DOES THE PHRASE ET EO IPSO HAVE A REDUPLICATIVE FUNCTION IN LEIBNIZ'S "PARIS AMAT ET EO IPSO HELENA AMATUR"?[1]

Edgar Marques
To the memory of Hans Burkhardt

In several texts from the 1670s and 1680s, Leibniz undertakes a systematic project of rewriting or reformulating various kinds of sentence that are somehow problematic for his system. In general, these sentences either are not in the subject-predicate form, presenting nouns in cases other than the nominative, or occur in arguments that cannot be justified by merely resorting to syllogistic forms of inference. I give some examples:

> (1) All oblique inferences—e.g. "Peter is similar to Paul, therefore Paul is similar to Peter"-are to be explained by explanations of words. Such may be seen from the logic of Jungius. It is reduced to the propositions "Peter is A now and Paul is A now."[2]

---

[1] In this paper I tackle in a more mature and more rigorous way some issues I have already discussed in the text "Observações críticas sobre a hipótese interpretativa de Mugnai acerca da forma lógica da expressão *eo ipso* em Leibniz" (see bibliography). I have also borrowed from it some paragraphs of section II.

[2] *LP*, p. 13. "Omnes illationes obliquae explicandae ex Vocum explicationibus. Ex. gr. *Petrus est similis Paulo. Ergo Paulus est similis Petro*. Videantur talia ex Jungii Logica. Reducitur ad propositiones: *Petrus est A nunc et Paulus est A nunc.*" (AA VI IV, p. 107).

(2) "Caius is killed by Titius"; that is "insofar as [*quatenus*] Titius is killing, to that extent [*eatenus*] Caius is killed."[3]

(3) "This will be the best way of explaining 'Paris is the lover of Helen,' that is, "Paris loves, and by that very fact [*et eo ipso*] Helen is loved." Here, therefore, two propositions have been brought together and abbreviated into one. Or, 'Paris is a lover, and by that very fact [*et eo ipso*] Helen is a loved one.'"[4]

From a grammatical point of view, the most salient feature of Leibniz's rephrasing of these sentences (*Petrus est similis Paulo*; *A Titio occisus est Cajus*; *Paris est amator Helenae*) consists in reformulating them so that all nouns (Petrus, Paulus, Titius, Cajus, Paris, and Helena) that occur in the new sentences are in the nominative case. This elimination of obliquity is possible insofar as Leibniz substitutes relational sentences by complex sentences formed by predicative sentences linked to each other by a sentential connective. The philosophical interest in such analyses lies precisely in the fact that they apparently represent ways of reducing relational sentences to merely predicative ones. Such a reductionist enterprise coheres with the adoption of a nominalistic perspective, according to which there are, strictly speaking, at an ontologically more fundamental level, only individuals and their individual modifications, so that relations are *entia rationis* grounded in these individual modifications. *Nota bene*:

---

[3] "*Titio occisus est Cajus*; id est *quatenus Titius est occidens eatenus Cajus est occisus*" (AA VI IV, p. 651).

[4] G. W. Leibniz, *LP*, p. 14. "Optime sic explicabitur ut *Paris est amator Helenae*, id est: *Paris amat et eo ipso Helena amatur*. Sunt ergo duae propositiones in unam compendiose collectae. Seu *Paris est amator, et eo ipso Helena est amata*" (AA VI.IV, p. 114–115).

it does not mean that relational facts have no reality at all, only that they do not belong to the most fundamental ontological level.

In this paper, I will not discuss the wider philosophical issues concerning the nature and status of relations in Leibniz's thought. This will be done another time. I will instead confine myself to reflect upon Leibnizian strategies of rewriting/reducing relational sentences, especially those that include relational predicates that express relations of connection or concurrence rather than of comparison.[5] More precisely, I will deal with Leibniz's analysis of the sentence "*Paris est amator Helenae*" (Leibniz also writes "*Paris amat Helenam*") as reducible to "*Paris amat et eo ipso Helena amatur*" (Leibniz also writes "*Paris est amator et eo ipso Helena est amata*"). I intend to show, against Massimo Mugnai's interpretative proposal, that the phrase "*et eo ipso*" does not perform a reduplicative function here (MUGNAI, 1992; 1978 and 1979).

This paper is structured into three short sections. In the first one, I sketch roughly the conceptual Leibnizian context in which the problem of the logical form of the clause *eo ipso* arises. In the second section, I give an account of Mugnai's interpretative hypothesis. In the third section, I present my arguments against Mugnai's interpretation.

