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« I saw a movie with Brad Pitt » – Apprendre la syntaxe en dessinant

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## 1. Context, research question and theoretical background

- 1 This paper is based on an experiment conducted on four classes of second year English majors (app. 110 students) at Sorbonne Nouvelle University (Paris, France) in 2021/2022. The program of the course concentrates on the noun phrase. The section under scrutiny is dedicated to noun phrase structure. By the end of the section, students are expected to describe noun phrases and show the interrelation between syntax and meaning. To describe noun phrases, students are expected to:
  - show the boundaries of a noun phrase by adding brackets, and justify them;
  - find the head of a noun phrase;
  - describe the other elements of the noun phrase (determination, premodification and postmodification).
  - materialize embedded structures by bracketing embedded phrases and clauses;
- 2 The lesson plan was redesigned in 2019 after the authors realized that they were struggling to teach their students how to bracket and describe noun phrases.
- 3 They hypothesized that students failed to reach the learning outcomes for at least two reasons. First, they did not succeed because they did not engage and they did not engage because they did not understand why syntax mattered in the first place. The teachers decided that the new lesson plan should present syntax as a problem to be solved, which in turn involved making it visible. Second, students failed because bracketing was too difficult a task, as it involves understanding how words regroup to make sense and how some structures, such as preposition phrases, can be embedded. The new lesson plan should include intermediary activities.

- 4 The question that motivated this experiment was thus whether offering the students an array of mediums, including drawing, could help them realize the importance of syntax and support their learning process so that they could correctly describe and bracket the structure of noun phrases.
- 5 The teachers therefore decided to support the students' learning process in three ways:
  - keeping them active through a task-based approach;
  - engaging them through a gamified approach;
  - offering different routes to reach their aim through a multimodal approach.
- 6 To introduce such complex notions as syntax and embedding, the lecture format was discarded, as research has shown that traditional lectures are at best unengaging, and at worst ineffective (Altet) and that a shift toward a more active form of teaching was necessary, especially in French universities, where the tradition of lecturing has long prevailed (Bertrand 38). A meta-analysis conducted in 2014 on 225 studies showed that undergraduate students who were given lectures on S.T.E.M.<sup>1</sup> subjects were 1.5 times more likely to fail examinations than students who were offered active learning courses (Freeman et al). Active learning is a broad term that has been defined as “anything that involves students in doing things and thinking about the things they are doing” (Bonwell and Eison 2). More precisely, active learning supposes that students have to be active and engaged, but also supported in their learning process.
- 7 This can be achieved through scaffolding, that is to say, “controlling those elements of the task that are initially beyond the learner's capability, thus permitting him to concentrate upon and complete only those elements that are within his range of competence” (Wood, et al 90). Scaffolding involves collaborative and student-centered tasks that progressively lead the students into co-constructing knowledge through their Zone of Proximal Development (Vygotsky; Wells).
- 8 This also concurs with the task-based approach described in the Common European Framework of Reference for Languages.

“Communicative pedagogic tasks (as opposed to exercises focusing specifically on decontextualised practice of forms) aim to actively involve learners in meaningful communication, are relevant (here and now in the formal learning context), are challenging but feasible (with task manipulation where appropriate), and have identifiable (and possibly less immediately evident) outcomes.” (CEFRL 157-158)
- 9 Well-designed tasks can therefore keep students active in class but their engagement can also be secured thanks to gamification, which is the introduction of game elements into contexts that are not normally associated with games (Sailer et al.; Alvarez et al.; Djaouti et al.). Research on gamification has indeed shown that using game-based mechanisms does “engage people, motivate action, promote learning and solve problems” (Kapp 10).
- 10 Indeed, a gamified environment provides a safe space for “nonliteral activities”<sup>2</sup> (Brougère, “Le jeu peut-il être sérieux?”) that have no impact on real life. Learning can become “fun” (as defined by Prensky, Brougère, *Jouer/Apprendre*) and complex notions can be rendered more accessible or concrete (Alvarez et al.). Serious games can also justify the introduction of unusual modes of expression and interaction in the classroom: drawing, miming or singing can temporarily become acceptable means of communication.

