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The Argumentative *A Priori* in the Constitution of Beliefs

Abstract: A theory of social action requires a plausible and verifiable explanation of the beliefs that orient the subjects' conduct. This implies to consider that when people talk about their actions, they show a wide variety of levels of consciousness regarding the validity and adequacy of the beliefs implied in their discourse. Thus, their argumentative mistakes do not necessarily result from internal factors, unknown by them, or from the passive appropriation of received ideas, or even from the use of a primitive logic, but rather from the people's interests, needs, and values, that is, from the implicit or *a priori* hidden in their discourse. In this essay we try to show that arguments of scientists may also have *a priori* that can "contaminate" well-formed arguments used in scientific discourse. We develop the hypothesis that commonplaces are analogous to the *a priori* in Simmel/Boudon model and also to the embodied schemata in Lakoff and Johnson definition. Finally, we show that metaphors are not the only scheme to say the real, since the metonymy and the dissociation of notions are also used and their validity can be established by the negotiation of meanings in rhetorical and dialectical situations.

Keywords: theory of social action, situated argumentative procedures, implicit assumptions, Simmel/Boudon model.

1. Introduction

When talking about their actions, people present a wide variety of levels of consciousness regarding the validity and adequacy of the beliefs or mental representations implied in their discourse. Thus, their argumentative mistakes do not necessarily result from internal factors unknown by them, or from the appropriation of received ideas, or even from the use of a primitive

logic, but rather from people's interests, needs, and values, that is, they derive from the implicit or *a priori* hidden in their discourse.

This conception is well developed in the book *The Art of Self-Persuasion* by Raymond Boudon (1990). This author presents a thesis according to which well-formed arguments (syllogisms), can be "contaminated" by non-explicit premises that lead to believe in doubtful, false or fragile ideas. This conception, sketched by Simmel and developed by Boudon, is hereinafter referred as Simmel/Boudon model. We propose that the implicit arguments mentioned by Simmel and Boudon can be understood as the *commonplaces* (*koiné topoi*) of the Aristotelian tradition, which are argumentative schemes usually present in any debate or conversation. The commonplaces, the cognitive metaphors, as well as the dissociations of notions, cannot be demonstrated as valid, but they are admissible in a rhetorical situation, in which those who are involved need to decide what they should do under the imperative of practice. Those same schemes can be the implicit of dialectic decisions, that define the predicates or categories that can be assigned to the subject of a proposition.

We will, initially, examine the opposition between arguments of scientists and non-scientists to show that in both cases hidden *a priori* may produce mistakes. Then we present the hypothesis that the commonplaces are analogous to the *a priori* in Simmel/Boudon model and also to the embodied schemata in Lakoff and Johnson's (1981) definition. Finally, we show that metaphors are not the only scheme to say the real, since the metonymy and the dissociation of notions are also used for that purpose and their validity can be established by the negotiation of meanings in both rhetorical and dialectical situations, what lead us to expose the three circumstances that determine the techniques to say the real: the rhetorical, the dialectical and the teaching or the situated argumentative procedures.

2. Arguments in science and common sense

As stated earlier, argumentative mistakes are not restricted to common sense, they also occur in scientific discourses, as is the case in the exemplary observation of Boudon (1990, 32) regarding the belief in the phlogistic¹. This author says that historians of science tried to show that this erroneous idea was not due to a *primitive mentality*, since they had good reasons to support it. Boudon (1990, 162-163), when discussing *modus tollens* in Poppers' theory, gives another evidence that scientific

¹ A substance supposed by 18h-century chemists to exist in combustible bodies, and to be released during combustion.

discourses also contain *a priori* that compromise their argumentative quality. Let's remember a classical way of exemplifying the *modus tollens*: when it rains, the street gets wet; the street is wet; then... it rained. In fact, one cannot bet on the reliability of that conclusion, unless the competitors and equally plausible hypotheses and minor premises are excluded.

