

## THE PRAGMATIC ASPECTS OF LINGUISTIC NEGATION

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### Abstract

This paper is an attempt to give a general explanation of pragmatics of linguistic negation. After a brief survey of classical accounts of negation pragmatic theories (as speech act theory, argumentation theory and polyphony) the main pragmatic uses of negation (illocutionary negation, external negation and majoring negation) are discussed within relevance theory. The question of relevance of negative utterances is raised, and a general inferential schema (based on so-called invited interference) is proposed and tested for the main uses which are discussed in the paper. The analysis proposed in the framework of relevance theory has thus been verified by the main uses of negation. It has the advantage of not making any morphologic or semantic distinctions between the different types of negation and the different uses are explained from different pragmatic processes depending either on the linguistic environment, or on the context, or on both.

The analysis is both simple and realistic. Simple because no complexification of the linguistic system is necessary. Linguistic negation treatment allows, on that count, interesting confrontations from one language to another. Realistic too, because it comes from the principle, admitted by psycholinguists, that positive information is more quickly treated than negative information. It follows from this principle that pragmatic inferences on negative utterances resort to positive premises.

**Key words:** argumentation, invited inference, negation, polyphony, speech act.

### Introduction

The roles of negation in argumentation and reasoning are relatively well known. *Reductio ad absurdum*, the principle of lowering in argumentation (Anscombe and Ducrot, 1983) the conversational structure of negative exchanges (Moeschler, 1982) are relevant examples of the role of negation in reasoning, argumentation and verbal interaction. Still, the fact that works from different origins and orientations have proposed explanation to the issues raised by negation (presupposition, counterfactuals, scope) does not mean that the investigation of the question is out of date. It is well known indeed that facts are defined as such by theories and that a minimal requirement for a scientific theory is to give better explanations of them. Among the classical problems linked to linguistic negation, we would like to discuss two which raise questions in linguistic pragmatics and natural logic: the link between negation and speech act on the one hand, and the

question of inference based on negative premises on the other. The first problem will lead us toward a discussion of argumentative and polyphonic analysis which Ducrot proposed (1980, 1984).

In the first part of this paper, we will come back to the question of the possibility of an illocutionary negation act<sup>1</sup>. In addition to the problem of the conventionality of such acts, we will discuss the problem of the derivation of the different negation acts from a primitive one. The second part will refer to another theoretical framework and will show how, within Sperber and Wilson's relevance theory (1986) the question of pragmatic inferences can be formulated. We will show also that the question of an illocutionary negative act has no legitimacy left.

## Negation Act

The pragmatic and semantic behavior of negation has puzzled more than one linguist. The distinctions between internal and external negation<sup>2</sup> (Kempson, 1975), illocutionary and propositional negation (Searle, 1972), polemic and descriptive negation (Ducrot, 1973) show clearly that concern. In all cases, it was a matter either to show that in certain syntactical or semantical environments, negation has different *scopes*, internal to the proposition expressed by the sentence (internal, propositional, descriptive negation) or external to it (external, illocutionary, polemic), in the case of external, illocutionary and polemic negation, the scope of negation conditions the realization of a speech act different from the negation act with the negative propositional content. Examples (1) to (3) illustrate those three types of uses of negation, the notations (4) to (6) specify the scope of negation, and paraphrases (7) to (9) the pragmatic interpretations associated with these facts.

- (1) (a) I don't regret that Paul is dead, since I loathed him.  
(b) I don't regret that Paul is dead, since he enjoys perfect health.
- (2) (a) I promise you I won't speak ill of my colleagues.  
(b) I don't promise I will speak ill of my colleagues.
- (3) (a) The weather isn't nice but the temperature is.  
(b) The weather isn't nice but very nice.
- (4) (a) explicature: not (I am sad (Paul is dead))  
presupposition: Paul is dead.  
(b) explicature: not (I am sad (Paul is dead))  
presupposition: not (Paul is dead)
- (5) (a) promise: (not (I will speak ill of colleagues)).  
(b) not-promise (I will speak ill of colleagues).
- (6) (a) not (the weather is nice) but the temperature is nice).  
(b) the weather is (not nice but very nice).
- (7) (a) expression of negative feelings.  
(b) expression of regret.