- 11 This multimodal approach is a way of supporting the students' learning process by stimulating them through different mediums. "The essence of multimodality therefore is to provide different types of resources to the student for stimulating learning in meaningful ways within and across disciplines." (Papageorgiou and Lameris 2).
- 12 Multimodality pertains to the way communication and interaction take place, through verbal modes, but also through non-verbal ones such as images, sounds, gestures, postures, gazes etc. (Kress). Each mode comes with its own affordances.
- 13 The notion of "modal affordance" (Jewitt) suggests that each mode, verbal or non-verbal, has its own specific potentialities and limits. For instance, the affordance of speech (or written language for that matter) is sequential, as you can only utter or write one word at a time, while the affordance of image is immediate, since the eye instantly sees the whole picture. Offering a variety of modes, both verbal and non-verbal, is thus a way of "encompassing the multiplicity of learning" (Jewitt 253). Kress et al.'s experiment in nine science classes in a London school showed that results in learning differed according to the mode used to teach a concept (writing, image or 3D object for instance). Their conclusion is that using only one mode can only offer a partial learning experience. Students can only benefit from a multimodal approach as "semiotic modes have different potentials, so that they afford different kinds of possibilities of human expression and engagement with the world, and through this differential engagement with the world they facilitate differential possibilities of development" (Kress 157).
- 14 The theory of dual coding (Paivio), as well as the "drawing effect" described by Wammes et al. suggest that combining the affordances of non-verbal and verbal modes can improve memorization and learning. The complex cognitive processes involved in drawing have been discussed in various studies which focused on the interrelations between visual, verbal and mental models (Van Meter and Garner; Mayer). The ability to interpret visual and verbal information and to translate verbal to visual, visual to visual, or visual to verbal is called visual literacy. This concept has been developed at length by Quillin and Thomas in a study on the use of drawing in biology. They argue that drawing can develop observational skills but also high and low-order cognitive skills such as understanding or solving a problem and redesigned Bloom's taxonomy (1956) by integrating the potentialities of drawing. Drawing can therefore be a learning outcome *per se*, or a step in constructing knowledge.
- 15 The authors kept in mind the importance of engagement, gaming and multimodality when they redesigned the lesson plan and set out the experiment described here.

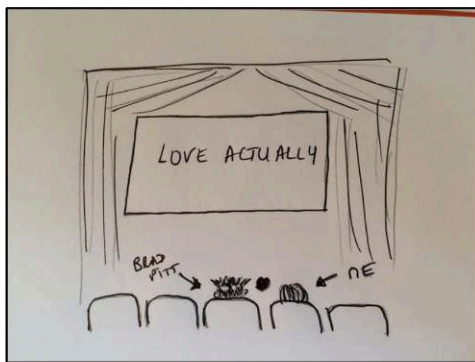
## 2. Methodology and data collection

- 16 The lesson plan on which the experiment is based was first implemented in October 2019. It starts with a 5-minute lecture on the opposition between linearity and syntax. As Saussure noted in 1906, one of the characteristics of language is its linearity: each word comes after the other, one at a time<sup>3</sup>. The notion may seem simple enough, but as Hutton (1990) remarks, it is seldom noted. To help students understand the concept and visualize it, language is compared to a pearl necklace, each pearl representing a word. Students are asked to try and pronounce two words at the same time. They soon realize that it cannot be done. Once the notion of linearity is accepted, the concept of

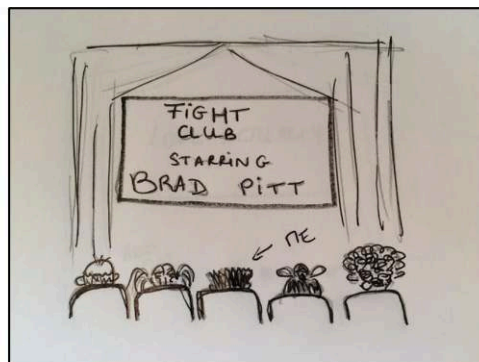
syntax is introduced, using the image of a tree branch or a Russian doll. Words are not isolated in the sentence. They regroup and make up larger meaningful units called constituents.

