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TRANSITIVITY EFFECTS ON CHILDREN'S SENTENCE COMPREHENSION

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Abstract

Active and passive declarative sentences varying according to transitivity features (actionality, punctuality, and plausibility) were given to monolingual five-year-old French-speaking children. Active and passive designating requests were used to elicit the children's interpretive responses. Both active and passive sentences higher in actionality proved easier to understand than nonactional ones. There was no main effect of either punctuality or plausibility but these two variables interacted with actionality. Contrary to previous indications in the literature, we demonstrate that facilitating actionality effects on sentence comprehension are a general phenomenon that is not restricted to passives. An explanation of the actionality effect is offered in terms of the mental representation of the predicate-argument structures of actional sentences serving as a support in the comprehension process.

Key words: Transitivity, children, sentence comprehension.
Mots clés : Transitivité, enfants, compréhension de phrase.

According to Hopper and Thompson (1980), semantic transitivity entails the transfer of a property from an underlying grammatical subject (UGS) to an underlying grammatical object (UGO) through the mediation of a verb. In sentences such as *The boy hits the girl* or *The girl is hit by the boy*, the boy is the UGS and the girl the UGO. As defined, semantic transitivity involves a series of features including actionality, telicity (actions with a clear starting point and ending point vs. atelic ones), animacy, punctuality, mode (realis vs. irrealis. events) -- which we prefer to label plausibility, agency for the UGS and the UGO, and affectedness and individuation for the UGO (see below).

Passive sentences with actional verbs have been shown to be easier to interpret (Sudhalter & Braine, 1985; Maratsos, Fox, Becker, & Chalkey, 1985) and to produce by children (Pinker, Lebeaux, & Frost, 1987) than passive sentences with nonactional verbs. The same effect was not found with active sentences, however. Maratsos et al. (1985) proposed the notion of semantic transitivity for explaining children's better receptive performance on passives involving actional verbs. This suggestion was unwarranted as no other transitivity feature than actionality of verb had been shown to facilitate sentence comprehension and production in the above studies. If, as suggested by Hopper and Thompson (1980), transitivity is a basic dimension of language, there is no reason to expect its effects to be restricted to passive sentences. In a study conducted by Lempert and Kinsbourne (1981), it was observed that 4-year-olds recalled nouns from active subject-verb-object sentences more effectively when the sentences contained actional verbs. There is thus at least one study in the literature indicating an effect of verb actionality in active sentences. This study employed a noun-recall paradigm. It is worth asking whether a similar effect can be obtained in sentence interpretation.

Both Sudhalter and Braine (1985) and Maratsos et al. (1985) used designating requests formulated in the active voice following the presentation of the active or passive sentence to be interpreted (for example, "*Jean forgot Harriet*" was followed by the questions "*Which one forgot the other? Which one forgot?*"). Such designating requests may have rendered the interpretation of the active sentences easier, precluding the manifestation of actionality effects. In opposition to Sudhalter and Braine (1985) and Maratsos et al. (1985), we propose that with proper controls a facilitating effect of verb actionality can be demonstrated for active as well as passive sentences.

Hopper and Thompson (1980) supply a list of features associated with transitivity (Table 1).

One problem with the below list is that it does not specify the possible associations between transitivity features. The work reported here offers some clarification in this respect. Of course, the complete specification of the intrinsic relationships between the features (which would amount to upgrading Hopper

and Thompson's list from an aggregate to a system) is beyond the scope of the present paper. It should be noted that punctuality and telicity, as defined by Hopper and Thompson (see bottom of Table 1) may not be completely independent. These authors use the telic/atelic opposition in the sense of perfective/imperfective, which we also do in the present study. For an alternative point of view in which telicity is regarded as an inherent property of verb meaning that is unaffected by the tense the verb happens to be in, see Comrie (1976).

TABLE 1. Transitivity features according to Hopper and Thompson (1980).

Parameters	Transitivity	
	High	Low
1. Participants	Two or more participants (agent and object)	One participant
2. Kinesis	Action[1]	Nonaction
3. Aspect	Telic[2]	Atelic
4. Punctuality	Punctual[3]	Nonpunctual
5. Volitionality	Volitional	Nonvolitional
6. Affirmation	Affirmative	Negative
7. Mode	Realis[4]	Irrealis
8. Agency	Agent high in potency	Agent low in potency
9. Affectedness of object	Object totally affected	Object not affected
10. Individuation of object	Object highly individuated	Object nonindividuated

Notes: 1. Actionality: The transfer of one action from one participant to another; 2. Telicity: An action that has a clear starting point and ending point; 3. Punctuality: An action that has no obvious transitional phase between inception and completion; 4. Realis: An action whose occurrence is possible in the real world.