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<sup>1</sup> Act of refutation in Moeschler (1981) and act of counter-argumentation in Attal (1984).

<sup>2</sup> An authentic example of external negation can be found in the following quotation from an interview of King Hassan II (*Le Monde*, 16.08.1990), a sentence attributed to American and English politicians during Iraq-Iran war. It should be noted that this sentence cannot be given and internal negation reading: *We don't want Iran to be the winner and we don't want Iraq to be the loser.*

- (8) (a) promise.
- (b) refusal of commitment.
- (9) (a) negative argumentation.
- (b) rectification.

These examples show clearly the complexity of the behavior of negation.

The facts signaled by the above examples are fundamentally dependent of discriminatory pragmatic interpretations. These interpretations have a *semantic component* (defining the scope of the operator) and a *pragmatic component* (defining the type of the accomplished act). The chosen examples are, nevertheless, marked cases: they do not fundamentally raise scope or interpretation problems. Can one say, despite this, that all negative utterances must be sorted in one or another negation category? Except for the cases of illocutionary negation<sup>3</sup>, in which the negative prefix is either external or internal to the propositional content (i.e. affects or does not affect the illocutionary force of the speech act), it is finally either the context or *the context* which discriminates the interpretation and defines the scope of negation. Indeed, if one comes back to negative utterances (1) and (3), without their sequencing, it becomes impossible to define negative scope and, fortiori, illocutionary interpretation; what is more, it seems that, by *default assumption*, it is the weakest scope and the descriptive interpretation which are chosen:

(10) I don't regret that Paul is dead.

(11) The weather isn't nice today.

A priori, then, the logical form of these utterances is not enough to determine the scope of negation, nor the pragmatic interpretation of the utterance. In other words, *if these utterances are ambiguous, they are ambiguous pragmatically and not semantically*.

If examples (10) and (11) are arguments in favour of a radical pragmatic approach to the linguistic behavior of negation, can it be said that there are two types of negation, a semantic negation (playing an operator function), and a pragmatic negation (playing an illocutionary act marker function), negation which would respectively be responsible for the effects of scope and interpretation which have just been examined?<sup>4</sup> In other words, is it legitimate to define the distinction between internal, propositional, descriptive negation on the one hand, and external, illocutionary and polemic negation on the other? In this case, it would imply the possibility of an illocutionary negation act, whose illocutionary act marker would be negation. But this would still leave to be explained why each use of the negation morpheme *not* ... is not sufficient to realize such an act. One can thus see the *paradox* which an approach in terms of speech acts leads to. *The distinction between semantic negation and pragmatic negation allows the hypothesis (attractive to describe the effects of external, illocutionary and polemic negation) of an illocutionary negation act. But the structure of such an act imposes the assignment to the negation word of the function of illocutionary force marker, which makes it difficult to explain the non-marked pragmatic behavior of negation (internal, proposition, descriptive).*

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<sup>3</sup> On illocutionary negation and for a discussion of Hare's and Searle's theses, see Peetz (1979) and Garner (1970-1971)

<sup>4</sup> In this case the situation would be a priori identical with that of the pragmatic connectives, or, at least, pragmatic connectives like *and*, *but*, *because* which exhibit semantic operator properties (positing a relationship between propositional contents inside a unique speech act) and pragmatic connective properties (linking two speech acts).

This little digression in speech act theory may seem very far away from the argumentative and inferential properties of negation. Still, it has followed us to question a presupposition often used about negation: if language is an action, the negative utterances are speech acts as promises, orders, assertions are. The necessity to distinguish between negative assertion and negative act without being able to predict anything about the illocutionary value of a negative utterance shows that the notion of an illocutionary negation act is a difficult concept to delineate. What is more, the question of the relation between negation and types of negation acts is far from being solved: talking of a primitive negation act of content (Anscrombre) or distinguishing two levels of negation, of which one would be primitive (Attal), seems neither compatible with speech act theory nor able to simplify the semantic description of negation.