---

[5] According to Leibniz, there are two kinds of relation: "Relations divide into those of comparison and those of concurrence. The former concern agreement and disagreement (using these terms in a narrower sense), and include resemblance, equality, inequality, etc. The latter involve some connection, such as that of cause and effect, whole and parts, position and order, etc." G. W. Leibniz, *New Essays on Human Understanding* (hereafter: *NE*) II, xi, §4 - p. 142.

I

On the basis of the three cases of sentence reduction listed above, I will first establish the concept of reducibility that can be assigned to Leibniz in this context.

I agree with Benson Mates (1986, p. 216), who indicates that there are two different conceptions of sentence reducibility that could be at play here. According to the first, a sentence P is reducible to a sentence Q if P and Q are logically equivalent. That means that if P is reducible to Q, then P and Q are mutually deducible. Following Mates (1986, p. 216) Cover (1989) and Hill (2008) I consider that this conception does not give a correct account of the majority of analyses made by Leibniz. If one says, taking here an example offered by Mates himself, that "Socrates is similar to Plato" reduces to "Socrates is wise and Plato is wise," one is hardly saying that these sentences are mutually deducible. In this case, one is bound only to the statement that whatever makes the complex sentence "Socrates is wise and Plato is wise" true also makes the sentence "Socrates is similar to Plato" true, so that it cannot be that the former complex sentence is true while the latter is not. If sentence reducibility is to be understood in terms of logical equivalence, then "P is reducible to Q" entails its converse sentence, "Q is reducible to P." However, if "Socrates is similar to Plato" reduces to "Socrates is wise and Plato is wise," it does not follow from this that "Socrates is wise and Plato is wise" reduces to "Socrates is similar to Plato," because the fact that Socrates is similar to Plato may not be due to the

fact that they both are wise, but, for example, due to their status as humans. In this case, the truth of "Socrates and Plato are similar" would not warrant the truth of "Socrates is wise and Plato is wise." Hill sums up this idea saying that reducibility must not be symmetrical.[6] I thus believe that logical equivalence is too strict a condition for sentence reducibility in general. To put it cautiously, I am saying that perhaps some cases of reduction involve logical equivalence, but by no means all of them. Thus, the concept of sentence reducibility should not be explained by resorting to the idea of logical equivalence.

According to a second conception of reducibility, a sentence P is reducible to a sentence Q if Q entails P, that is, if it cannot be the case that Q is true and P is not true. Sentence reducibility then turns out to be a relation of logical implication between sentences. Thus, from this perspective, "P is reducible to Q" corresponds to the assertion that $Q{\rightarrow}P$ is a tautology. That is the account of reducibility I will assume in this paper. Let us now return to Leibniz's reductions.

A classic example of a Leibnizian reduction of a relational sentence into predicative sentences is the reduction from "Peter is similar to Paul" to "Peter is A now & Paul is A now." This means that, because of the fact— a semantic fact, so to speak —that two things are similar to each other when both have the same property, in all situations in which Peter and Paul both have any

---

[6] "It is possible for P to be reducible to Q but not vice versa. So reducibility is not symmetrical" (HILL, 2008, p. 116).

property A, Peter and Paul are similar to each other. There is no need to assign to the relation of similarity an ontological status over and above the mere possession of property A by Peter and by Paul, respectively. In an ontological inventory of the world, we would find, at the most basic level, Peter-having-property-A and Paul-having-property-A but not the bare property A nor the relation of similarity between Peter and Paul. The similarity between Peter and Paul emerges as a product of the simultaneous thinking of Peter as having property A and of Paul as also having the property A and has no independent ontological reality.[7] This is why Leibniz says that relations are beings of reason.

The reduction of "Caius is killed by Titius" to "insofar as [*quatenus*] Titius is killing, to that extent [*eatenus*] Caius is killed" is completely different from the former reduction. We do not have in this case to deal with a comparison between two individuals having the same monadic property, but, on the contrary, with the assertion that a certain condition in an individual is (causally?) connected with another condition in another individual. *Prima facie,* no comparison on the basis of the possession of such a property would provide the means to link a fact about an individual (Caius being killed) to a fact about another individual (Titius killing). Thinking at the same time about the two individuals having their respective properties and comparing them seems not to

---

[7] "Relatio est accidens quod est in pluribus subjectis, estque resultans tantum seu nulla mutatione facta aliis supervenit, si plura simul cogitentur, est concogitabilitas" (AA VI.IV, p. 866).

be sufficient to found the relational fact described by the exponible sentence "Caius is killed by Titius."