TABLEAU 1. Paramètres de transitivité selon Hopper et Thompson (1980).

This study was specifically aimed at testing for the effect of verb actionality, punctuality and plausibility on children's comprehension of active and passive sentences and for the effect of the syntactic type (active vs. passive) of the interpreting request in relation with the syntactic type of the sentence to be interpreted. In order to keep the experimental design reasonably simple, we left out the following features identified by Hopper and Thompson (1980): participants, volitionality, affirmation, agency, affectedness of object, and individuation of object. It is also the case that the definitional status of several of these features is not perfectly clear at the present time (cf. Rondal & Thibaut, 1990).

METHOD

Subjects

The subjects were 240 monolingual French-speaking children (half boys and half girls) between the ages of 5 years and 5 years 11 months (mean age 5 years 5 months) from the Liège area. All the children had intellectual development within normal limits and were making normal progress in school.

Stimuli

The sentences were constructed in the following way. For an independent assessment of the relative actionality and punctuality of the verbs used in the study, a group of 150 first-year university students with no background in linguistics were requested to evaluate 25 verbs on a 7-point scale for actionality and for punctuality separately. Hopper and Thompson's definitions (1980) were used to instruct the students. Examples were provided that did not belong to the list of verbs that were to be rated by the students.

The two most representative verbs in each one of the following 4 categories resulting from the crossing of variables Actionality and Punctuality were selected: (1) Actional-Punctual [AP] (*frapper/hit*, *mordre/bite*); (2) Actional-Nonpunctual [ANP] (*soigner/care*, *porter/carry*); (3) Nonactional-Punctual (*apercevoir/see*,[1] *oublier/forget*); and (4) Nonactional-Nonpunctual [NANP] (*détester/hate*, *imaginer/imagine*). Four types of sentence skeletons varying in plausibility were constructed by allocating to each verb the nominal arguments in the UGS-UGO order in the four Actionality-Punctuality categories:

(1) Plausible and plausibly reversible sentences [PPR] (e.g., *garçon/boy (hit) fille/girl*);

(2) Implausible but plausibly reversible sentences [IPR] (e.g., *divan/couch (hit) garçon/boy*);

(3) Plausible but not plausibly reversible sentences [PNPR] (e.g., *garçon/boy (hit) divan/couch*);

(4) Implausible and not plausibly reversible sentences [INPR] (e.g., *table/table (hit) divan/couch*).

Sixty-four grammatical sentences were obtained by turning the 32 sentence skeletons into full-scale active and passive sentences. This meant adding the definite articles to the nouns, inflecting the verb in the active sentences and the

1. The French verb *apercevoir* is punctual whereas what we take as its English counterpart, i.e., *see*, probably is not.

auxiliary *être* (*be*) in the passive ones for third person singular of the present tense, and adding the past participle and the preposition (*par/by*) introducing the UGS in the passive voice. These 64 grammatical sentences were equally divided into two blocks of 32 sentences (16 actives and 16 passives). Block 1 sentences (B1) were constructed around the first most representative verb in each Actionality-Punctuality category (i.e., *frapper/hit*, *soigner/care*, *apercevoir/see*, *détester/hate*). Block 2 sentences (B2) were constructed around the second most representative verb in each Actionality-Punctuality category (i.e., *mordre/bite*, *porter/carry*, *oublier/forget*, *imaginer/imagine*). It was decided to test different verbs in similar conditions and to look at the results across subjects in order to keep the number of items and therefore the repetitions of the same construction as low as possible (32 sentences per block with each sentence skeleton being used twice -- one active, one passive -- per subject). See Appendix 1 for the complete list of sentences used and their code for Actionality, Punctuality, and Plausibility. All the words used in the clauses had a high frequency of occurrence in French according to the tables compiled by Gougenheim, Michea, Rivenc, and Sauvageot (1956).

The sentences were systematically varied by voice, actionality, punctuality, and plausibility while being similar along the other transitivity features. All the verbs were conjugated in the present tense.