In the second part of this work, we will propose a radically different treatment of negation, based on the notion of pragmatic inference. But before developing this approach, we will come back to two classical pragmatic analyses of negation proposed by Ducrot: the argumentative analysis (Ducrot, 1980) on the one hand and the polyphonic analysis (Ducrot, 1984) on the other.

### **Negation, Argumentation and Polyphony**

The reference to Ducrot's argumentation theory (in its first 1973 version, taken again in 1980 publication) will be necessary to bring out the inferential properties of negation, and among others the effects of the lowering rule. Also, the polyphonic analysis, an attempt at the synthesis of different works bearing on argumentation and enunciation (Ducrot 1980, 1984) will allow me to propose a fundamental hypothesis on the interpretative functioning of negative utterances. Ducrot's analyses will be criticized because of the limited span and because of which we consider inconsistencies; they will, nonetheless, be important because the main hypothesis we will develop in the inferential analysis of negated is directly indebted to them.

The argumentative effects of negation are mainly linked to the *argumentative reversal* rule and *lowering* rule. The argumentative reversal rule (Ducrot, 1980) says simply that 'if an utterance *p* is used by the speaker to support a certain conclusion, its negation will be considered by the same speaker as an argument for the opposite conclusion'. If this rule seems trivial, it is not, for all that, limited in its application to descriptive negation. It would in fact be difficult to see the possibility of argumentative reversal in the case of examples where negation allows of overbidding (examples of second level of negation in Attal, 1982).

(12) He is not satisfied with it, he is enthusiastic.

The rule of argumentative reversal limits itself thus to descriptive negation and the effects of polemic negation, are, depending on the situation, either to preserve or to reverse the argumentative value of the corresponding positive utterance.

Another counterexample to the reversal rule is given by the cases where it is a priori impossible to distinguish between the opposite argumentative values of positive and negative utterances. We can very well in fact argue in favour of the reasonable aspect of an expenditure by saying of a theater seat that it costs a pound or by saying of it that it does not cost a pound.

(13) You won't be broke, the seat does not cost a pound.

(14) You won't be broke, the seat costs a pound.

How is this to be explained? Ducrot resorts here to a discourse law (depending on the rhetorical component, see Ducrot, 1973), the *weakness* rule which 'gives affirmation of a quantity which is considered as weak a new argumentative value, that of asserting the weakness of that quantity' (Ducrot, 1980). This explanation does not concern the negative utterance but the positive one. *Costing a pound* being such a weak argument for the conclusion "being expensive", it follows at the rhetorical level that it becomes an argument asserting the weakness of such a sum. As far as *not costing a pound* is concerned, it is an explanation of the argumentative reversal rule which allows us to understand its strength in favour of the conclusion "not being expensive". This rule stipulates that "the scale where the negative utterances take place is the reverse of the scale of affirmative utterances" (Ducrot, 1980). A strong argument in the scale of affirmative utterances becomes thus a weak argument in the negative scale, and conversely.<sup>5</sup>

The fourth argumentative rule playing a role in the description of negation is the lowering rule according to which (descriptive) negation means "less than". In other words this rule explains why (15) is interpreted as (16a) and not as (16b), or (17) as (18a) and not as (18b):

(15) It isn't cold.

(16) (a) It is warm (or hot).

(b) It is icy.

(17) The weren't a lot of my friends at this reunion.

(18) (a) Few of my friends came.

(b) All of my friends came.

Still, the lowering rule by itself does not allow us to understand why an utterance like (19) cannot mean (20):

(19) It isn't very cold.

(20) It is hot.

There one must resort to a rhetorical rule (similar in effects to Horn's principle of scalar implication, Horn, 1972; Levison, 1983; Kleiber, 1990), the maximal quantity rule according to which a stronger utterance is impossible. If in fact the maximal quantity rule applies, this means that the speaker could not produce utterance (15) which does not communicate (20):

(15) It isn't cold.

(20) It is hot.