I think that exactly the same difficulty arises in the reduction of "Paris loves Helen" to "Paris is a lover, and by that very fact [*et eo ipso*] Helen is loved." In this case, too, it is about grounding a relational fact (the fact that Paris loves Helen) in facts about individuals taken apart from each other (that Paris is a lover, on one side, and that Helen is loved, on the other). The trouble is how to connect these facts about individuals so that a relational fact can supervene on them. In the following, I will focus on this fourth analysis, but I believe that the subsequent remarks are also applicable, *mutatis mutandis,* to the third one. The tough task here is thus to identify the logical form that the clause *et eo ipso* stands for.

In his writings already mentioned, Massimo Mugnai (1978; 1979 and 1992) develops an interpretative hypothesis according to which clauses such as *quatenus* and *et eo ipso* in analyses such as (2) and (3) should be understood as reduplicative particles. In the next section, I will try to throw light on the meaning of this hypothesis. In the third section, I will then present some objections to its adoption as a guideline to interpreting Leibniz's use of the clause *et eo ipso* in the context introduced above.

II

Following the path opened up by Angelelli (1967) and Burkhardt (1974), Mugnai considers that many of Leibniz's metaphysical or logical thoughts can only be correctly understood if we take into account the scholastic roots of his philosophy. In several logical texts, for instance, Leibniz articulates his famous principle of substitutability, *salva veritate,* which says that two terms have identical meanings only if one of them can be replaced by the other one – and vice-versa – in all circumstances without changing the truth value of the sentences wherein they occur. Therefore, since the word "triangle" can be replaced in the sentences in which it is used by the word "trilateral" with no modification of their truth value, we are allowed to take these expressions as synonyms. In Leibniz's words, "Things that can be substituted in the place of another without prejudice to the truth are the same, like triangle and trilateral, quadrangle and quadrilateral."[8]

Leibniz acknowledges, nevertheless, that there are contexts in which this principle cannot be applied. Using once again the same example presented in the preceding paragraph, if someone affirms that a triangle as such – that is, as a triangle – has 180 degrees, then he cannot in this case replace the term "triangle" by the term "trilateral," because what was asserted was not just that the sum of its internal angles equals 180 degrees but also that the triangle

---

[8] "Eadem sunt quorum unum in alterius locum substituit potest, salva veritate, ut traingulum et trilaterum, quadrangulum et quadrilaterum" (AA VI IV, p. 282).

conceived of as a triangle – that is, as a closed polygon with three internal angles – has 180 degrees as a result of the sum of its internal angles.[9] The expression "as such" indicates, then, that the sense of this sentence goes beyond the attribution to a certain object – the triangle – of a certain property – the sum of its internal angles is equal to 180 degrees. It also belongs to the sense of that sentence that a certain way of conceiving this object is relevant to the attribution to it of this feature.

In another text, probably written in the first half of the 1680s, Leibniz deals once more with restraints to the substitutability of terms. He asserts:

> If A is B and B is A, then one says that A and B are the same. Or A and B are the same if one can substitute for the other (with the exception of those situations where they differ not by virtue of something but by virtue of the manner of their conception. In this way, Peter and the apostle who denied the Christ are the same, and one term can be substituted by the other, except when I consider this very way of conceiving things, which some call reflexive. When I say, for example, "Peter, insofar as he was the apostle who denied Christ, sinned" I cannot substitute it for Peter and say, "Peter, insofar as he was Peter, sinned.")[10]

---

[9] This is an example conceived by Leibniz himself: "*A # B* significat *A* et *B* esse idem, seu ubique sibi posse substitui. (Nisi prohibeatur, quod fit in iis, ubi terminus aliquis certo respectu considerari declaratur, ver. g. licet trilaterum et triangulum sint idem, tamen si dicas *triangulum quatenus tale, habet 180 gradus*; non potest substitui *trilaterum*. Est in eo aliquid materiale)" (AA VI IV, p. 810).

[10] "Si *A* est *B* et *B* est *A*, tunc *A* et *B* dicitur idem. Vel eadem sunt *A* et *B*, si sibi ubique substitui possunt (exceptis tamen illis casibus, ubi non de re sed modo concipiendi agitur, quo utique differunt. Ita *Petrus* et *Apostolus qui Christum abnegavit* idem sunt, et unus terminus in alterius locum substitui potest; nisi cum hunc ipsum concipiendi modum considero, quod quidam vocant reflexivum, exempli causa, cum dico *Petrus quatenus fuit Apostolus qui Christum abnegavit, eatenus peccavit*, utique non possum substituere *Petrum*, seu non possum dicere *Petrus quatenus fuit Petrus peccavit*)" (AA VI IV, p. 552).