- 17 To help students see the relevance of the concept and how it interacts with linearity, they are given ambiguous sentences such as ‘I saw a movie with Brad Pitt’<sup>4</sup> which can be construed as ‘I saw a movie starring Brad Pitt’ or ‘I went to the movies with Brad Pitt’. The fact that the same string of words can be understood in two different ways proves that something happens that linearity cannot account for. This remark opens a door on something new to investigate. Students now have something to learn. They are shown two drawings corresponding to the two semantic interpretations of the ambiguous sentence. Each drawing is associated with a bracketed version of the ambiguous noun phrase, which gives visibility to what there is to learn. In version A, the noun phrase is limited to “a movie”, whereas in version B the noun phrase includes the preposition phrase “with Brad Pitt” as this piece of information is semantically related to the head “movie”. The preposition phrase is in fact the complement of the head.

Figure 1 – Introducing the concept of syntax and bracketing through drawing



Version A - I saw [a movie] [with Brad Pitt]



Version B - I saw [a movie with Brad Pitt]

- 18 After this short introduction, students work in pairs on a 30-minute activity described on a slide projected on the white board. Students are asked to choose an ambiguous sentence from a list and discuss its interpretation with their partner. Then each student in the pair draws one of the possible interpretations, adds a follow-up sentence to make the context explicit, adds brackets to make the structure visible, and eventually shares with their partner before sharing with the class. The discussion is meant for the students to realize that the sentence can mean both that someone went to the movie in the company of Brad Pitt or that they saw a moving starring Brad Pitt. The follow-up sentences provide information that disambiguate the sentence. For instance, interpretation A can be followed by “he was in town and wanted to see the last Hugh Grant movie” whereas interpretation B goes with “the film was terrible but Brad is such an amazing actor”. Thus, the activity allows for various modalities to prove one’s awareness of syntactic ambiguity: two verbal modes (gloss and follow-up sentence) and two non-verbal ones (drawing and bracketing). Gloss and bracketing are more explicit than the follow-up sentence and the drawing as they cannot be based on intuition; they require more analytical skills. Bracketing comes as the last phase of the activity as it is the only activity the students may have never experienced before. It can reasonably be believed that they have already had the chance to explain in their own

words, provide a sentence of context or make an explanatory drawing. Before the activity began, students were invited to sign a consent form so that their drawings could be kept for further analysis and displayed in research work and teacher training programs.

- 19 At the end of the session, students were asked to complete a 7-item questionnaire<sup>5</sup> to express their opinion of the session and to assess their learning. The 93 paper questionnaires collected were coded using an Excel spreadsheet.
- 20 Further training is provided online for home practice in the form of a multiple choice questionnaire (MCQ) on the Moodle page of the course. The format involves students matching the correct gloss, follow-up sentence and drawing with a bracketed noun phrase. They do not produce the gloss, drawing or bracketing (see below). The Moodle platform makes it possible to monitor and keep track of students' online activities. However, this data is not exploited in this paper<sup>6</sup>.

Figure 2 – Extract from online activity


**Yesterday, I gave a bath to [my dog] [in a pink tutu].**


Choose the gloss + the drawing + the follow-up sentence corresponding to the syntactic structure of the sentence above.

*Vous devez donc cocher trois cases: une paraphrase, un dessin et une phrase d'explicitation.*

Gloss: the dog was wearing a tutu

Gloss: I was wearing a tutu

Drawing: 

Drawing: 

Follow-up sentence: My dog is special. She likes to dress up.

Follow-up sentence: I didn't take the time to change after my ballet lesson.

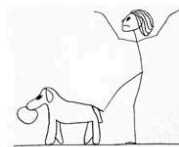
- 21 The rest of the section on noun phrase structure is then devoted to analyzing unambiguous sentences and producing syntactic trees. It will not be discussed in this paper.
- 22 At the end of the section on noun phrase structure, 111 students took the midterm exam<sup>7</sup>. All the papers were collected, scanned and the two exercises relevant for the experiment were coded on an Excel spreadsheet to monitor the students' results.
- 23 Exercise 3 is aligned (Biggs) with the online MCQ activity<sup>8</sup>. The students are provided with an ambiguous sentence containing a bracketed noun phrase. They need to match the structure with the corresponding drawing, follow-up sentence and gloss, as shown below.

Figure 3 – Instructions for midterm exam (November 2021): Exercise 3, analyzing ambiguity

3. For each ambiguous sentence, choose the corresponding gloss, illustration and follow-up sentence. (*Pour chaque phrase, vous devez donc cocher 3 cases*) – 3pts

a. Sara kicked [the dog with a ball].