The problem is that Popper requires the exclusion of *all* the competitor hypotheses, which is not only impossible, but also unnecessary, since experience shows that they are limited by the theme in examination. Thus, as it can be concluded, even in a very well formed theory, such as Popper's, the hyperbolic *a priori* introduced in the *modus tollens (all)*, resulted in a fragile conception. Boudon's explanation shows that, contrary to Popper's assumption, there is no asymmetry between *modus tollens* and inductive reasoning.

Simmel, after Kant, proposes the effectiveness of the *a priori* in the constitution of arguments in any argumentative situation. For example, the historian constitutes his narrative through signs of the character of the personage, a strategy that remains implicit. The traits of character selected by the historian allow establishing the relations between the *act* and the *person*, as described by Perelman and Olbrechts-Tyteca (2008, § 69). This and other argumentative schemes kept implicit may lead to mistakes not perceived by the author and his audiences because they share the same *a priori*. Thus, there is no way of supporting the existence of a pre-logic or something similar, since the analysis of mistakes shows that formally well-established arguments can be misleading for sustaining themselves in meta-conscious *a priori*.

In Simmel's model, the difference between science and common sense arguments is not due to their argumentative schemes, but stem from the admission of implicit assumptions that constitute the premises of the syllogisms in use. In common sense, premises that lead to false, fragile or doubtful ideas can be accepted, while in scientific field misleading implicit tend to be purged, as in the examples previously presented. We can conclude, therefore, that the scientists' practice is the one that allows the production of reliable knowledge, i.e., knowledge with less *a priori* compromising the quality of the inferences. This conclusion stresses the need for developing better techniques to analyze situated discourses.

3. Are Simmel's *a priori* the same as Aristotle's *commonplaces*?

According to Aristotle there are argumentative schemes that are usual in any kind of debate (the *commonplaces*), while others (the

particular-places) are proper of the techniques and its corresponding sciences. It seems that the *a priori* of the Simmel-Boudon model coincide with both the commonplaces and the particular-places. If so, a study that resumes the *Topics* will allow establishing the analytical framework necessary to identify the *a priori* in both scientific and nonscientific discourses.

Initially, it is necessary to put aside the discussions about commonplaces that reduces them to stylized forms whose origin seems to be in Cicero (see, for example, Thionville 1855). It seems more fruitful to investigate the cases in which a usual argumentative scheme, i.e., a commonplace, is the expression of embodied schemata, as defined by Lakoff and Johnson (1981), since there are cases in which the relation between the argumentative scheme and its sustentation or its expression through an embodied schemata seems evident. This is the case of the commonplace *discrete/continuous* opposition. This antinomy was stressed by Gerard Holton when presenting the position of Weinberg, to whom “the world is discrete, made of particles” (Holton 1988, 33). There is no way to solve the *discrete/continuous* opposition through formal procedures such as controlled observations or experiments. In fact, a dispute about the *continuous/discontinuous* may be abandoned for some practical reason. The reason, when it comes to science, may be the recognition of the uselessness of the dispute to explain some phenomenon, as is the case of the “nature of light” (is it corpuscle or wave?). The dispute regarding the relevance of these opposites presented in commonplaces cannot resort to dialectic procedures – that could allow establishing which pole should be admitted as credible – since they are not contradictory. It is perfectly possible that the opposites *discrete/continuous* are just a matter of point of view, therefore, both can be said about the subject of the proposition. In the ambit of Physics, the opposition *discrete/continuous* may be irrelevant if we switch to a differential topology, in which the discrete is a singularity that emerges in the continuous of the interactions in a balancing framework, as proposed by Jean Piaget (1975), Rolando Garcia (2002) and René Thom (1975) for example.

On the other hand, it is possible that the opposites are incompatible, and thus cannot be used at the same time in a practical situation, being necessary to choose one of them. However, if the situation changes, the other pole can be more relevant. The solution is not, in any event, neither logical nor experimental, but rather what is considered *desirable*, therefore, inscribed in the field of Rhetoric, not in Dialectic. For Einstein, for example, it was not *desirable to* admit that

“God doesn’t play dice”, the reason for which he rejected the models that operate with probabilities, choosing *determinacy* over *chance*. This incompatibility, however, can be solved when it is stated that chance determines a structure, which emerges from casual interactions, something that studies of complex dynamic systems (see, for example, Stein 1989), or another name given to these investigations, try to establish.