All the sentences employed the definite article in the noun phrases in order to avoid any cueing the subjects on the identity of the topic/comment elements and therefore affecting their choice of the UGS or UGO (Hupet & Le Bouedec, 1975). All the noun phrases were singular, since there seems to exist a preference for singular-plural sequences in clause organization (Hupet & Costermans, 1976).

Material

A set of black and white 20 by 30 centimeter cardboard pictures was used. The pictures individually represented the nominal arguments appearing in the sentences listed in Appendix 1.

Procedure

Half of the children (120) were randomly assigned to the first block (B1), and the second half (120) to the second block (B2). The sentences in each block were presented in a random order that was different for each child in order to avoid serial effects due to interference, learning and/or generalization during

the experiment.[2] Each child individually heard the 32 sentences of the block to which he/she was assigned. The sentences were orally spoken in French. A 10 minute break took place after the presentation of the first 16 sentences. The sentences were produced by the experimenter with as neutral an intonation as possible to avoid cueing the child on the identity of the UGS or the UGO (Maratsos, 1973; Vion & Amy, 1984). Each sentence was followed by a request to specify a particular one of the two participants, either the UGS or the UGO. The request was either an active imperative sentence "*Montre-moi qui (verbe)*"/"*Show me who (verb)*" or a passive imperative sentence "*Montre-moi qui (est verbé)*"/"*Show me who (is verbed)*".[3] For a given sentence in a given block, one group of children (60 subjects) was presented with the active request, whereas another group of children (60) was presented with the passive request of the same sentence. For each sentence, all the children were simultaneously presented with 2 pictures representing the UGS and the UGO, respectively. The two pictures were labelled by the experimenter before the first presentation of each test sentence. The order in which the UGS and the UGO of the sentences were labelled was inverted from one trial to the next so as to control for possible sequential effects on the designating responses. An oral repetition of the sentence by the experimenter followed the designating request. The choices were forced. In case of doubt, the child was encouraged to make a "best guess". He/she was allowed to change his/her mind. In such cases, only the last response given was taken into account in the scoring. Before the test, each child heard several practice active and passive sentences to familiarize him/her with the task. In this warm-up task, the children were asked to choose between two pictures, as in the main task that followed. One week prior to the experimental session, each child was presented with the task of verbally defining each one of the lexical items (verbs and nouns) appearing in the experimental sentences in order to assess his/her knowledge of the meaning of these words. A panel of three independent judges was appointed to evaluate the children's definitions. Each child proved able to define the words in a way judged to be correct, indicating sufficient lexical knowledge for inclusion in the study.

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2. For example, Maratsos et al. (1985) noted that there seems to be generalization from actional to nonactional passives in their experiment. Children performed approximately twice as well on nonactional passives when these were preceded by actional ones.

3. Unlike its English counterpart, the French pronoun "qui" ("who") may have an inanimate or animate noun as its antecedent.

RESULTS

A one-way ANOVA (block of sentences) was carried out on the data. It failed to reveal a significant effect. Therefore, the rest of the analysis was performed on the data summed up for the two blocks of sentences. Table 2 supplies the overall percentages derived from raw numbers of correct responses for each sentence category for the active and the passive voice.

TABLE 2. Mean overall percentage of correct responses in sentence interpreta-tion as a function of verb actionality, verb punctuality, and sentence plausibility.

	AP	ANP	NAP	NANP	*TOTAL*	
1.a. Active designating request: Active sentence						
PPR	.74	.68	.58	.63	*.66*	
PNPR	.73	.71	.67	.69	*.69*	
IPR	.69	.68	.60	.67	*.66*	
INPR	.68	.74	.72	.63	*.69*	
	.71	*.70*	*.64*	*.65*	.68	*TOTAL*
1.b. Active designating request: Passive sentence						
PPR	.60	.53	.48	.39	*.50*	
PNPR	.58	.57	.45	.48	*.52*	
IPR	.52	.62	.48	.58	*.56*	
INPR	.53	.58	.45	.43	*.50*	
	.56	*.58*	*.47*	*.47*	.52	*TOTAL*
2.c. Passive designating request: Active sentence						
PPR	.71	.61	.46	.65	*.61*	
PNPR	.70	.63	.57	.65	*.64*	
IPR	.65	.67	.63	.58	*.63*	
INPR	.66	.64	.61	.56	*.61*	
	.68	*.64*	*.57*	*.61*	.62	*TOTAL*
2.d. Passive designating request: Passive sentence						
PPR	.70	.55	.51	.60	*.59*	
PNPR	.66	.57	.57	.51	*.58*	
IPR	.53	.60	.60	.55	*.57*	
INPR	.64	.54	.53	.58	*.57*	
	.63	*.56*	*.55*	*.56*	*.58*	*TOTAL*
	.64	**.62**	**.56**	**.57**	**.60**	**GRAND TOTAL**