What hinders the substitution, in this example, of "the apostle who denied Christ" by "Peter" is the fact that the complex sentence "Peter, as the apostle who denied Christ, sinned" not only attributes to Peter the condition of a sinner but also specifies the way of understanding Peter under which he emerges as a sinner. Then one is justified in saying that Peter is a sinner only insofar as he is considered as the apostle who denied Christ, and not, say, insofar as he is the founder of the Catholic Church. Because of this, even if we can say that the expressions "Peter," "the apostle who denied Christ," and "the founder of Catholic Church" denote one and the same person, we are not allowed to replace one for another in – using Leibniz's terminology in – reflexive or reduplicative contexts, because in such contexts the way of conceiving of the object is significant, and not just the fact that it is this or that particular object about which we are talking. Speaking in Fregean terms, we can say that in indirect contexts, phrases sharing the same reference in – *Bedeutung* in – but having dissimilar meanings in – *Sinn* in – cannot replace one another, that is, in these peculiar contexts, co-extensionality does not warrant substitutability.[11] It is relevant for my purposes here that for Leibniz, using reduplicative clauses brings forth contexts of this sort.

In this paper, I will take Joachim Jungius, whom Leibniz explicitly mentions when he deals with reduplicative sentences, as holding the standard doctrine about reduplication. This means that I will ignore subsequent

---

[11] Angelelli (1967) calls attention to this similarity between Leibniz's and Frege's conceptions.

disagreements about the issue among medieval and other early modern philosophers.

In book II, chapter XI of his *Logica Hamburgensis*, Jungius (1957) characterizes reduplicative sentences as complex sentences in which occur reduplicative words such as *qua, quatenus, in quantum, prout, qua ratione,* etc. These words have either the function of expressing a particular way of conceiving of a certain being or the function of revealing a condition to the attribution of a certain predicate to a certain subject. For the sake of simplification, we can say that sentences of the form "*S* qua *M* is *P*" are reduplicative sentences.

Jungius (1957, p. 93) distinguishes reduplicative direct sentences from reduplicative oblique sentences. While in direct sentences, M is bound to the subject, in the oblique ones M belongs to the predicate. However, this distinction does not concern the logical structure of these sentences because each reduplicative oblique sentence can, by means of inversion, be transformed into a reduplicative direct sentence. Hence, the reduplicative oblique sentence "Homer praises Helen as beautiful" [*Homerus laudat Helenam ut pulchram*] can be transformed into the reduplicative direct sentence "Helen is praised by Homer as beautiful" [Helena laudatur ab Homero ut pulchra].

Reduplicative terms can be followed either by the duplication of the subject term – as in the sentence "man as man is social" – or by a different term, as in the sentence "man, inasmuch as he is an animal, is mortal." Sentences of

the first sort are characterized by Jungius as strictly reduplicatives, while sentences of the second sort are specificatives.

Specificative – dissimilar – sentences can be limitative or causal.[12] What is at stake in this last distinction is the role that the term *M* plays in the sentence "*S* qua *M* is *P*." Those sentences in which the term *M* expresses the cause or reason of *P*'s inherence in S are causal sentences. Thus, when one says, to use an example employed by Jungius, that "man, inasmuch as he is rational, is capable of doing philosophy," one means that the presence in man of the capacity to do philosophy can be explained by virtue of his rationality; that is, it is because he is rational that man can do philosophy. In other words, rationality is the cause or the reason for the human capacity to do philosophy. By contrast, limitative sentences are those sentences in which *M* expresses only a property or a part of *S* by virtue of which *P* applies to the subject *S*. The fundamental idea is that in these cases, the attribution of *P* to *S* is due to a certain aspect present in *S* that can be a feature of the subject or a constituent of it. In reduplicative sentences of this kind, the feature or the part is designated by the term *M*. If the feature is an essential predicate of the subject – as in "man,

---

[12] I disagree at this point with Bäck, who considers that Jungius identifies three types of specificative sentence (namely, dissimilar, limitative, and causal), discussing, however, only the second and third types: "Jungius' classification is obscure. After distinguishing the reduplicative and the specificative, he says that the specificative is dissimilar, limitated, and causal. He claims that the limitated has a limitation that is an essential predicate, accident, or integral part of the subject. However, he never discusses the dissimilar" (Bäck 1996: 366). Jungius seems to me, however, to assert, in a sufficiently clear way, that the specificative sentences—also referred to as dissimilar by him—can be limitative or causal: "*Specificativa* sive *dissimilaris*, vel *limitatitia* est, vel *causalis*" (JUNGIUS, 1957, p. 92).

inasmuch as he is an animal, senses" – the limitative reduplicative sentence will be an essential one; if the feature is an accidental one – as in "Nireius, inasmuch as he is handsome, is similar to Achilles" – the sentence will be an accidental one. The sentence is partitive in cases in which the predicate is attributed to the subject by virtue of being attributed to a part of it, as in "An Ethiopian, inasmuch as he has teeth, is white."