The Simmel/Boudon model sustains that the *a priori* may lead to doubtful, fragile or false ideas in any argumentation, in daily life as well as in science, not having, therefore, something like a logic of common sense or a primitive logic. If the logic is the same, then the *a priori* determine the mistakes. What leads us to ask: what are the sources of these *a priori*?

At this point it is enough to say that the figures of thought provide the meanings of the propositions that constitute the premises of the arguments. For example, the embodied schemata (Lakoff and Johnson 1981) have the human body as referent, from which are extracted the meanings transported to the theme that we want to know or re-signify. Let’s resume the opposition *discrete/continuous*, which derives from the fact that each person perceives oneself as unique and isolated. This fact provides the meanings of the premises that sustain that something is discrete, such as the person. But, from another point of view, the perception of oneself can be sustained in family continuity, what permits to affirm that what seemed discrete is, in fact, a continuous, the family; or, more broadly, an immemorial continuity, as ‘the people’s soul’.

In this regard, Prandi’s report (2005) about the notion of person is exemplary, although the anthropologist has not developed the theme *discrete/continuous*. In the Yoruba culture, the notion of person is sustained on the assertion of the existence of three souls (dimensions): the *ori* (head, the individual and his destiny), that is mortal; the *egum*, the family continuity, that can be reborn; and the *orixá*, the connection with the nature and the transcendent, the world outside the family, the community territory. They are three complementary dimensions: the discrete, the person, is also the familiar transcendent and the community, the continuous. Over this conception is inscribed that of *time*, which is not divided in hours, nor in past and future, but it is a continuous: “the lived, the time accumulated and the time happened. More than that, the future is the return of the past in the present, therefore does not exist” (Prandi 2005, 31). Thus, in Yoruba culture there is no continuous/discrete opposition.

Do the Yoruba operate with another logic? Not at all, Boudon would say (and also Durkheim, Simmel, Weber, Piaget, among others),

they just operate with other contents or meanings about things. When assuming the Yoruba conceptual framework, it is perfectly possible to argue with fairness and correction, according to the norms of the science of logic. There is no such a thing as a “logic of common sense” different from the logic in its meaning of well-formed chains of arguments. The difference is not in logic, in the form of arguments, but in what is admitted as premises or *a priori*, or commonplaces, which are also sustained on the figures of thought such as metaphor and metonymy, which are examined next.

4. Schemes to say “what is the real”

The *a priori* of the arguments can be clearly expressed by the analysis that allows identifying the scheme of what is said to be the real. The schemes used to say “what is the real” are figures of thought (metaphor and metonymy), as well as the dissociation of notions, a procedure that tries to avoid or solve some incompatibility among values. These schemes constitute the predicates or categories of the propositions about the real. There is a secular polemic about this theme (see, for example, Kleiber 1990), but we will not examine it, since what interests us here is to show that the categorization is made through a cognitive/affective process that has its base on the operator *comparison of notions*.

The *comparison* is made through the modes similarity/dissimilarity. The social actors compare notions to identify and transfer meanings, if and when this is necessary. The general form is as follows: the theme or target (what we want to mean) is compared to the forum (source), in which is considered the similar for some quality/predicate to be transferred to the theme. If the theme and the forum are of different genus or species, the result will be a metaphor, which is the scheme that makes the different look alike by the qualities chosen for comparison. For example, *Achilles is a lion* transfers the lion’s courage and strength to Achilles.

When the theme and the forum are of the same genus or species, we have a metonymy. This figure of thought requires the predicates to be similar, and they can be integrally or partially interchangeable. To say, for example, that the *social balance (homonoia)* is like a *picnic* is to say that both result from human actions more or less planned whose final result is contingent. Cassin (1994) considers that *picnic* is an adequate metaphor to translate *homonoia*. But, as the comparison is made between similar species, namely social relations, we affirm it is a metonymy. This distinction is necessary because the metonymy is characterized by being

more descriptive, as in *picnic* by *homonoia*, in which it is recognized that social relations are contingent, not likely to be perfectly adjusted, therefore, it is expected that the procedures are adjusted in the course of actions. This regulation by the objectives of the action implies constant readjustments, something that requires the *pragmatic attitude* (Perelman and Olbrechts-Tyteca 2008, §47).