AP: Actional-Punctual verb; ANP: Actional-Nonpunctual verb; NAP: Nonactional-Punctual verb; NANP: Nonactional-Nonpunctual verb; PPR: Plausible and plausibly reversible sentence; IPR: Implausible but plausibly reversible sentence; PNPR: Plausible but not plausibly reversible sentence; INPR: Implausible and not plausibly reversible sentence.

TABLEAU 2. Pourcentage moyen de réponses correctes dans l'interprétation des phrases selon l'actionnalité du verbe, la ponctualité du verbe et la plausibilité de la phrase.

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the designating request and sentence share the same voice. One might argue that with passive requests, it is hard to distinguish failure to understand the request from failure to understand the original statement. Assuming that passives are understood like actives both as to-be-interpreted sentences and as requests, one would expect "correct" responses for the combination of a passive statement with a passive request, even if both statement and question were misunderstood (provided the misunderstanding were systematic), but false responses for the combination of an active statement with a passive request, as well as for the combination of a passive statement with an active request. The data summarized in Table 2 are not consistent with these predictions. The mean percentage of correct responses for passives is lower with requests in the passive voice than for actives with requests in the active voice. In addition, passives with requests in the passive voice are less well understood than actives with requests in the active voice. It is likely, therefore, that children understood the passive constructions in both the sentences and the designating requests well enough to rule out the kind of "false positives" mentioned above.

The Plausibility variable interacted significantly with the Actionality and Punctuality variables but no overall Plausibility effect was observed. Follow-up analyses showed that significant actionality effects were observed in plausible sentences as well as in implausible sentences, which attests to the relative robustness of the actionality effect.

Summarizing, our results show that verb actionality facilitates comprehension in declarative sentences (active as well as passive, punctual as well as nonpunctual, plausible as well as implausible).

Our data are in line with Slobin's developmental suggestion (1981) according to which younger children encode highly transitional events in their first multi-word productions.[4] Balcom (1987) observed that the first two- and three-word utterances produced by her son involved the participation of the following transitivity features: kinesis (actionality), punctuality, volitionality, mode (realis), and individuation of object. These utterances were constructed around the following verbs: *turn*, *shut*, *open*, and *eat*. Utterances constructed around less transitive verbs such as *burn*, *share*, and *find*, followed within weeks. Pinker et al.'s recent work on the acquisition of the passive (1987) shows that transitivity features, particularly actionality, continue to play an important role in sentence processing until age 8. Current research in our laboratory has demonstrated that the same effect is still at work in adults. We are having French-speaking subjects interpret active and passive one-clause sentences that vary along transitivity features. Highly actional sentences are correctly decoded significantly

4. We are grateful to G. Amy for bringing this convergence to our attention.

faster than sentences that are lower in actionality. Contrary to premature indications by Sudhalter and Braine (1985) and by Maratsos et al. (1985), the actionality effect is not restricted to the interpretation of passive sentences but rather appears to constitute a general feature of sentence processing, as one would expect from Hopper and Thompson's descriptive scheme. Additional empirical investigations just completed and to be reported in further publication (Thibaut & Monseur, in preparation; Thibaut & Spigarelli, in preparation) demonstrate actionality effects on the comprehension of declarative, active, relative, and temporal subordinate clauses in children age 5 to 9, therefore corroborating the general thesis presented in this paper.