- Gloss: Sara had a ball in her hand. She kicked the dog with it.
  - Gloss: The dog had a ball in its mouth. Sara kicked that dog.
  - Follow-up sentence: Why did Sara use a ball? The dog deserved to be shot.
  - Follow-up sentence: But the dog didn't let go of the ball and Sara had to give up.
  - Illustration
- OR
- Illustration



b. Rohan dreamt of [Superman] [in his car].

- Gloss: Rohan was in his car when he dreamt of Superman.
  - Gloss: in Rohan's dream, Superman was in Rohan's car.
  - Follow-up sentence: Well, dreaming while driving is dangerous.
  - Follow-up sentence: Why would Superman use Rohan's car when he can fly?
  - Illustration
- OR
- Illustration



24 Students were also asked to name a few linguistic concepts studied in class, as shown below. The first definition corresponds to the concept of linearity.

Figure 4 – Instructions for midterm exam (November 2021): Exercise 1, naming linearity

1. You've learnt a few linguistic concepts during the semester. Here are their definitions. Add the name of the corresponding concept in the column to the right. You are not expected to explain anything or to give an example. A single word will do. – 6pts

Definition	Name of the concept
One of the characteristic of language is that you can only say or write one word at a time. This characteristic is called ...	
One of the characteristics of words is that they can change categories. Sometimes, a noun can be used as a verb, a verb can be used as an adjective. This characteristics is called ...	
One of the characteristics of nouns is that they can go from countable to uncountable and vice versa. For instance, "glass(es)" can be singular uncountable, countable and even plural uncountable. This characteristic is called ...	
One of the characteristics of grammar is that it can try to copy reality. For instance, very often, when a noun denotes an object made of two separate parts linked together (like "trousers"), it will be plural to reflect the fact that the referent is made of more than one element. This tendency to copy reality is called ...	

### 3. Results and discussion

#### 3.1 Exploratory activity and satisfaction questionnaire

25 All the students present produced a drawing during the in-class exploratory activity. Half the students worked on the ambiguous sentence "He fed her cat food", while the other half had to illustrate the two possible meanings of the sentence "Look at the dog with one eye".

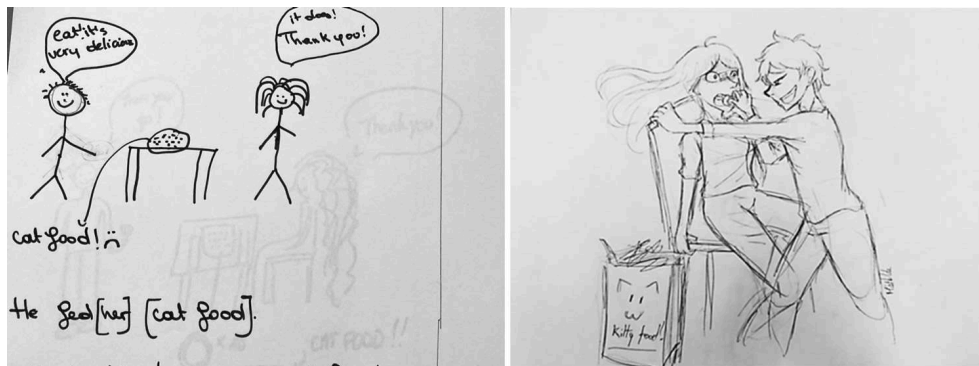


- 26 Illustrations ranged from artistic, true-to-life representations to more abstract drawings – some students exhibiting amazingly good skills in drawing while others expressed concern about their professed inadequacy. Any initial reluctance disappeared once it had been made clear that what mattered was the symbolic function of the drawing, not its artistic value, thus reassuring students with low efficacy and performance anxiety (Anderson and Bourke).

Figure 5 – Sample drawings for the sentence “Look at the dog with one eye”



Figure 6 – Sample drawings for the sentence “He fed her cat food”



- 27 The answers to the satisfaction questionnaire showed great appreciation for the in-class activity as only one student out of 93 stated that they did not like it.
- 28 The exploratory activity was originally designed as a doorway to a difficult concept and a way to engage students and make sure they would persevere. The fact that all the students produced a drawing and that all but one enjoyed doing it tends to prove that the activity achieved that aim. The care that some students displayed in their drawings can also be interpreted as a sign of engagement. In the comments left in the questionnaire, one student expressed their gratefulness at being offered the opportunity to show a talent they could not display otherwise in an academic setting:

I get to show my skills so that's cool.