Through an analysis of reduplicative sentences, we get sentences that are more elementary in which reduplicative phrases do not occur. Analyzing a sentence such as "man, inasmuch as he is rational, is capable of laughing," we have, as a result, a conjunction of the following sentences:

(4) Each man is capable of laughing.

(5) Each man is rational.

(6) Everything that is rational is capable of laughing.

(7) If something is rational, then it is capable of laughing.

(8) Being rational is the cause of being capable of laughing.

The point here is that human rationality is the cause of the human capacity to laugh; that is, men are endowed with the capacity to laugh by virtue of being endowed with rationality. That is why the conjunction of sentences (4) to (8) entails the truth of the reduplicative specificative causal sentence "man, inasmuch as he is rational, is capable of laughing."

After that summary presentation of the fundamental conception of reduplicative clauses, we can turn back to Mugnai's interpretative hypothesis.

Mugnai considers *grosso modo* that, in Leibniz's works, reduplicative clauses play a double role. On the one hand, they occur in intensional contexts, that is, in contexts in which the principle of substitutability *salva veritate* does not hold. On the other hand, according to Mugnai, Leibniz employs them within his project of reducing relational to non-relational sentences. To be more specific: Mugnai sustains that Leibniz ascribes to reduplicative particles the job of establishing connections between different subjects to which asymmetrical relations are attributed.[13]

It seems to me undeniable that the employment of reduplicative particles can generate intensional contexts and that Leibniz was well aware of this fact. On account of this conviction, I will not discuss this topic further. The second claim, by contrast, deserves a more careful and more detailed review.

Mugnai's hypothesis[14] is, in short, that in the Leibnizian analyses in which sentences that express relations of connection are reduced to complex sentences including connectives such as *quatenus* or *eo ipso,* these terms should

---

[13] "It is precisely to the reduplicating operators that Leibniz tries to assign the task of expressing the relation as something which directly connects the related subjects" (MUGNAI, 1992, p. 93). "Given a complex sentence of the form '*p* quatenus *q*,' where *p* an *q* are variables for sentences, the *quatenus* would have the function of specifying that the sentence *q* is true, given the truth of sentence *p*. That is to say that the reduplicative operator would in a sense tie the state of things expressed by the sentence *p* to the state of things expressed by the sentence *q*" (MUGNAI, 1992, p. 103).

[14] Mugnai himself insists on the hypothetical character of his own thesis: "Leibniz was aware of the tradition of the reduplicative sentences and their *expositio*. It is not unlikely therefore that he intended to make 'technical' use of the *quatenus* and similar terms—a use corresponding, in effect, to that described in the *expositiones* of the reduplicatives. This, however, is only a hypothesis, about which there can be no absolute certainty" (Mugnai, 1992, p. 135).

be understood as reduplicatives. He presents the following passage as typical of Leibniz's understanding of the meaning of expressions of this kind: "*Quatenus* signifies in general, as, for example, in respect to the proposition that follows: *man is immortal* quatenus *man is endowed with a mind*. That is, man is immortal, having regard to this: man is endowed with a mind."[15]

This sentence is a classic case of a causal specificative reduplicative sentence. When one says that man is immortal to the extent that he is [*quatenus*] endowed with a mind, what one is saying is that the fact that man has a mind is the cause or reason for attributing immortality to him; that is, it is because man has a mind that man is immortal. The analysis of this reduplicative sentence would proceed in the same way as the analysis of the sentence "man, inasmuch as he is rational, is capable of laughing," presented above.

The relevant point for Mugnai is that in this reduplicative sentence, the word *quatenus* could be interpreted as a sentential connective tying the sentence "man is endowed with a mind" to the sentence "man is immortal." According to him, "man, inasmuch as he is endowed with a mind, is immortal" could be formalized as "*p quatenus q,*" symbolizing by the expression *quatenus* that the

---

[15] "*Quatenus* generaliter idem significat, quod respectu habito ad hanc propositionem quae sequitur v.g. *Homo est immortalis quatenus homo est mente praeditus.* Id est Homo est immortalis respectu habito ad hoc: homo est mente praeditus" (AA VI IV, p. 666).

sentence *q* will be true if the sentence *p* is true. The connective *quatenus* would tie the state of affairs that makes *p* true to the state of affairs that makes *q* true.[16]

