

THE MEANINGS OF PRONOMINAL- VERBAL CONSTRUCTIONS FOR SPEAKERS AND LEARNERS OF FRENCH¹

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ABSTRACT

This article reports on a study of the interpretations of French pronominal-verbal constructions, and on the classification of those interpretations as 'reflexive', 'reciprocal', 'intrinsic', or 'passive'. Nineteen Francophone and 19 non-Francophone students in university degree programmes in English <—> French translation interpreted 20 sentences with pronominal-verbal constructions having, out of context, one or more of the four possible readings. To do this, they wrote a translation or a paraphrase corresponding to each reading. They also identified each of the readings which they recognized as reflexive, reciprocal, intrinsic, or passive, having been given a written and oral explanation of these interpretation types.

The results of the study showed greater correctness in rendering and identifying reflexive and reciprocal readings, on the one hand, than for intrinsic and passive readings, on the other. One major source of difficulty was the metalinguistic aspect of the task: there was a great tendency to misclassify correct non-reflexive interpretations as reflexive. Another was the preference among Francophones for paraphrase over translation as the means to express an interpretation. This posed the greatest problem in the case of the intrinsic, which must be interpreted by a verb lexically different from that in the reflexive, reciprocal, and/or passive reading. This requirement was best met by translating, not paraphrasing, the specifically intrinsic reading, since within one language, there are no perfect synonyms.

1. INTRODUCTION

This paper reports on a study of the interpretation of sentences containing pronominal-verbal constructions in French. More particularly, and in traditional grammatical terms, we were interested in eliciting interpretations of reflexives, reciprocals, 'intrinsic', and 'passives'. For reasons

¹ We wish to thank the Social Sciences and Humanities Research Council of Canada for the grant making this and related studies possible, and Michel Lamoureux, of the Département d'informatique et de recherche opérationnelle at the Université de Montréal, for the statistical studies presented here.

which will quickly become obvious, we solicited these interpretations from a group of advanced learners of French and from a comparable group of native Francophones.

We shall first of all see how the recent theoretical and descriptive linguistic literature, in its focus on structures of the intrinsic and passive types, has foreshadowed the problematic nature of these latter two constructions for speakers and learners. This evaluation will of course be relative to that of reflexives and reciprocals, which, in French as in a number of other languages, are bound together in an extremely systematic and productive relation. Then we shall examine our empirical study of the awareness, manifested by our respondents, of each of these possible meanings of the construction. For the description of our study below, it will be important to keep in mind the distinction between linguistic tasks, such as interpreting sentences by means of translation or paraphrase, and metalinguistic tasks, the explicit appeal to grammatical classes (in the broadest possible sense of that term).

Studies such as this one come from a long tradition in descriptive and theoretical linguistics, in which informants for a given language are asked to perform such linguistic tasks as giving the meaning of sentences invented by a linguist and to judge their grammaticality. The question of the syntactic ambiguity (and thus the existence of at least two meanings) of certain types of sentences took on central importance in connection with the early-generative-grammar distinction between 'deep' and 'surface' syntactic structure (Chomsky 1965): syntactic ambiguity signalled the presence of two 'deep structures' underlying one 'surface structure'.

Some linguists and psycholinguists became interested in the question as to the systematicity of these kinds of judgments, so crucial to the accuracy of linguistic data and of the description and, ultimately, the theories which depend upon them (Carrroll, Bever & Pollack 1981, Fillmore 1979, Gleitman & Gleitman 1979, Ross 1979, Snow & Meijer 1977). The most general outcome of such studies, focusing on the judgments themselves, was that inter-subject agreement is always imperfect when more than a handful of subjects are questioned as to such fundamental linguistic characteristics of a given sentence as its syntactic ambiguity (or lack thereof) and its grammaticality.

In the field of second-language acquisition studies, there was reason to fear that linguistic intuitions would be even less uniform among learners than among native speakers, since the grammars ('interlanguages') of the former were more heterogeneous than linguists postulated native grammars to be, as far as one could see from linguistic performance other than

judgment behaviour. Thus, paralleling the systematic study of linguistic judgments of native-speakers, there developed a literature on those of second-language learners (Arthur 1980, Singh, D'Anglejan & Carroll 1982, Chaudron 1983, Gass 1983, Masny & D'Anglejan 1985, Masny 1987, White 1985a, 1985b, 1989, Coppieters 1987, Birdsong 1989). Some of this work seemed to confirm the fear that learners, even near-native speakers (Coppieters 1987) are less uniform in judgments of grammaticality, ambiguity, and meaning than comparable native speakers. Other work suggested that one cannot predict the degree of uniformity of the linguistic judgments of groups of either kind of informant, and that studies in this area must continue to examine the judgment behaviour of groups of native as well as non-native speakers (Birdsong 1992).

In this connection, Birdsong's (1989) book-length treatment of the literature in this area dispelled the implicit assumption among linguists that in eliciting grammaticality and meaning judgments on hypothetical, idealized (and thus simplified) data, we abstract away from the irrelevant complexities of performance, and that the direction of the judgments obtained will necessarily reflect the learner's (or speaker's) competence with respect to the rule or principle being tested. Birdsong's review shows that the determinants of the judgment process are so ill-understood that we must abandon the notion that linguistic judgments necessarily reflect competence more accurately than other types of performance.