The argumentative analysis of negation, despite its originality, is in fact limited by its goals more or less explicitly indicated by Ducrot: on the one hand giving empirical and theoretical arguments in favour of scalar approach to semantic (informative) interpretation of argumentative facts. Unfortunately, the consequence is a partial and incomplete analysis of negation. The argumentative rules concern neither the effects of polemic negation nor the behavior of negation towards presupposition (most notably the effects due to external negation). The second consequence of this approach is the resort to a rule or principle in the solution of

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<sup>5</sup> This law is illustrated by the sequencing with *even* which implies an effect of argumentative strength. Thus, a speaker who would argue in favour of the seriousness of Peter in (i) would have to accept the argumentation in (ii) against the lack of seriousness of Paul:

(i) Peter has a MA and even a PhD.

(ii) Paul doesn't have a PhD and not even a MA.

each difficulty. For example, to explain the limits of the effects of the lowering rule, one must resort to the maximal quantity rule; to explain the overbidding effect of negation (which does not apply to the argumentative reversal principle), one must resort to the lowering, limited to descriptive to descriptive negation, or to polemic negation (which is not concerned with argumentative principles); to explain the undifferentiated argumentative analysis, the weakness rule.

To supply this constitutive lacks of negation analysis, Ducrot has chosen a non-argumentative, polyphonic description and also to come back to his first analysis (distinction between descriptive negation and polemic negation), which the argumentative analysis cannot take into account.

## Negation and Pragmatic Inference

We would like to look at the problem of negation from a pragmatic and cognitive point of view, and this from Sperber and Wilson's relevance theory (Sperber and Wilson, 1986).

This theory contrary to speech acts theory or argumentation theory, belongs to the descriptive vs. ascriptive models (Anscombe and Ducrot, 1983). The pragmatics does not describe the action aspect of language, but has a more general function to give a complete interpretation to utterances, more particularly by indicating their illocutionary force, by attributing a referent to anaphoras and deictics, by disambiguating the ambiguous utterances, and briefly to complete the partial interpretation which the linguistic input system (limited to phonology, syntax and semantics) produced by a way of a logical form<sup>6</sup>.

The problem of negation is different in the framework of relevance theory. The question is not here to explain the role of negation as an illocutionary force marker or as a propositional operator, not to explain the different illocutionary acts derived from a negation act, nor still to establish a functional typology of negation. Linguistic negation will be considered here as a semantic operator. Whether specific pragmatic factors are attached to it, as the different examples discussed above show, does not in the least contradict this principle, but argues on the contrary in favour of a radical pragmatic approach: what releases the different interpretations is not only due to negation, but to the interaction between negation and some linguistic and/or contextual factors. These effects will be described as the result of pragmatic inferences.

To give more empirical consistency to our research, we will begin by the following question: *given that a negative utterance needs a greater processing effort than a positive utterance (Wason, 1989), what can its relevance be?* This question supposes, of course, that relevance be understood in the sense of Sperber and Wilson (1989), as a comparative concept: the more contextual effects (contextual implication, strengthening or suppression of an assumption) an utterance produces, the more relevant the utterance; the more effort needed for the treatment of an utterance, the less relevant the utterance. The hypothesis, we will make, and which supposes an inferential view of negation, is that the negative utterance must be

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<sup>6</sup> We will not give here, for reasons of space, a precis of relevance theory. The reader can consult for good accounts of his theory Jayez (1986), Reboul (1986), (1988), Luscher (1989), Moeschler (1989) and Charolles (1990) for a more critical account.

considered as the most relevant in the circumstances, i.e., the utterance whose effect is sufficient to balance the supplementary cognitive effort imposed by the treatment of negation.

Let us take an example to discuss this hypothesis. A asks B, who has just opened the shutters, what the weather is like. B, when the weather is unpleasant, can answer with a positive or with a negative utterance:

B: (a) It is grey.

(b) It is not nice.

Strictly speaking, the more relevant utterance should be B (a): it needs less processing effort, and its effect is a priori as that of B (b). If, for example, A and B wanted to go to the beach, A will draw the contextual implication that this outing will not take place; if A thought that the weather would again turn nasty, or on the contrary that the weather would change to beautiful, his preceding belief will be respectively confirmed or cancelled. There are contextual effects and thus, apparently, there is a better yield of B (a) than of B (b). Why then can B choose between these two utterances? On the other hand, is it not sufficient to show that A comes to an interpretation which is consistent with the principle of relevance for the a priori difference between a positive utterance and a negative one to disappear?