Why are actional sentences better decoded than non- or less-actional ones? Following the line of argumentation opened by Kosslyn (1980) and Johnson-Laird (1983) -- for a proper treatment in French, see Denis (1979, 1989) -- and more specifically the dual-coding hypothesis proposed by Paivio (1971; see also Paivio, 1986), it may be suggested that the images stored in memory and posited to correspond to the predicate-argument structures of the sentences are more precise or more vivid (or both) in the case of actional verbs. The greater precision and/or the more marked vividness of the mental imagery of the actional verbs may allow for a faster and surer search for the UGS and the UGO in the working space of mental representation when the image(s) associated with the predicate-argument structures of the sentences is (are) called upon for interpreting incoming sentences. A recent study conducted by Kaens (1988) supplies empirical support for this interpretation. Kaens had French-speaking children age 5 to 8 interpret active and passive one-clause declarative sentences in four conditions: *first*, a neutral condition similar to the methodological context used in the present experiment; *second*, a positive condition in which the children were shown a picture correctly illustrating the predicate-argument structure of the sentence for 5 seconds before sentence presentation; *third*, a negative condition in which the picture represented a reversal of the predicate-argument structure of the sentence to be presented (for instance, boy hitting girl, for the sentence *The girl hits the boy*); and *fourth*, an "irrelevant condition" in which the picture presented bore no verbal relationship with the meaning of the sentence (for example, girl combing a boy's hair, for the sentence *The girl bites the boy*). As predicted, the sentences constructed around actional verbs were interpreted significantly better in the neutral, positive, and so-called irrelevant conditions than the sentences formed from nonactional verbs. The reverse effect, however, was observed in the negative condition, suggesting that the thematic reversal on the picture hindered the mental processing of the more visually representable predicate-argument structures expressed in the actional sentences more than it hindered the processing of the less visually representable nonactional sentences. This research provides interpretive evi-

dence in favor of the role of mental imagery in the psycholinguistic processing of actional sentences, a role that we intend to specify further in future experiments.

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RESUME

On a proposé à des enfants francophones âgés de 5 ans d'interpréter des phrases actives et passives variant selon plusieurs paramètres de transitivité (actionnalité, ponctualité et plausibilité). Des requêtes en désignation formulées à la voix active et à la voix passive furent utilisées pour obtenir les réponses des enfants. Les résultats indiquent que tant les phrases actives que les phrases passives présentant un degré élevé d'actionnalité sont mieux comprises que les phrases moins actionnelles. Aucun effet principal de ponctualité ou de plausibilité n'est observé, mais ces deux variables interagissent significativement avec la variable actionnalité. Contrairement à des indications préalables dans la littérature, nous montrons que l'effet facilitateur de l'actionnalité du verbe sur la compréhension des phrases est un phénomène général non limité aux phrases à la voix passive. Une explication de cet effet est proposée qui fait appel à la représentation mentale des structures prédicat-argument des phrases actionnelles, laquelle sert de support au processus de compréhension.

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APPENDIX 1: List of sentences

(AP: Actional-Punctual verb; ANP: Actional-Nonpunctual verb; NAP: Nonactional-Punctual verb; NANP: Nonactional-Nonpunctual verb; PPR: Plausible and plausibly reversible sentence; IPR: Implausible but plausibly reversible sentence; PNPR: Plausible but not plausibly reversible sentence; INPR: Implausible and not plausibly reversible sentence.)

BLOCK 1	Actionality-Punctuality	Plausibility
1. Le garçon frappe la fille *The boy hits the girl*	AP	PPR
2. Le garçon frappe le divan *The boy hits the sofa*	AP	PNPR
3. Le divan frappe le garçon *The sofa hits the boy*	AP	IPR
4. Le divan frappe l'armoire *The sofa hits the cupboard*	AP	INPR
5. La maman soigne le papa *The mother nurses the father*	ANP	PPR
6. La maman soigne l'oiseau *The mother nurses the bird*	ANP	PNPR
7. L'oiseau soigne la maman *The bird nurses the mother*	ANP	IPR
8. L'armoire soigne le divan *The cupboard nurses the sofa*	ANP	INPR
9. Le monsieur aperçoit la dame *The man sees the lady*	NAP	PPR
10. Le monsieur aperçoit la boîte *The man sees the box*	NAP	PNPR
11. La boîte aperçoit le monsieur *The box sees the man*	NAP	IPR
12. La boîte aperçoit le téléphone *The box sees the telephone*	NAP	INPR
13. La fille déteste le garçon *The girl hates the boy*	NANP	PPR
14. La fille déteste le livre *The girl hates the book*	NANP	PNPR
15. Le livre déteste la fille *The book hates the girl*	NANP	IPR
16. Le livre déteste le vélo *The book hates the bike*	NANP	INPR
17. La fille est fappée par le garçon *The girl is hit by the boy*	AP	PPR
18. Le divan est fappé par le garçon *The sofa is hit by the boy*	AP	PNPR