Yet such judgments remain necessary, since linguistic corpora, whether for speakers or for learners, provide insufficient data on the status of many crucial structures in any grammar. The complex properties of linguistic judgments themselves, then, are a worthy object of study. The very fact that even learners at various levels of second-language acquisition, as the above mentioned literature shows, have intuitions about their second language which enable them to perform the same judgment tasks as those performed by native speakers is interesting in itself.

The ability to detect and resolve syntactic ambiguity is of particular interest in students of translation (Piquette 1977), since it is among the *sine qua non* of the skill which they are trying to perfect. The enthusiastic response of translation students to the questionnaires in the series of studies of which the present one is a part have been matched with a wealth of data showing great abilities in this area, especially in ambiguity detection. It is sometimes said that speakers, and especially second-language learners, should be provided with a context motivating a particular reading of a syntactically ambiguous sentence. In fact, it is precisely the context (real-world knowledge and extra-sentential co-text) which, in normal language

use, limits and usually eliminates ambiguity by rendering all but one reading improbable, when the reader or listener infers the intention of the writer or speaker.

This is why syntacticians have always presented sentences for ambiguity judgments out of context. It would seem to us to be misguided to propose a specific context for the study of perceived syntactic ambiguity, since, like the sentences which the grammar of the speaker or learner generates, the number of possible contexts for each of the readings of that sentence is in principle infinite, and therefore unforeseeable by even the native-speaking linguist. It is precisely the absence of context which enables some speakers and learners to find all the possible readings of sentences. This was indeed true for many of our respondents, in the case of many of our sentences. We shall see that the specifically *meta*-linguistic aspect of the task described below made it especially difficult to have the 'right' set of answers for each sentence in our study.

The Literature

The reader will immediately notice, in the list of constructions studied, the absence of 'neuter' pronominals (Ruwet 1972). Explaining this last type of construction to non-linguists (again, in traditional-grammatical terms) requires proceeding negatively, i.e., contrasting them to intrinsics, on the one hand, and passives, on the other, and was judged too complex for this experiment. In addition, we have avoided referring to 'middle' constructions. This term has been subject to a proliferation of related but conflicting usages in the literature, which make its avoidance preferable here (see, e.g., Klaiman 1992). For the last-mentioned type of pronominal-verbal construction, the study of pedagogical grammars convinced us that the term 'passive' would be best, despite its well-known syntactic and semantic differences from the morphological passive (Verhaar 1990), which we emphasized in explaining this construction to our informants. (See the section on the questionnaire, respondents and instructions.)

The passive and intrinsic constructions have been of great interest to theoretical linguists. As Van Valin (1990: 221-2) points out, in a role-and-reference-grammar reanalysis of 'split intransitivity', relational grammarians, for example, in connection with the 'unaccusative hypothesis' (Perlmutter), have focused on 'unaccusative' verbs (i.e., having no underlying subject) and on 'unergative' verbs (i.e., having no underlying object). In relational grammar (Legendre 1994), they embody the two types of intransitivity. Government-binding theoreticians have renamed such

verbs, respectively, 'ergative' and 'intransitive' (Burzio 1981, 1986; Haegeman 1985). Without wishing to enter into, much less resolve, all the terminological divergence on this topic, the advantage of the term 'ergative', for what we have popularized as 'passive' pronominal-verbal constructions, is that it conforms to a well-known characterization of 'ergative languages', where S (the intransitive Subject) = O (the transitive Object) \neq A (the transitive Subject)—see, e.g., Dixon (1979), Verhaar (1990). On the proliferation of pairs of terms for this opposition and the reasons for it, see Mithun (1991).

To return to the terms of our experiment, we assume, along with the relevant literature in general, as far as we can tell, that our 'passive' pronominals are verbs without underlying subjects, and our 'intrinsic' pronominals are verbs without underlying objects. This is notwithstanding the relational grammar analysis (Legendre 1994: 30, citing Perlmutter 1983 & Fauconnier 1983) in which intrinsics are a type of unaccusative construction. Be that as it may, the differences among analyses, in the frameworks of different theories, are less important than what passive and intrinsic pronominal-verbal constructions have in common across these analyses. Thus, in the terms of some of the recent literature, both involve 'argument (or thematic role) reduction' and thus 'detransitivization' (Fagan 1988, Cinque 1988, Klaiman 1992, Haegeman 1985, Song 1987)—the Patient is 'suppressed' (in intrinsics) or 'promoted' to Subject (in passives). In the case of French intrinsics, the reflexive pronoun is 'empty', rather than representing the Patient(-Agent) or Experiencer, as it would have in true reflexives or reciprocals. In the case of pronominal passives, it is the Agent which is suppressed. Such constructions are widely regarded as lexically (i.e., not syntactically) derived (Fagan 1988, Zaenen, Maling & Thráinsson 1985). Intrinsics, in fact, can be said to be entirely idiosyncratic, in the sense that they are non-productive, and in addition, the lexical meaning of the verb in its intrinsic construction is synchronically distinct from (though diachronically related to) that in its transitive constructions (if any). Passive pronominals (as a type, then, of 'unaccusative' or 'ergative') have 'limited' productivity (Klaiman 1992). Much of the relevant theoretical literature is devoted to trying to account for the productivity and the nature of its limitations in such constructions, where the Patient becomes Subject. These accounts have invoked, notably, the interaction between the (different) argument structures of verbs and a universal hierarchy of argument types (Van Valin 1990, Connolly 1987). In any event, it is clear cross-linguistically that while not every combination of Patient and transitive verb allows this construction, linguistic theory must account

for its cross-language characteristics and its alternation and semantic relation with corresponding transitives. We shall see below that the peculiar, and related, status of these two constructions in the literature is mirrored in their similarly problematic status for speakers.