Mugnai believes that sentences that express relations of connection should also be interpreted in the same way. The presence of operators such as *eatenus, quatenus, et eo ipso,* etc. would make possible to resolve these relations into implications. Thus, according to Mugnai, when Leibniz analyzes a relational sentence such as "Paris loves Helen" into "Paris is a lover *et eo ipso* Helen is loved," he is resorting to reduplicative particles, so to say, to tie the state of affairs described by "Paris is a lover" to the one described by "Helen is loved." The expression *et eo ipso* should thus be interpreted as a conditional clause and therefore the sentence "Paris is a lover *et eo ipso* Helen is loved" as a conditional sentence which says that it cannot be the case that Paris is a lover and Helen is not loved.[17]

Following Mugnai's interpretation, the relational fact that Paris loves Helen obtains as a result of certain monadic states of Paris and Helen, being thus founded in its relata. The phrase *et eo ipso,* according to this interpretation, works as a conditional clause in the sentence "Paris is a lover *et eo ipso* Helen is

---

[16] "Given a complex sentence of the form '*p* quatenus *q*,' where *p* an *q* are variables for sentences, the *quatenus* would have the function of specifying that the sentence *q* is true, given the truth of sentence *p*. That is to say that the reduplicative operator would in a sense tie the state of things expressed by the sentence *p* to the state of things expressed by the sentence *q*" (MUGNAI, 1992, p. 103).

[17] "It is very probable, too, that in interpreting the reduplicative operators as conditionals, he [Leibniz] assigned them the same function they held in the traditional *expositio* of the scholastics. Thus, given a proposition of the type 'Paris loves *et eo ipso* Helen is loved,' Leibniz almost certainly interprets it at least as '¬M (Paris loves and Helen is not loved)'" (MUGNAI, 1992, p. 110).

loved," expressing the fact that a certain modification in Paris can only happen if a certain corresponding modification in Helen also happens. Since Mugnai considers that a reduplicative sentence can be formalized as a conditional sentence, he believes, I think, that the phrase *et eo ipso* plays the role of a reduplicative, given that the sentence "Paris is a lover *et eo ipso* Helen is loved" is a conditional sentence.

III

The evaluation of Mugnai's hypothesis that the phrase *et eo ipso* in Leibniz's analysis has to be understood as a reduplicative clause is a somewhat delicate issue, because Mugnai alleges that Leibniz sometimes uses reduplicative operators in a very idiosyncratic way, occasionally keeping some distance from the medieval and early modern tradition. The use of a reduplicative as a logical connective between sentences (as in "*P quatenus Q*" and "*P et eo ipso Q*") would be exactly the kind of case in which Leibniz strongly opposes traditional practice.[18]

The question here is how far idiosyncrasy about the use of a concept can go without changing the initial subject. To be more specific: it is not clear

---

[18] "Leibniz makes a very idiosyncratic use of reduplicative operators, even using them as logical connectives between propositions, contrary to traditional practice" (MUGNAI, 1992, p. 109–110). "In der Tradition der hoch- und spätscholastichen Logik finden wir (...) keine Beispiele reduplikativer Termini, die in reduplikativer Funktion mehrere Sätze verknüpfen, während Leibniz (...) *quatenus* auch an der Funktion einer Verknüpfung zwischen Sätzen mit verschiedenen Subjekten gebraucht" (MUGNAI, 1979, p. 89).

at all to me how eccentric the use of reduplicative particles can be so that one can still be sure that they do play a reduplicative role in the analyzed sentences. When Mugnai says that the clause *et eo ipso* in "Paris is a lover *et eo ipso* Helen is a loved one" is a reduplicative particle, that has to mean that the logical role that the phrase *et eo ipso* plays in the sentence can be illuminated by resorting to the way reduplication works. That is, Mugnai suggests that we can grasp the logical structure of this sentence if we take into account the fact that the clause *et eo ipso* works as an *idiosyncratic* reduplicative particle. However, if such a use is idiosyncratic to the point that one cannot even specify which features this use shares with the more typical uses, then, I think, we should ask if this characterization is in fact a helpful tool for understanding what is going on in Leibniz's analyses. To be unambiguous: I am not fighting about words, but about concepts. All I am requiring is that the sense in which a logical connective between two sentences with different subjects can function as a reduplicative particle is made fairly comprehensible. By the way, in an article from 1979, Mugnai himself recognizes this difficulty:

> Unter dem Begriff der Reduplikation selbst oder der Reflexion versteht man jedoch eine zweifache Bezugnahme auf ein und dasselbe Subjekt oder gewissermassen das "Sichverdoppeln" eines und desselben Begriffs: so impliziert "Sokrates, insofern er ein Mensch ist, ist sterblich", dass Sokrates ein Mensch ist, dass Sokrates sterblich ist, und dass Sokrates, insofern er ein Mensch ist, sterblich ist. Wenn man aber zwei Sätze mit verschiedenen logischen Subjekten verknüpft, so verliert *quatenus* oder allgemeiner, der Terminus reduplicativus, der die Konjunktion bildet, die Eigenschaft, die wenigstens nach der Tradition der mittelalterlichen oder spätscholastischen Logik „reduplikativ" stricto sensu gennant werden kann (MUGNAI, 1979, p. 89f).