- 29 Some comments show that students understood what motivated the format of the activity and were willing to embrace it:

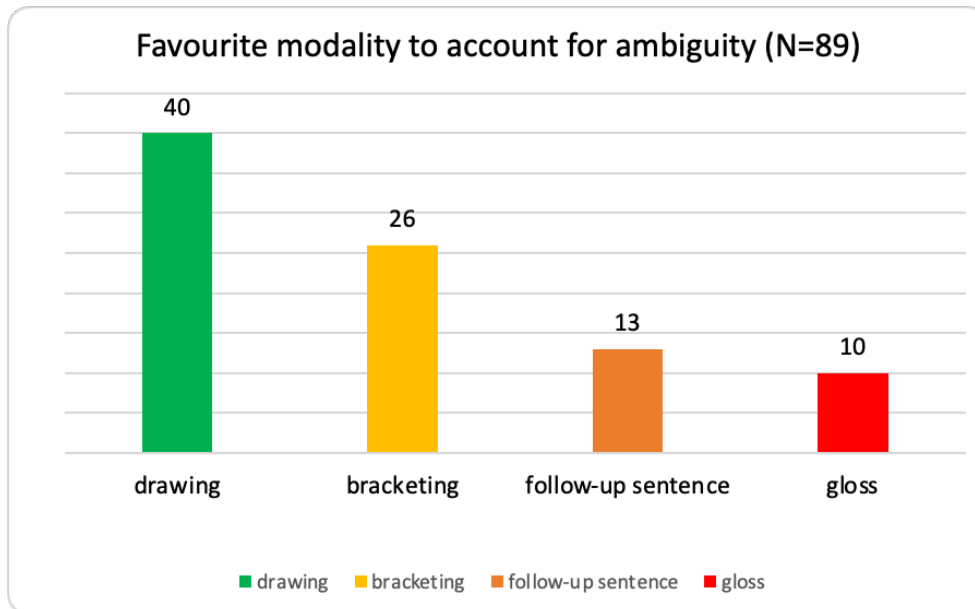
Having fun while learning is the best and efficient way to learn.<sup>10</sup>

- 30 Some commented on the fact that multimodality should be explored in other courses and explicitly related the notion of diversity with the notion of engagement and perseverance:

More diverse way of teaching would probably more stimulate students/people & it would probably make them want to learn and practice more!

- 31 All the students stated that they liked being offered more than one way of completing the activity. When asked to choose a favorite modality, they showed a clear preference for drawing and less attraction for gloss, as shown in the graph below.

Figure 7 – Favorite modality to account for ambiguity



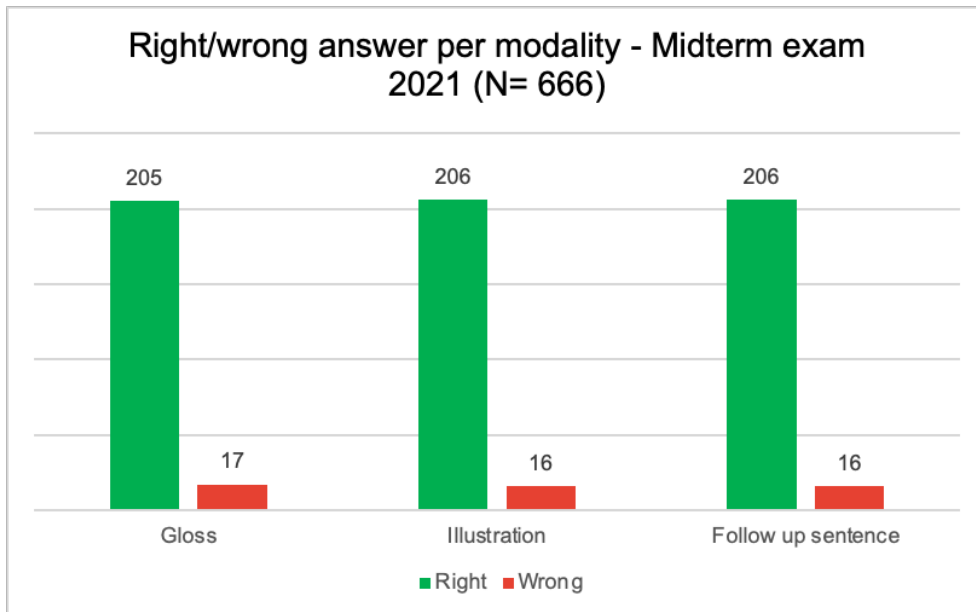
- 32 This ranking might seem disconcerting at first. It was anticipated that drawing would come first for its non-academic immediate playful dimension. However, bracketing was expected to come last as it was the newest and most abstract mode. The ranking suggests that non-verbal modalities (drawing and bracketing) are preferred over verbal modalities (follow-up sentence and gloss). Gloss is in fact what comes closest to linguistic analysis and to what is expected from university students, i.e., building complex reasoning and displaying it in words. The fact that it comes last in the ranking may indicate that drawing is a perfectly acceptable entry point but that written skills should be developed to help students attain university requirements. As for bracketing, the fact that it comes second does not mean that students are better at it than at follow-up sentences or gloss. It may mean that it is easily done. This does not imply that it is well done, as will be shown below.