2. THE STUDY

Questionnaire, Respondents, and Instructions

Given, then, both the comparative obscurity of these two constructions and their relatedness in the linguistic literature, we will be interested in the consequences of the productivity status of each of them when French speakers and learners are asked to interpret sentences with a pronominal verb form. More particularly, our questionnaire presented 19 Francophones (all of whose principal language of schooling was French) and 19 Non-Francophones (all of whose principal language of schooling was English) with 20 grammatical French sentences containing pronominal verb forms:

Questionnaire sentences

(1) Ce livre se vend bien.	passive
(2) Les passants s'aperçoivent dans la glace.	reflexive, reciprocal, passive
(3) Les enfants se surveillent bien de la fenêtre.	reciprocal, passive
(4) Les grands savants s'admirent.	reflexive, reciprocal, passive
(5) Jean et Paul se parlent	reflexive, reciprocal
(6) Les lumières s'allument à six heures	reflexive, passive
(7) Mathieu se sert du café	reflexive, intrinsic
(8) Jean se déteste	reflexive
(9) Alexandre et Denis se sont sauvés	reflexive, reciprocal, intrinsic
(10) Ils s'aperçoivent de leurs propres erreurs	intrinsic
(11) Pierre et Simon s'appliquent à leur travail	intrinsic
(12) Mathieu se sert du marteau	intrinsic
(13) Ces types de personnes se rencontrent dans ce bar	reciprocal, passive
(14) Pauline et Yves s'entendent bien	reflexive, reciprocal intrinsic, passive
(15) Les coupables se pendent dans la prison	reflexive, reciprocal, passive
(16) Marie s'évade du couvent	intrinsic
(17) Les enfants se comportent bien à l'école	intrinsic
(18) Pierre et Jean s'écrivent de nombreuses notes	reflexive, reciprocal
(19) Simon et Anne se sont rencontrés dans ce bar	reciprocal
(20) Paul et Anne se marient	reflexive, reciprocal

All of the respondents were in one or the other of two corresponding second-year courses, each part of a university programme leading to a B.A. in translation. These courses were devoted to problems in the translation of texts from French to English. The sentences were presented in a written questionnaire, answered by each respondent in class. As we have just seen, each of the sentences contains a pronominal-verbal construction, having at least one and at most four interpretations: reflexive, reciprocal, intrinsic, and/or passive. An Introduction to the questionnaire discussed these interpretation types in traditional-grammatical terms and exemplified them. It defined and illustrated the notion of syntactic ambiguity, and then worked through examples of pronominal-verbal sentences having two or three of the four interpretations of interest:

(21) Paul et Jean se regardent dans le miroir.	reflexive and reciprocal
(22) Les enfants se lavent en dix minutes.	reflexive, reciprocal, passive
(23) Les victimes de guerre se plaignent .	reflexive, reciprocal, intrinsic

The respondents were then asked, for each sentence, to circle on the questionnaire the type of reading or types of readings it had (reflexive, reciprocal, intrinsic, and/or passive), and for each meaning recognized, to supply an interpretation in the form of an English translation or a (French) paraphrase, beside the circled interpretation type. So we see that there were two tasks, one linguistic and one metalinguistic.

It must be emphasized here that the protocol appeared in a French version for the Francophones and an English version for the non-Francophones, schooled mainly in English. Otherwise it was the same for all respondents. They were told that every sentence was grammatical on at least one reading but not necessarily ambiguous. We have seen that the task required expressing each interpretation by a translation or a paraphrase of the original sentence. The choice, mentioned above, of students in two matched second-year courses devoted to problems of translation from French into English was dictated by our belief that the best way to express the different possible meanings of these constructions would be differential translations of these French sentences into English.

This is, of course, especially true in the case at hand, because English obligatorily differentiates reflexives and reciprocals morphosyntactically. Both languages have the (morphological) passive construction, which, while not identical in meaning to the French pronominal passive, could be used in either language to differentiate the passive reading from the others. The intrinsic posed a problem related to its idiosyncratic meaning.

Ideally, at least, a change in lexical verb was called for to express the difference between its meaning and those of the other three constructions. For the latter, three different constructions with the same lexical verb would be the ideal translations or paraphrases.