This question, to be raised correctly, must in fact take into account a very important fact: the context for the interpretation of B's utterance, that is the accessible assumptions for the treatment of the utterance. We will say, on this point, that the relevance of each of the answers depends on the context of interpretation. Given respectively the contexts in (21) and (22):

(21) If the weather is grey, A and B will work at home.

(22) If the weather is nice, A and B will go to the beach.

We will not say that in context (21), B (a) is more relevant than is B (b), and that in context (22), it is B (b) that is more relevant than B (a).

We have thus made a little advance in the pragmatic description of negative utterances: their relevance is a function of the context for their interpretation. But it is now possible to go further on. *The relevance of B (b) in context (22) is due to the echoic status of the negative utterance.* We come back here to Ducrot's polyphonic analysis. But the important point is not that an utterer E2 opposes himself to an utterer E1's point of view. It lies in the fact that an assumption ("the weather is beautiful") is accessible to B and cancelled by the proposition expressed in the utterance ("not (the weather is beautiful)"). This cancellation effect is minimal, but not trivial. It does not mean that a proposition, considered as true at one time is entertained as false at another. It means more radically that a belief entertained with certain strength must be cancelled.

In addition to this minimal effect,<sup>7</sup> other effects are possible; in context (22), for example, the effect is that A and B will not go to the beach. Next, we would like to show two pragmatic facts which go in fact in this direction, those of conditional *if* and of *because*.

Geis and Zwicky (1971)<sup>8</sup> have shown that a conditional proposition has a tendency to be interpreted as a biconditional. The classical example is the following. A father who would say (23) to his son and then would punish him, despite the fact

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<sup>7</sup> Sufficient in context (22): B believes that the weather is beautiful.

<sup>8</sup> See also Fauconnier (1981), de Fornel (1989).

that the son came back before 10 p.m., would certainly have respected the rules of classical logic, but not the pragmatic rules of *if* in natural language:

(23) If you come back after 10 p.m., you will be punished.

(24) If you come back before 10 p.m., you will not be punished.

The path from conditional *if* to bi-conditional *if and only if* is called *invited inference*. If we come back now to negation, we are faced with similar problem.

The second example of the mechanism of invited inference is given by because. If a speaker utters (25), he certainly does not mean (26) but rather (27):

(25) The children have been very tiresome, because I am exhausted.

(26) CAUSE (I am exhausted, the children have very tiresome)

(27) CAUSE (the children have very tiresome, I am exhausted)

In other words, the relation CAUSE is here interpreted to the reverse of its usual direction, according to the principle of invited inference.

We have until now given an explanation in terms of relevance and invited inference to only one type of negation use, the non-refutative and reactive use. What about the strictly descriptive and polemic uses on the one hand, and of the wide scope effects, that is external negation (presuppositional and illocutionary) on the other?

Let us suppose, as a beginning, that our speaker B, still in the position of just having opened his shutters, says:

(28) (a) Hello! The weather is not beautiful.

(b) Dash! The weather is not beautiful.

(c) The weather is not beautiful.

The first two utterances, affirmative, contrast with the third, in the sense that to a description of a negative state of affairs is added a description not of a representational, but of an expressive aspect: the expression of surprise (28a) and of disappointment in (28b). These propositional attitudes imply identical contexts from a non-representational point of view:

(29) B believes that the weather is beautiful.

If (29) is completed by assumption of type (30), the surprise effect can be explained without any difficulty:

(30) (a) The weather news predicted beautiful weather.

(b) If the weather news predicts beautiful weather, then the weather will be beautiful.

If, on the reverse, (29) is completed by (31), it is the disappointment effect which will prevail:

(31) (a) If the weather is beautiful, A and B will go to the beach.

(b) B wishes to go to the beach.

But what about (28c)? No expressive element releases any context. Still, it is difficult to have such an utterance, as a reaction to a situation, without imagining a *particular intonation*. It is thus possible, in this case, to associate with the utterance a particular intonation pattern, indicating either a nice surprise, or a disagreeable surprise and releasing contexts as:

(32) B hopes that the weather will not be beautiful.