### 3.2 Midterm exam 2021-2022

- 33 Almost 93% of the 111 students whose midterm exam paper was collected in November 2021 correctly matched the bracketed sentences with their illustrations, glosses and follow-up sentences. These results are consistent with the students' perception of self-efficacy as 88 students among the 93 who filled in the satisfaction questionnaire stated that they were capable of disambiguating a sentence, using their preferred modality. The fact that they can self-assess correctly can be construed as a sign of agency, which was one of the goals that presided over the choice of the multimodal playful activities in the first place. In fact, the results for the midterm are equally good, regardless of the

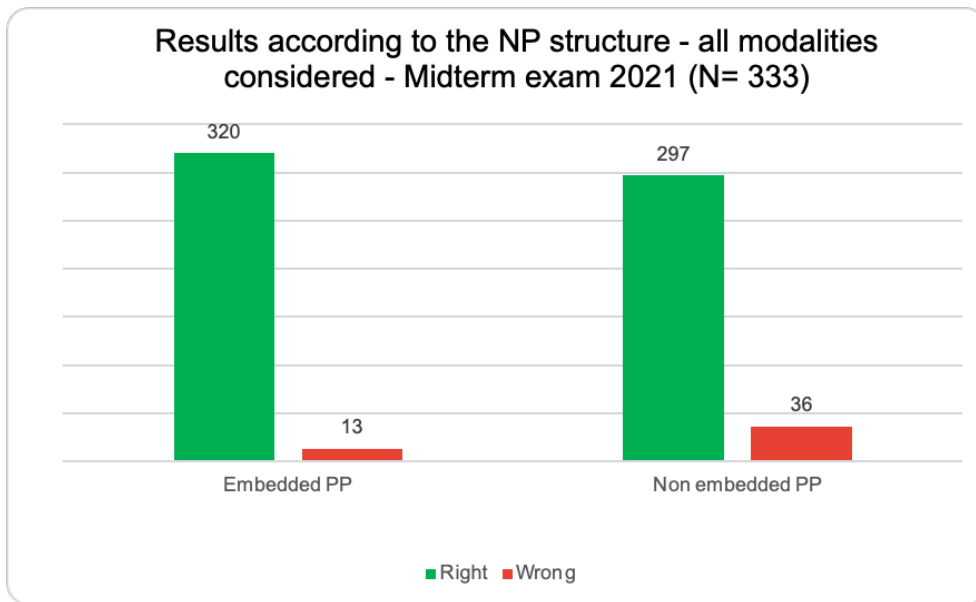
modalities, as shown in the graph below. When they identified the right gloss, they also identified the right illustration and the right follow-up sentence.

Figure 8 – Results per modality – Midterm exam 2021<sup>11</sup>



- 34 Their equal success regardless of modality does not however imply that offering an array of modalities is unnecessary as they rank equally high. Quite paradoxically, it might suggest that they scored highly because multimodality was offered.
- 35 The students' residual errors are better explained by the structure of the noun phrase which seems to be the discriminating factor. A structure such as "Sara kicked [the dog with the ball]" scored higher than a structure such as "Rohan dreamt of [Superman] [in his car]". Students do significantly<sup>12</sup> better when the preposition phrase following the head noun is embedded within the noun phrase than when the preposition phrase is not the complement of the head noun of the preceding noun phrase and should be described as an independent constituent.