Thus, for example, in sentence (23), as we indicated in our (written and oral) protocol, the reflexive and reciprocal meanings have to do with self- or mutual *pity*, easily paraphrasable in French, but the ideal verb for expressing the intrinsic meaning was its obvious English translation, *complain*. In brief, we hoped that the respondents would favour translation as the means to differentiate interpretations, especially for the intrinsic. We assume, in accordance with a long tradition in linguistics (Gross 1975), that within one language, no two lexical items are perfect synonyms. We shall see results for the intrinsic below which will be explainable in part by the above-mentioned fact that a change in lexical verb is required to express how its meaning differs from that of the other three pronominal-verbal constructions. The ideal way to find this distinctive lexical verb, meaning only what the intrinsic does, is to translate it. Since translation into English was what the two matched courses which our respondents were taking were devoted to, we had high hopes that this would in general be done.

In fact, despite these identical instructions for both respondent groups, the Francophones chose paraphrasing more often than translation, and the non-Francophones translation more often than paraphrasing. For the reasons mentioned above, this seems to have favoured the non-Francophones when the accuracy of the interpretations was evaluated, as we shall see. We regard this result as an artifact, though not a flaw, of the design of the study. This is why it will not be a main focus of interest below.

Hypotheses

The theoretical possibility of four interpretations for each of the twenty sentences, by each of the 38 respondents, produced a considerable body of data, which we will not attempt to present here from all possible viewpoints. Rather, we will focus mainly on the French speakers' and learners' identification and rendition of intrinsics and passives, in the larger context of the study as a whole. We shall try to determine whether the advanced learners show systematic differences from the native speakers in detecting and transmitting the reading(s) of the 20 sentences containing pronominal verbal constructions. Whatever the overall and relative success of the speaker and learner groups, however, we hypothesize that reflexive and

reciprocal readings, on the one hand, will show signs of greater transparency than intrinsic and passive readings, on the other. This is because the reflexive pronoun has (referential) argument status in the first two types of readings, but not in the latter two types. We propose that this relative obscurity of the non-argument readings will be reflected in a lower success rate in accurately detecting and/or a relative inability to correctly translate or paraphrase these readings. Furthermore, we expect considerable variation, within the two respondent groups, between the native-speaker and the learner group, and from one sentence to another (according to the nature and the number of readings which must be detected and rendered), in success at this linguistic task.

On the metalinguistic level, we have seen that the respondents were to classify each of their interpretations according to the typology assumed above and explained in the Introduction to the questionnaire. We can therefore ask whether the respondents correctly identified the nature of their interpretations. When they provided their interpretation(s) for each sentence, did they classify reflexive interpretations as reflexive, reciprocal ones as reciprocal, and so on? We predict that misidentifications of interpretation types will favour reflexive readings relative to other ones. That is, non-reflexive readings will be misclassified as reflexive more often than any other misclassification, most fundamentally because attributing a reflexive reading to a pronominal-verbal construction constitutes a more transparent (or 'literal') analysis of it than recognizing that the reflexive pronoun is 'empty'. Reciprocals would appear to stand somewhat apart: while the reflexive pronoun has (referential) argument status, the necessarily plural or collective nature of the subject in sentences having a reciprocal reading, as well as the linguistic devices required to make the reciprocal reading explicit, eliminating any ambiguity, would seem to prevent other kinds of correct readings from being misclassified as reciprocal. We shall see if this expectation is fulfilled below.

Analysis of the Data

The analysis of relative success at this set of tasks must, again, distinguish the linguistic from the metalinguistic level: it is one thing to give all and only the correct readings of a sentence. It is another to identify these readings correctly in linguistic terms, even in those of traditional grammar, and even immediately after a written explanation of them. The coding of our data thus distinguished not only correct reflexive, reciprocal, intrinsic, and passive readings from incorrect ones, but also correct inter-

pretations correctly classified from those misclassified as reflexive, reciprocal, intrinsic, or passive. This will enable us to see, for example, whether the respondents indeed favoured a reflexive analysis in their misclassifications, rather than a reciprocal, intrinsic, or passive analysis.

Parallel to evaluating the performance of our Francophone and non-Francophone respondents, we must also examine the 'behavior' of the sentences. The choice of the simplest possible form of each one, and the decision as to the number and nature of its readings, was made only after consulting the relevant linguistic literature, grammars, and a group made up of interested native linguists and advanced translation students. The order of the sentences in the questionnaire was then randomized. Despite these measures, our analysis of all the interpretations given for each sentence indicated that some were much more problematic than others. That is, the respondents recognized and rendered the predicted set of readings much more often in the case of some sentences than of others. Our analysis will therefore compare, for each sentence, the simple majority's choice of type(s) of reading(s) to the set of reading types which we regard as correct for that sentence. We hope in this way to identify the classes or combinations of readings which, though clear to the linguist and the native analyst, are difficult to detect or render in a manner that resolves any ambiguity among readings. We shall see, again in this way, whether sentences requiring intrinsic and/or passive readings pose extraordinary interpretation problems in this sense.

3. RESULTS AND DISCUSSION

General Levels of Performance

Tables A-D below reflect the difficulty of the combination of linguistic and metalinguistic tasks with which our respondents were confronted. To get the 'right answer', one had to distinguish and render accurately each possible meaning of the sentence and correctly identify the type(s) of interpretation(s) at issue.