Thus, the identification of the forum of comparison allows exposing the attitude or position of the speaker and his audience regarding a problem, in the case of *picnic* to describe social balance. Perelman and Olbrechts-Tyteca (2008, §47) identify three types of attitude: the logical, the pragmatic and the diplomatic. The *logical attitude* is characterized by trying to solve all the problems once and for all; the *pragmatic*, for adjusting the conduct according to the circumstances; and the *diplomatic*, by avoiding to take a position hoping things will be solved by themselves. These positions (attitudes) seek to solve some *incompatibility* between *what is said to be characteristic of a situation* and *what occurs*; certainly these types of attitude are incompatible with each other. Facing a speaker who adopts the *logical attitude*, that intends to define the rules of actions once and for all, are his opponents, the practical, who consider that “in practice the theory is different”, what is supported by the *pragmatic attitude*. Others decide not to oppose, hoping that the course of the events defines the direction of actions. These are the ones who adopt the *diplomatic attitude*, which, in some situations, is expected and desirable.

This leads us to examine the scheme *dissociation of notions* as described by Perelman and Olbrechts-Tyteca (2008). For the authors, this procedure is required when there is incompatibility between a belief and the circumstance in which the conduct oriented by that belief cannot be achieved. When this is the case, the notion that gives rise to the incompatibility is divided in two terms to say that one lacks the qualities presented by the other, seeking to solve the incompatibility. The usual marker is “it seems, but it is not”, which is presented in the forms “pseudo”, “semi”, as in pseudo-intellectual, semi-alphabetized, for instance. It is not a disjunctive formulation that establishes two different notions as, for example, in or horse or dog. Perelman and Olbrechts-Tyteca affirm that the dissociation of notions establishes a hierarchy oriented by the values of the social group. It is necessary to specify the meaning of the word “value” to make clear the direction of this essay. The word “value” was introduced in the twentieth century philosophy to replace the words “good”, “desirable”, and “preferable” among others (see Lallande 1932). If we recover those meanings, we will consider that

the hierarchies established by the dissociation of notions are coordinated by the topic of the preferable or commonplaces of preferable, which are ready schemes used to decide if a proposition should be admitted for being good, better, useful.

But what meaning of “places” (topos) do we need to adopt? In the *Rhetoric* (1396 b), Aristotle suggests “a mean, the first, to choose enthymemes is the topic”. He says, then, that topic and element are the same thing. What is the definition of topos, after all? To answer this question, we adopt the position of J. A. Segurado Campos in his “Introduction” to the Portuguese translation of the *Topics*. This author (2007) accepts the explanation of Sanmartín, to whom topos is a propositional scheme that can be filled with the terms of the proposition in dispute. Saying it in another way, the topos mark a place to be filled by propositions put in the debate. The topos are distributed in four classes (cf., first book of *Topics*) or the “four predicable ones”: definition, property, genus and accident. Thus, “each instance of the propositional S is P, given the ambiguity of the copula is (*estín*), should be understood as representing successively each one of the four predicable ones, i. e., the scheme S is P should be understood as equivalent to: (1) S is P = P is the definition of S; (2) S is P = P is the property of S; (3) S is P = P is the genus of S; (4) S is P = P is the accident of S” (Campos 2007, § 60).