To tackle this issue appropriately, we must first establish the identity of the features that constitute reduplication. Two extreme positions must be avoided here: on the one hand, begging the question by an arbitrary stipulation of conditions that from the beginning cannot be fulfilled in the case of "Paris is a lover *et eo ipso* Helen is loved," and, on the other hand, leaving the notion of reduplication so vague that one cannot explain why this or that use of certain clauses is indeed reduplicative.

Let us reflect again upon the doubtlessly reduplicative sentence "man is immortal *quatenus* man is endowed with a mind." I would like to stress two different aspects here. In the first place, it seems clear – as Mugnai points out – that *quatenus* has here to bind somehow the predicative fact expressed by the sentence "man is immortal" with the predicative fact expressed by the sentence "man is endowed with a mind," so that it is not possible that man is immortal and not endowed with a mind. If man is immortal insofar as he has a mind, then the state of affairs of man-being-immortal cannot occur without the occurrence of the state of affairs of man-having-a-mind. That means that *quatenus* functions in this complex sentence as a mark of logical implication between the two predicative sentences. *Quatenus* may thus be grasped in "man is immortal *quatenus* man is endowed with a mind" as a strict conditional.

However, and this is the second aspect I would like to underline, in this sentence, *quatenus* not only ties the state of affairs of man-having-a-mind to the state of affairs of man-being-immortal, but it also indicates a reason for the

existence of this connection between these states. It is impossible for a man to be immortal and not have a soul because having a soul is the cause of being immortal. The *expositio* of "man is immortal *quatenus* he is endowed with a soul" would show that it involves the assertion that everything that has a mind is immortal, the possession of a mind being the cause of immortality. That is, the reason why "man is immortal" entails "man has a mind" lies in the links between the notions "having a mind" and "being immortal," so that it is only because one and the same subject have both predicates that the sentence stating the attribution of immortality entails the sentence uttering the attribution of a mind.

Of course, the sentence "man *qua* endowed with a mind is immortal" can be rewritten as "man is immortal *quatenus* man is endowed with a mind," so that we can go from the form "*X* qua *F* is *G*" to the form "*p quatenus q*." However, we must be aware that something gets lost in translation here, namely, the guarantee that the predicates that take the place, respectively, in sentences *p* and *q* apply to the same subject. Without this guarantee, and without assuming that the predicate that occurs in *p* (say, *G*) and the predicate that occurs in *q* (say, *F*) are interrelated in such a way that anything to which the predicate *F* applies the predicate *G* will also apply, the conditional sentence cannot be taken as true based solely on considerations of formal nature. This means that the formalization of "man is immortal *quatenus* man is endowed with a mind" as "*p quatenus q*" captures only one aspect of the initial reduplicative sentence, namely, that the reduplicative sentence may be understood as a conditional one; it does not give an account of the fact that a reduplicative sentence also contains the

formal reasons for its truth. In fact, the *expositio* of a reduplicative sentence such as "man *qua* endowed with a mind is immortal" (or "man is immortal *quatenus* man is endowed with a mind") shows that such a sentence is a conjunction of predicative sentences whose truth conditions are not identical with the truth conditions of the reduplicative sentence, so that if these sentences are true, then the reduplicative sentence is also true.[19] Summing up: "Paris is a lover *et eo ipso* Helen is loved" is a conditional sentence, much in the way that reduplicative sentences are, but unlike these, its truth value is not determined on the basis of the truth value of other sentences.

My point is thus the following: to consider (a) in the sentence "Paris is a lover *et eo ipso* Helen is loved" that the *et eo ipso* functions as a conditional clause and (b) that reduplicative sentences are also conditional sentences does not suffice to support the interpretation of this sentence as a reduplicative one because it lacks a key feature of reduplication, namely, the dependence of its truth value on the truth value of the sentences in which it is analyzed.