The first question to which every reader must expect an answer (though we have explained why it is not our main point here) is whether the Francophones were globally superior to the non-Francophones in performance on the set of tasks presented above. The answer, surprising on the face of it, is no. As a test of 80 items—20 sentences x four decisions as to whether there was a reflexive, a reciprocal, an intrinsic, and/or a passive

reading, and what these readings were—the questionnaire produced the overall results given in Table A:

Table A
Overall Performance: Francophones vs. non-Francophones

Group	N	Mean/80	Standard Deviation	t-value	2-tailed probability
Francophones	19	52.5263	8.106	-2.51	.017
Non-Francophones	19	59.1053	8.034		

We attribute this statistically significant result in favour of the non-Francophones to the fact that, as it turned out, the Francophones generally wrote paraphrases to express their interpretation(s) of the sentences, while the non-Francophones generally wrote translations into English to do so. English of course differs from French precisely in the nature of the (distinct) constructions expressing reflexive and reciprocal, and, notably, has intransitive (non-reflexive) forms for our 'intrinsic' and 'passives'. Translation seems therefore to have been the appropriate method for expressing interpretations which had to be distinctly reflexive or reciprocal, or neither. For a respondent with a good passive vocabulary in French and a good active vocabulary in English, even the interpretation of intrinsic benefited from translation. Paraphrases were in general inexact (since, of course, there are no perfect synonyms), and were therefore often rejected by the Francophone analyst as inadequate interpretations.

Still on the subject of the overall difference in results between the Francophones and the non-Francophones, we can ask to what extent each group rendered the correct combination of readings for each of the twenty sentences. This would mean giving a (correct) reflexive interpretation if and only if the sentence had one, and classifying it as reflexive, as well as a (correct) reciprocal interpretation iff the sentence had one, and classifying it as reciprocal, and so on. On this extremely demanding criterion, the performance of both groups was modest, internally quite varied, but again significantly different, in the same direction, of course, as the first overall measure.

The standard deviations, as well as the means, in Tables A and B give us an idea of the overall difficulty of this set of linguistic tasks, and the relative advantage of the advanced learners over the Francophones in the special circumstances recounted above. They do not, however, answer the question of greatest interest to us: Are there signs of differences in degree of difficulty among the four types of interpretations? Are reflexive and re-

reciprocal readings, on the one hand, easier to 'get' (and render) than intrinsic and passive readings, on the other?

Table B
Performance on Required Combination
of Interpretations for each Sentence

Group	N	Mean/20	Standard Deviation	t-value	2-tailed probability
Francophones	19	5.1579	3.304	-2.59	.014
Non-Francophones	19	8.1053	3.695		

One obvious approach to this problem is to determine the proportions of the required reflexive, reciprocal, intrinsic, and passive readings which were furnished by the respondents. All respondents will be pooled (i.e., without distinguishing Francophones from non-Francophones), since there was no significant interaction between the respondent-group variable and the interpretation-type variable. (The Greenhouse-Geisser index was .818. See Figure 1 for graphic representation of the near-perfect parallelism of the performance of the two respondent groups, across the four interpretation types.) Table C gives the average percentage of the required reflexive, reciprocal, intrinsic, and passive interpretations which were correctly furnished by the 38 respondents as a group:

Table C
Proportion of Interpretations Correctly Supplied According to Type

Interpretation Type	Mean (%)	Standard Deviation	Standard Error
Reflexive	.6842	.175	.028
Reciprocal	.7775	.198	.032
Intrinsic	.3783	.290	.047
Passive	.4868	.290	.047

Of the six comparisons to be made between these success rates (by interpretation type), the first five are significant, at the .000 level of two-tailed probability. Despite our general hypothesis that intrinsics and passives, on the one hand, are more difficult than reflexives and reciprocals, on the other, we adhered everywhere to tests of two-tailed probability, as though there were no directional hypotheses. Such tests are more demanding than one-tailed tests in that a given coefficient (or t-value in this case) is associated with a higher (less significant) probability level in the case of a two-tailed than in that of a one-tailed test. Table D gives the differences between the success rates associated with each pair of

interpretation types and the results of the t-tests for the significance of those differences:

Figure 1
Proportion of Correct Responses

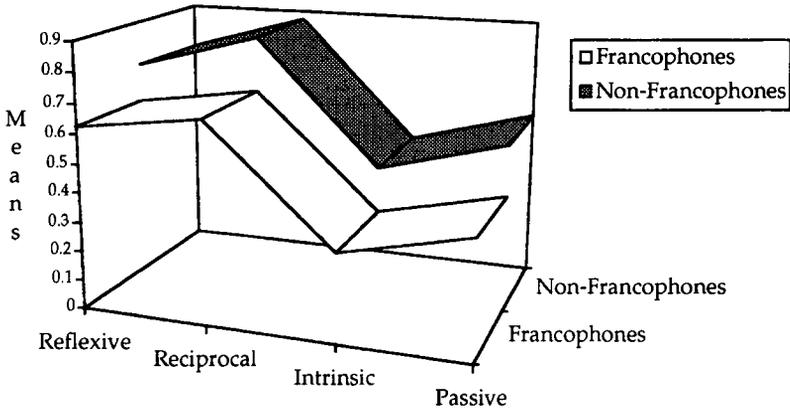


Table D
Differences between Success Rates for each Pair of Interpretation Types

Interpretations	Difference (%)	Std. Deviation	t-value	2-tailed probability
Reflexive vs. Reciprocal	-.0933	.128	-4.50	.000
Reflexive vs. Intrinsic	.3059	.275	6.85	.000
Reflexive vs. Passive	.1974	.270	4.50	.000
Reciprocal vs. Intrinsic	.3992	.273	9.02	.000
Reciprocal vs. Passive	.2907	.251	7.13	.000
Intrinsic vs. Passive	-.1086	.408	-1.64	.110