In the debate to establish the truth or falsity of the proposition, proper of the dialectic situation, we cannot always rely on the contraries, since there are relative opposites. This is the case of the commonplaces of the preferable, or that of the propositional schemes, usual in debates about rights or ethics, in which the a priori, being expressed clearly, lead to exposing the incompatibility of the arguments in a situation. To solve this type of incompatibility, the debaters adopt one of the three attitudes previously presented, namely, the logical, the pragmatic and the diplomatic. If the places are markers of the propositional schemes managed in the situation, then the speakers need to resort to what the audience considers to be the real, in which those schemes have meaning or are recognized as correct. This is done through the figures of thought that allow establishing the meanings of the real: the metaphor and the metonymy. For our purposes, the previous observations are sufficient to assert that the implicit arguments come from the figures of thought, the dissociation of notion, as well as from the commonplaces, and that maybe the same as the embodied schemata proposed by Lakoff and Johnson (1981). This leads us to exam the differences in the argumentative procedures determined by the social situation that conditions them.

5. Argumentative procedures are situated

The argumentative procedures are conditioned and determined by the social situation that requires them. Thus, in the situation of exposure or teaching (*didascalía*) the syllogism has, as premises, knowledge established in other situations (the dialectic and the rhetoric situations). In the rhetoric situation, its syllogism does not require an extensive exposure of threads, because the audience would not be able to follow; besides, demonstrations of everything involved in the proposals to be chosen are not required. The dialectic situation, the counterpart of rhetoric, operates with a syllogism in form of question (x is y or is not y?); what is asked is which predicate or category can or cannot be attributed to the subject of the proposition. Each situation has a particular audience: in *didascalía* the public is made of apprentices who listen to the teacher and do not deliberate, they are just supposed to learn; in the dialectic situation, there are few people, in the limit only one, that have the same knowledge about the subject matter and try to solve a problem (question); in the rhetoric situation the speaker addresses many people to advise them to approve or not a given proposition, always directing his arguments against other speakers, and the final decision is up to the audience (see Wolff 1995, Boyer 1995).

The demonstrative syllogism is established by an analysis of the arguments to expose them in a complete way and without contradictions and/or fallacies; the dialectic syllogism decides about the predicate pertinent to the subject of the proposition; the rhetoric syllogism is concise and direct, because is directed to a very extensive public and aimed at forwarding a deliberation. The rhetoric situation interests us particularly, since within it the norms of conduct of the social groups are established. The characteristic of the rhetoric situation is the deliberation regarding a controversial theme, in which the speakers present their positions and try to persuade or influence the auditors/readers about the credibility and pertinence of their propositions. The members of the audience judge the propositions and take an attitude regarding what they consider preferable to do or have in the situation. Thus, the speaker has to take into account what is admissible to the audience. The enthymeme resorts to signs to establish a believable demonstration, as well as to examples to produce a form of induction. The enthymeme supported by signs makes approximation between notions, as, for example, the efficacy of the use of parts of willow to reduce fever and pain, in the framework of a theory that affirms the identity of the disease and elements of the nature.

This relation does not explain the reasons of the efficacy, which is only demonstrated by the analysis of the infusion of willow that identified the presence of salicylic acid. The determination of the active principle was made in the dialectic situation and its results were reorganized to be exposed initially to other researchers, then arranged to be taught to the apprentices (*didascalía*). Thus, from an enthymeme supported by signs we can reach, through the dialectic debate or scientific methodology, the demonstrative syllogisms that explain the reason or the effective cause of the established in the enthymeme, what allows the teaching of the knowledge obtained.

6. Final considerations

In this essay we tried to demonstrate that to the constitution of a theory of social action it is useful to adopt the position of Simmel/Boudon, in which the social actors argue using the same syllogistic forms employed in the methodic or scientific situation. In any case, the *a priori* can give origin to doubtful, fragile or false. Thus, there is no reason to suppose the existence of other logic that operates the arguments of the common sense. We put forward the hypothesis according to which such *a priori* are the commonplaces discussed by Aristotle and also the same as the embodied schemata exposed by Lakoff and Johnson. The presence of *priori* offers an explanation for the reasons people have to support their conceptions, without resorting to the hypothesis that they are dominated by forces they do not know.

Finally, once the schemes to establish what is considered to be the real are known, as well as the commonplaces, we have the tools for the analysis of what people say in a situation, contributing to the constitution of a theory of social action based on plausible and verifiable explanations of their beliefs or mental representations.

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