19.	Le garçon est fappé par le divan *The boy is hit by the sofa*	AP	IPR
20.	L'armoire est frappée par le divan *The cupboard is hit by the sofa*	AP	INPR
21.	Le papa est soigné par la maman *The father is nursed by the mother*	ANP	PPR
22.	L'oiseau est soigné par la maman *The bird is nursed by the mother*	ANP	PNPR
23.	La maman est soignée par l'oiseau *The mother is nursed by the bird*	ANP	IPR
24.	Le divan est soigné par l'armoire *The sofa is nursed by the cupboard*	ANP	INPR
25.	La dame est aperçue par le monsieur *The lady is seen by the man*	NAP	PPR
26.	La boîte est aperçue par le monsieur *The box is seen by the man*	NAP	PNPR
27.	Le monsieur est aperçu par la boîte *The man is seen by the box*	NAP	IPR
28.	Le téléphone est aperçu par la boîte *The telephone is seen by the box*	NAP	INPR
29.	Le garçon est détesté par la fille *The boy is hated by the girl*	NANP	PPR
30.	Le livre est détesté par la fille *The book is hated by the girl*	NANP	PNPR
31.	La fille est détestée par le livre *The girl is hated by the book*	NANP	IPR
32.	Le vélo est détesté par le livre *The bike is hated by the book*	NANP	INPR

BLOCK 2		Actionality-Punctuality	Plausibility
1.	Le garçon mord la fille *The boy bites the girl*	AP	PPR
2.	Le garçon mord la pomme *The boy bites the apple*	AP	PNPR
3.	La pomme mord le garçon *The apple bites the boy*	AP	IPR
4.	La pomme mord la banane *The aple bites the banana*	AP	INPR
5.	La maman porte le papa *The mother carries the father*	ANP	PPR
6.	La maman porte le divan *The mother carries the sofa*	ANP	PNPR

7.	Le divan porte la maman *The sofa carries the mother*	ANP	IPR
8.	L'armoire porte le divan *The cupboard carries the sofa*	ANP	INPR
9.	La fille oublie le garçon *The girl forgets the boy*	NAP	PPR
10.	La fille oublie le livre *The girl forgets the book*	NAP	PNPR
11.	Le livre oublie la fille *The book forgets the girl*	NAP	IPR
12.	Le livre oublie le vélo *The book forgets the bike*	NAP	INPR
13.	Le monsieur imagine la dame *The man imagines the lady*	NANP	PPR
14.	Le monsieur imagine le livre *The man imagines the book*	NANP	PNPR
15.	Le livre imagine le monsieur *The book imagines the man*	NANP	IPR
16.	La boîte imagine le livre *The box imagines the book*	NANP	INPR
17.	La fille est mordue par le garçon *The girl is bitten by the boy*	AP	PPR
18.	La pomme est mordue le garçon *The apple is bitten by the boy*	AP	PNPR
19.	Le garçon est mordu par la pomme *The boy is bitten by the apple*	AP	IPR
20.	La banane est mordue par la pomme *The banana is bitten by the apple*	AP	INPR
21.	Le papa est porté par la maman *The father is carried by the mother*	ANP	PPR
22.	Le divan est porté par la maman *The sofa is carried by the mother*	ANP	PNPR
23.	La maman est portée par le divan *The mother is carried by the sofa*	ANP	IPR
24.	Le divan est porté par l'armoire *The sofa is carried by the cupboard*	ANP	INPR
25.	Le garçon est oublié par la fille *The boy is forgotten by the girl*	NAP	PPR
26.	Le livre est oublié par la fille *The book is forgotten by the girl*	NAP	PNPR
27.	La fille est oubliée par le livre *The girl is forgotten by the book*	NAP	IPR
28.	Le vélo est oublié par le livre *The bike is forgotten by the book*	NAP	INPR
29.	La dame est imaginée par le monsieur *The lady is imagined by the man*	NANP	PPR

30.	Le livre est imaginé par le monsieur *The book is imagined by the man*	NANP	PNPR
31.	Le monsieur est imaginé par le livre *The man is imagined by the book*	NANP	IPR
32.	Le livre est imaginé par la boîte *The book is imagined by the box*	NANP	INPR