It is precisely this last difference which we would have predicted to be non-significant, since intrinsics and passives should be comparably 'hard to get' for the theoretical-linguistic reasons mentioned in the Introduction, most particularly the 'argument reduction' and 'detransitivization' which they involve, as we saw. The difference between the average success rate for reflexives and reciprocals, in the face of that between intrinsics and passives, requires comment. As we see in sentences (1)-(20) above, reflexive and reciprocal interpretations were each required in 11 sentences, while intrinsic and passive interpretations were each required in only eight

sentences. In addition, the very similar differences in average success rate were nonetheless accompanied by strikingly different standard deviations. That is, the difference in performance on intrinsics vs. passives was much less uniform among the respondents than that between reflexives and reciprocals. Thus a superficially similar difference was statistically significant in the latter case, but not the former.

The relatively great success in detecting, identifying, and rendering the required reciprocal interpretations stands out among the results. Corresponding to the theoretical reasons for the salience of the reciprocal reading (associated with its argument status) are the hallmarks of this construction in translations and paraphrases, which enable the interpreter to distinguish it from any other actually or theoretically possible reading: i.e., *each other, one another, l'un l'autre*, etc.

We must immediately emphasize here that these results do not signal a lack of imagination in the interpretation of the sentences. On the contrary, there were many hundreds of interpretations, altogether, of the 20 sentences among the 38 respondents. The present results indicate, rather, the difficulty of the metalinguistic part of the task with which our respondents were faced. In the next analysis, we shall see the extent to which the respondents proposed correct interpretations whose type they identified incorrectly. Such radically different behaviour, again, justifies the distinction in the psycholinguistic literature between linguistic awareness and the performance of metalinguistic tasks.

Correct Interpretations Misclassified

There is, in addition, then, another possible approach to the question of the relative salience of reflexive, reciprocal, intrinsic, and passive readings: we can ask, at the metalinguistic level, to what extent non-reflexive interpretations were judged to be reflexive, non-reciprocal ones reciprocal, and so on. Is there any difference in the direction taken by one's misclassifications of one's (correct) interpretations which favours one or the other interpretation type? Or, on the contrary, are the respondents' misidentifications of the type of interpretation they have written randomly distributed among the four possibilities? To answer this question, we will now compare among themselves 'pseudo-reflexives', 'pseudo-reciprocals', 'pseudo-intrinsics', and 'pseudo-passives', i.e., correct interpretations incorrectly classified by their authors as reflexive, reciprocal, intrinsic, or passive, respectively.

Table E gives the range of numbers of 'pseudo-reflexives', 'pseudo-reciprocals', 'pseudo-intrinsics', and 'pseudo-passives' produced by our respondents as a group, and the number of respondents who made one, two, three, etc. errors of each of these types. The sums of the tokens of each 'pseudo' type enables us to appreciate how much more successful our respondents were at their linguistic task (interpreting the sentences) than at their metalinguistic task (identifying each interpretation type):

Table E
Tokens of 'Pseudo' Interpretation Types / Respondents (Total=38)

Pseudo-Reflexive		Pseudo-Reciprocal		Pseudo-Intrinsic		Pseudo-Passive	
Tokens	N	Tokens	N	Tokens	N	Tokens	N
0	3	0	14	0	18	0	27
1	7	1	14	1	9	1	9
2	9	2	9	2	4	2	1
3	5	3	1	3	3	3	1
4	4						
5	6			5	1		
6	2			6	2		
7	1						
				11	1		
12	1						
Total Tokens							
117		35		54		14	

We see that, while the theoretical possibility of furnishing a 'pseudo-reflexive' interpretation was equal to that of providing a 'pseudo-reciprocal', a 'pseudo-intrinsic', or a 'pseudo-passive', the respondents as a whole indeed overwhelmingly favoured the reflexive category over the other three in misidentifying the nature of their (correct) interpretations. This finding supports the linguistic intuition underlying traditional grammatical terminology, which sometimes confuses pronominal-verbal constructions with reflexive verbs. It also accounts for the observation, widespread in the literature, that various languages, including unrelated ones, use what are historically and (according to specialists in those languages) basically reflexive constructions to express reciprocal and passive meanings.

Table F indicates the significant differences among the distributions of the four types of 'pseudo' classes of interpretations. (Bear in mind, from Table E, however, that the errors of the different types were very differently distributed among the 38 respondents.)