Unlike what happens in the case of reduplicative sentences, the conditional link between "Paris is a lover" and "Helen is loved" can only be justified on the basis of an appeal to the metaphysical principle of pre-established universal harmony. According to this principle, reality is structured

---

[19] The *expositio* of this sentence could resemble this: (i) Each man has a mind; (ii) Each man is immortal; (iii) Everything which has a mind is immortal; (iv) If something has a mind, then it is immortal; (v) Having a mind is the cause of being immortal.

in such a way that internal monadic states of different individuals that belong to the same world are mutually compatible, despite the fact that these individuals do not entertain any real causal relations to each other. Consequently, it is solely because of this harmony that "Paris loves Helen" can be reduced to the assertion that Paris is in such-and-such a state only when Helen is in such-and-such a state. The relational fact supervenes on the monadic facts because of universal harmony.

If my above remarks are correct, Mugnai's interpretative hypothesis concerning the logical form of *et eo ipso* is a misleading one, because the fact that the sentence "Paris is a lover *et eo ipso* Helen is loved" is a conditional one is far from sufficient to characterize it as a reduplicative one. Worse yet, this hypothesis makes it difficult to understand the central role that the principle of pre-established harmony plays in this context.

BIBLIOGRAPHY

ANGELELLI, I. A. "On Identity and Interchangeability in Leibniz and Frege." *Notre Dame Journal of Formal Logic*, VIII, 1967, pp. 94–100.

BÄCK, A. *On Reduplication: Logical Theories of Qualification*. Leiden. 1996.

BARTH, E. M. *The Logic of the Articles in Traditional Philosophy*. Dordrecht. 1974.

BURDICK, H. "What Was Leibniz's Problem about Relation?". *Synthese*, 88, 1991, pp. 1-13.

BURKHARD, H. "Anmerkungen zur Logik, Ontologie und Semantik bei Leibniz". *Studia Leibnitiana*, VI, 1974, pp. 49-58.

COVER, J. "Relations and Reduction in Leibniz". *Pacific Philosophical Quarterly*, 70, 1989, pp. 185-211.

_____. 1995. "A Review of Mugnai, *Leibniz's Theory of Relations.*" *Leibniz Society Review*, 5, pp. 1-10.

COVER, J. & O'LEARY-HAWTHORNE, J. *Substance and Individuation in Leibniz*. Cambridge. 1999.

HILL, J., 2008. "Leibniz, Relations, and Rewriting Projects." *History of Philosophy Quarterly*, 25, 2, pp. 115-135.

HINTIKKA, J. "Leibniz on Plenitude, Relations, and the 'Reign of Law'". In: FRANKFUT, H. (ed.). *Leibniz. A Collection of Critical Essays*, pp. 155-190. New York. 1972.

ISHIGURO, H. "Leibniz's Theory of the Ideality of Relations." In: H. FRANKFUT, H. (ed.). *Leibniz. A Collection of Critical Essays*, pp. 191-213. New York. 1972.

ISHIGURO, H. *Leibniz's Philosophy of Logic and Language*. Cambridge. 1990.

JUNGIUS, J. *Logica Hamburgensis*. Hamburg. 1957.

LEIBNIZ, G. W. 1996. *New Essays on Human Understanding*. Cambridge.

_____. (AA). *Sämtliche Schriften und Briefe*. Deutschen Akademie der Wissenschaften zu Berlin.

MARQUES, E. "Observações críticas sobre a hipótese interpretativa de Mugnai acerca da forma lógica da expressão *eo ipso* em Leibniz". *Revista de Filosofia de Costa Rica*, LI, 2012, pp. 139-147.

MATES, B. *The Philosophy of Leibniz: Metaphysics and Language*. Oxford. 1986.

MUGNAI, M. "Bemerkungen zu Leibniz's Theoria der Relationen". *Studia Leibnitiana*, X, 1978, pp. 2-21.

_____. "Intensionale Kontexte und *termini reduplicativi* in der Grammatica rationis von Leibniz". *Studia Leibnitiana*, VIII, 1979, pp. 82-92.

_____. *Leibniz's Theory of Relations*. Stuttgart. 1992.

POLI, R. "Formal Aspects of Reduplication". *Logic and Logical Philosophy*, 2, 1994, pp. 87-102.

_____. "*Qua*-Theories." In: ALBERTAZZI, L. (ed.). *Shapes of Forms*, pp. 245-256. Dordrecht. 1998.

ROYSE, J. "Leibniz and the Reducibility of Relations to Properties". *Studia Leibnitiana*, XII, 1980, pp. 179-204.

SZABÓ, Z. "On Qualification". *Philosophical Perspectives*, 17, 2003, pp. 385-414.

Van RIJEN, J. "Some Medieval Analyses of the Logica of 'Qua'". In: JACOBI, K. (ed.). *Argumentationstheorie. Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns*, pp. 465-482. Leiden. 1993.