(33) B hopes that the weather will be beautiful.

The contextual effects concern the attitude that B expresses by his utterance on this situation. In this case, there is contrast between on the one hand negative uttered information and positive assumption in the context, and on the other pragmatic inference associated with negation.



The case of the polemic use of negation raises still less difficulty. We will look into the cases where the use of polemic negation gives raise to indirect refutations as in example (34):

(34) A: Peter is an intelligent man.

B: But he is not serious for all that.

What B refutes is the inferable conclusion of A's utterance, that is "Peter is serious". The context of interpretation for B's utterance will be the following:

(35) (a) Peter is intelligent.

(b) f Peter is intelligent, then he is serious.

The effect of *but* (in its use of direct reaction, Moeschler, 1989) is thus to assert a contradictory proposition to the proposition retroactively drawn and cancelled by *but*.

The rectification of a word (lowering or majoring) must resort to a different treatment, since both the context summoned and the contextual effects are different. Let us compare to this effect (36a) and (36b):

(36) (a) Peter is not tall, but small.

(b) Peter is not tall, but huge.

We will begin by the principle but there is no need to distinguish two types of negation, a lowering negation and a majoring negation. We will on the contrary draw the hypothesis that the sequence *but small* in (36a) confirms the contextual implication drawn by the addressee, whereas the sequence *but huge* in (74b) invalidates this inference.

Last problem is that of external negation in the cases of presuppositions and of illocutionary negation for speech acts. The effects of negation also resort to a revision not of contextual assumption (descriptive and polemic negation) nor of the result of an elimination rule (majoring rectification), but of an implicature (here of a presupposition). Let us look at a previous example reproduced in (37):

(37) I do not regret that Paul is dead, since he enjoys perfect health.

(38) (a) explicature: The speaker is not sad about proposition.

(b) implicature: proposition is true.

(proposition = Paul is dead).

It is not (38a) that is revised by the sequence of the utterance in *since*, but (38b). Still, how can the role of negation be explained? The negation being polemic as well as external, it imposes a context of interpretation which introduces an opposition between a propositional attitude expressed by the speaker:

(39) (a) The speaker regrets that Paul is dead.

(b) If the speaker regrets that Paul is dead, then Paul is dead.

(c) Paul is dead.

The double effect of negation (polemic and external) is understandable here: the explicature (38a) is contradictory with premise (39a): the revised implicature (38b) is in contradiction with the implicated premise (39c).

The illocutionary negation gives raise, from an interpretive point of view, to a different problem from that raised by the problem of its position. As Lyons (1977) justly noted, the effect of illocutionary negation is different form that of propositional negation. How should this be explained? The explanation has to do once again with the idea of positive contextual premise and invited inference. Given the non-performative negative utterance (40):

(40) I do not promise to be on time.

The context contains among other things assumption (41):  
(41) The speaker promises to be on time.  
The inference rule resorts to elimination rule (42):  
(42) promise (speaker, proposition) – commit oneself to (speaker, proposition)  
The invited inference then makes it possible to draw the non-commitment act reading (44) from inference rule (43):  
(43) not-promise (speaker, proposition) – not-commit oneself to (speaker, proposition)

## Conclusions

The analysis proposed in the framework of relevance theory has thus been verified by the main uses of negation. It has the advantage of not making any morphologic or semantic distinctions between the different types of negation and the different uses are explained from different pragmatic processes depending either on the linguistic environment, or on the context, or on both.

The explanation is based on two strong assumptions. Every negative utterance resorts to a positive implicated premise and an elimination rule. The elimination rule, by invited inference, produces the conclusion that is consistent with the context of interpretation.

The analysis is both simple and realistic. Simple because no complexification of the linguistic system is necessary. Linguistic negation treatment allows, on that count, interesting confrontations from one language to another. Realistic too, because it comes from the principle, admitted by psycholinguists, that positive information is more quickly treated than negative information. It follows from this principle that pragmatic inferences on negative utterances resort to positive premises. Far from having shown the psychologic and representational validity of this principle, we have at least shown its computational plausibility.

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