Table F
Differences among 'Pseudo' Classes of Interpretations

Pair Compared	Cochran Q	Probability (*significant iff <.0083)
Reflexive / Reciprocal	9.3077	.0023*
Reflexive / Intrinsic	11.8421	.0006*
Reflexive / Passive	22.1538	.0000*
Reciprocal / Intrinsic	1.1429	.2850
Reciprocal / Passive	7.3478	.0067*
Intrinsic / Passive	3.8571	.0495

The Cochran (non-parametric) test, used here, requires dividing .05 (the usual level of probability required for significance) by the number of binary contrasts: six in this case. Thus, in these rigorous conditions, only probability levels equal to or less than .0083 (.05/6) are significant. As one would expect from the raw data in Table E, all the comparisons between 'pseudo-reflexives' and other 'pseudo' classes are significant. In addition, surprisingly, the modest difference between the incorrect choice of reciprocal vs. passive is significant. This is because the binary contrast tested was between the number of respondents having no errors of each type and those having one or more such errors. As we have just seen in Table E, 14 of the 38 respondents made no incorrect choice of the reciprocal category for their correct interpretations, but this was also true of 27 of the 38 respondents in the case of the passive category.

The intrinsic class, though wrongly chosen 54 times, as we see in Table E, contrasted significantly neither with the reciprocal nor with the passive class under the conditions of the statistical test. First, the difference between the absolute number of wrong choices of reciprocal and that of intrinsic was not very great (19). In addition, and more important here, the number of respondents having no errors of these two types (14 vs. 18) was not very different.

As for the difference between 'pseudo-intrinsics' and 'pseudo-passives', again, the contrast between respondents who did not make these errors is not great enough (18 vs. 27) to lead to a significant result under these conditions. This is despite the surprisingly great number (54) of tokens of 'pseudo-intrinsics', which we cannot explain. It is possible that we are seeing hypercorrection, since, as we have seen, the intrinsic class showed the lowest level of correctness and a high level of variation among the respondents (Table C). We remember that this success rate was significantly worse than those for reflexives and reciprocals (Table D). The other pos-

sible explanation has to do with the (lexically) idiosyncratic nature of the intrinsic reading: speakers have to memorize this meaning as distinct from that common to the verb in the other three constructions. This could give the intrinsic a special salience, as pointed out by an anonymous assessor. We shall also see below, however, that the classification of a sentence as having an intrinsic reading was a source of disagreement between the group of French-speaking linguists and translators who had decided on the correct type(s) of reading(s) for each sentence, on the one hand, and the (simple or absolute) majority of respondents identified with the response set most often chosen, on the other. We will refer to this set as the 'modal response', and to these respondents as the 'modal group' below. Disagreement as to which sentence had an intrinsic reading is matched, as we shall see, by failure, in the case of three sentences, to recognize passive readings. This will not surprise us, since we have just seen very little tendency (Tables E and F) to misidentify one's correct interpretations as passive.

Before leaving the study of classes of 'pseudo' interpretations, we should mention the *Chi*-square distributions for Francophones and non-Francophones having made, vs. not made, each of these types of classification errors. They indicated one significant difference: more Francophones than non-Francophones furnished one or more 'pseudo-reciprocals' (Pearson 7.23810, $p = .00714$). As for the 'pseudo-reflexives', much more widely distributed and well represented among our respondents, the frequency with which a respondent provided them was inversely (and significantly) correlated with overall performance (Table A: Pearson correlation coefficient $-.5809$, $p = .000$) and with performance on the required combinations of interpretations (Table B: Pearson $-.5036$, $p = .001$). It also correlated significantly (but directly) with the number of times the respondent furnished an 'unusable' interpretation (i.e., ambiguous in a crucial respect or otherwise not distinct from the original sentence in a way enabling us to consider it a relevant reading). This last (Pearson) correlation coefficient was $.3910$ ($p = .015$).

Misidentifying one's (correct) interpretations as reflexive is, then, a salient error among our respondents generally, and an indicator of global performance on the set of interpretation-classification tasks confronting them. Misclassifying one's (correct) interpretations as reciprocals, on the other hand, was mainly confined to Francophones (see above). We might speculate that this is because the latter can easily be made conscious of the fact that reflexive sentences are in general potentially also reciprocal (thanks to the argument structure of the lexical verb), if the grammatical

subject is plural or collective. Anglophones may be less often aware of this possibility: the reflexive reading is felt to be basic or unmarked (as we have seen), and the reciprocal can be explicitly distinguished from it by variants of *l'un l'autre* or by *entre eux*, which have literal English translations. The fact, however, that the reciprocal reading is, in general, there, under the required conditions, along with the reflexive one, rather than being explicitly distinguished from it, may be why English speakers are not particularly inclined to find it where it is not.

As for the relatively large number of 'pseudo-intrinsics' (Table E), for which we have mentioned our difficulty in deciding on an explanation, just over half of our respondents made this type of error at least once, nine Francophones and 11 non-Francophones. This type of misidentification, therefore, does not distinguish our two language groups.

Now at last we must ask why the correct combination of interpretations, correctly classified as to type, was rendered for so few sentences by our average respondent in each of the two groups (Table B). Table G below indicates, for each sentence, the correct response-type set, the number of respondents (out of 38) who rendered a set of correct (and correctly categorized) interpretations, the mode, and the modal response set.

