotle's *On Sophistical Refutations*, namely to take a proposition for a premise when it is not contributing as a premise.¹⁴ According to the definition of a syllogism, if it is a premise, a proposition must contribute to the conclusion. An idle premise is no premise.¹⁵ A proposition that is not a premise is just logically useless for the argument. But does an argument become fallacious because there is a useless proposition (a non-premise) figuring among its premises? No, but in the context of *On Sophistical Refutations* it does if it plays another essential role in the refutation. This point is the major difference between the *On Sophistical Refutations* version of this sophism and the *post hoc ergo propter hoc* version of *On Rhetoric* which can be a fallacy.¹⁶ The *non causa* proposition does play an essential role in a refutation when it is the thesis to refute. It has an argumentative function, even if it is not a premise. The core of the argument, then, is a *reductio* and the trick is the claim that the impossibility of its conclusion supports the contradictory of the *non causa* proposition. Here is an example:

You say that in ten years the oil price will be high. But up to now, when the oil price is low there is no serious research on alternative kinds of energy. That is today’s situation: the oil price is low. So, there is no serious research on alternative energies. But you also claim that there is serious research on

¹⁴ For the interpretation of the expression *non causa pro causa* and various interpretations of this fallacy see Hamblin (1970, pp. 78-80), Woods (2014) and Woods and Hansen (2001).

¹⁵ See, Aristotle, *Topica*, I, 1, 100 a 25-27, or *Prior Analytics*, I, 1, 24b 18-20.

¹⁶ See, Aristotle, *On sophistical refutations* (5, 167b21-36) and *Rhetoric* (II, 24, 1401b29-33).

alternative kinds of energy! You can't have both! So, in ten years the oil price will not be high.

The *non causa* proposition is your claim that “in ten years the oil price will be high.” The fallacious move to the contradictory of the *non causa* proposition is an induction about the oil price in ten years, based on today's contradiction between the valid intermediate conclusion “There is no serious research on alternative energies” and your other claim.

Is the fallaciousness of this kind of argument more often deliberate than not?¹⁷ Its structure seems to me a bit complicated to be a common sophism. Is it more often a fallacy? Aristotle drops a hint in this direction when he writes: “Such arguments are not absolutely inconclusive but only inconclusive as regards the point at issue, and *the questioners themselves are often equally unconscious of such a state of affairs*” (5. 167b34-36).¹⁸

5. Conclusion

The difference between “fallacy” and “sophism” is perhaps just a nominal distinction. Yet, I think that a more systematic attention to the consequences of the apparently neglected distinction between deliberate and non-deliberate fallacious arguments would be beneficial for the study of the battlefield of fallacies.

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¹⁷ It took me more than a few seconds to design this one but it will go faster next time since I have found a good heuristic: “Project a valid present conclusion into the future.”

¹⁸ My emphasis.

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