Table G: Correct and Modal Response Sets for each Sentence

Sentence	Correct Response Set		Modal Response Set	
	Type(s)	N	Type(s)	N
1	passive	17	= passive	17
2	reflexive, reciprocal, passive	9	reflexive, reciprocal	18
3	reciprocal, passive	9	= reciprocal, passive	9
4	reflexive, reciprocal, passive	13	reflexive, reciprocal	14
5	reflexive, reciprocal	27	= reflexive, reciprocal	27
6	reflexive, passive	8	passive	9
7	reflexive, intrinsic	8	reflexive	15
8	reflexive	28	= reflexive	28
9	reflexive, reciprocal, intrinsic	4	reflexive, reciprocal	5
10	intrinsic	8	= intrinsic	8
11	intrinsic	4	reflexive	7
12	intrinsic	18	= intrinsic	18
13	reciprocal, passive	12	= reciprocal, passive	12
14	reflexive, reciprocal, intrinsic, passive	2	reflexive, reciprocal intrinsic	5
15	reflexive, reciprocal, passive	15	= reflexive, reciprocal, passive	15
16	intrinsic	10	= intrinsic	10
17	intrinsic	10	= intrinsic	10
18	reflexive, reciprocal	24	= reflexive, reciprocal	24
19	reciprocal	17	= reciprocal	17
20	reflexive, reciprocal	9	= reflexive, reciprocal	9

We see that for only 13 of the 20 sentences did the mode correspond to the correct response set. Not surprisingly, in seven of these 13 cases, the correct response corresponded to only one interpretation type; i.e., these were seven of the eight unambiguous sentences in the questionnaire. In sentence (11), the simple majority thought the verbal construction was reflexive, whereas we consider it intrinsic.

Putting aside such admittedly litigious cases (i.e., the English construction *apply oneself* is in fact reflexive), the secret to success seems to be unambiguous sentences. Thus ambiguity appears to be the main source of difficulty in 'getting', in identifying, or in rendering the correct set of interpretations, since it was principally for unambiguous sentences that the (simple or absolute) majority correctly classified and rendered the interpretation required. One cannot help noticing, in particular, the problematic sentence (9), where the small modal group of respondents did not 'get' the intrinsic interpretation of *se sauver*, sentence (11) noted above, and, especially, sentence (14), the only one in the questionnaire with all four readings, of which the passive was overlooked by the small modal group. Sentences (2), (4), (7), (9), and (14), more generally, confirm the role of the combination of ambiguity with the difficulty of intrinsics and passives. These two interpretation types are more particularly, then, 'hard to get' in the presence of other readings.

Yet knowledge about the ambiguity of some sentences can be detailed indeed. As Piquette (1977) points out, the meanings of an ambiguous sentence are not, in general, of equal plausibility, even out of all context. In an unpublished parallel study, we submitted our 12 ambiguous sentences and all their interpretations, in the form of paraphrases, to four highly educated non-linguist Francophone judges, who had not participated in the main study reported here. We asked them to rank the two, three, or four interpretations of each of these sentences according to their plausibility (out of context). A statistical study of the four judges' choices for most plausible interpretation for each sentence showed highly significant agreement: $\kappa = 0.5261$, $\sigma \kappa = 0.0741$, $z = 7.102$, $p < .001$. We can conclude, therefore, that linguistic intuitions on the readings of ambiguous sentences are abundant, and, for many sentences, the object of considerable agreement among learners and speakers.

The intra-sentential co-text of course plays a role in pushing interpreters to one, and allowing them to overlook another possible reading; we in fact deliberately altered this context to force a change in the set of possible readings for the specific verbs in sentences (2) vs. (10), (7) vs. (12), and (13) vs. (19). We think, however, that there are also lexico-semantic

reasons for the relative plausibility of the different, theoretically possible types of interpretations associated with specific pronominalized verbs. We shall return to this question in the near future, in the next phase of our research.

4. CONCLUSION

We have seen that, on the whole, our most general hypothesis of a bias in favour of (referential) argument readings of the reflexive pronoun was supported. The fundamental grounds for this finding are the correct choice and rendering of the reflexive and reciprocal interpretation types, compared to that of the intrinsic and passive types (Tables C and D). The great tendency to misidentify pronominal verbal constructions as reflexive (Tables E and F) also reinforces the intuitive idea that this (argument) reading is the basic and therefore salient one.

Although the reflexive pronoun has argument status in the reciprocal reading, the very particular semantic and syntactic conditions which it requires (a plural or collective subject, above all) seem to lead to a very high level of success in recognizing and rendering it (Tables C and D) but little tendency to misclassify one's interpretations as reciprocal (Tables E and F). The passive reading, on the other hand, in which the reflexive pronoun does not have (referential) argument status, appears to suffer in all the ways one would expect (Tables C and D; E, F and G).

Finally, however, the salience of the intrinsic interpretation type (Table E), despite the difficulty in correctly recognizing and rendering intrinsic readings (Tables C, D, and G), remains, again, open to more than one explanation. We do not pretend to have answered every conceivable question about the psychological status of the different readings of pronominal verbal constructions in French.

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