Figure 9 – Results according to the noun phrase structure, all modalities considered – Midterm exam 2021



- 36 It is possible that students understand the ambiguity of the sentence and its impact on its syntactic description but that some are not yet capable of seeing the semantic implications of bracketing. This analysis is inspired by a student’s comment from the satisfaction questionnaire:

Eventhough I understand the ambiguity, The syntaxe of a sentence is clear but it is such an abstract concept<sup>13</sup>.

- 37 It must be noted that students scored lower at identifying the concept of linearity (exercise 1 of the midterm). Only 61% were able to name the concept of “linearity” when given its definition. It is however hard to tell if the concept was not understood or if the word simply eluded them when they needed to remember it. In order to test the understanding of the concept, it would be more meaningful to ask them to provide a definition and an example.
- 38 At any rate, the gap between results in exercise 5 (match the structure with the drawing, gloss and follow-up sentence) and exercise 1 (name the concept after its definition) shows that students are better at discriminating the right answer among a list of possibilities (exercise 5) than producing it (exercise 1). This is a well-documented bias of MCQ (Shermis and Di Vesta; Jönsson et al.). It is consistent with the results in an exercise proposed at the 2019 midterm. Contrary to students in 2020, students in 2019 were asked to produce the bracketing and gloss of an ambiguous sentence according to an illustration, as shown below:

Figure 10 – Excerpt from the midterm exam of November 2019

## 3. SYNTACTIC AMBIGUITY (2 POINTS)

The following sentence is syntactically ambiguous. To remove the ambiguity:

- Add brackets to the sentence corresponding to each drawing
- Explain in your own terms

## I SLAPPED THE MAN WITH A NEWSPAPER

Meaning #1: (add brackets) I slapped the man with a newspaper



Explanation:

Meaning #2: (add brackets) I slapped the man with a newspaper



Explanation

- 39 The results are lower than those from 2021: only 59% of the 2019 cohort of 123 students were capable of bracketing both structures correctly against 93% of the 2021 cohort who only had to show their understanding of the bracketing<sup>14</sup>. These remarks are not meant to minimize the students' success but to highlight the fact that the evaluation was better aligned in 2021.

## 4. Conclusion

- 40 The experiment aimed to test whether a non-verbal modality such as drawing could serve as a first step in understanding the opposition between syntax and linearity and whether offering more than one modality to demonstrate one's understanding of noun phrase structure could work towards engaging the students and helping them reach the learning outcomes. The results show that students participated actively in class activities and that 93% of the cohort achieved a perfect score on the midterm evaluation testing their capacity to disambiguate a sentence relying on its syntactic structure. Although it cannot be proven that this result can be directly attributed to the multimodal approach, students' comments and answers at the satisfaction questionnaire show their across-the-board appreciation at being offered more than one way of solving a problem and a preference for non-verbal modalities.
- 41 Future research should show whether these newly acquired skills are easily transferable to the analysis of unambiguous sentences and nominal complementation. Comparison with the 2019 data suggests that the activities offered in 2021 serve as an efficient engaging first step but may be insufficient in bringing students to produce non-verbal analysis (bracketing) and verbal analysis (gloss), which is what will be expected of university students eventually.

- 42 Thus, drawing for learning is worth considering for its modal affordances and as a means to unfold the multidimensionality of language. However, a lesson plan including a drawing activity should also include follow-up activities to help students develop non-intuitive verbal skills.

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## APPENDIXES

### Satisfaction questionnaire

1. I can explain the notions of linearity & syntax in my own words, using examples and/or convincing comparisons

- Strongly agrees
- Agrees
- Disagrees
- Strongly disagrees

2. I can disambiguate a sentence (no matter the modality: gloss, drawing, follow-up sentence, bracketing)

- Strongly agrees
- Agrees
- Disagrees
- Strongly disagrees

3. I enjoyed the drawing activity

- Strongly agrees
- Agrees
- Disagrees
- Strongly disagrees

4. The drawing activity helped me understand the notion of linearity/syntax

- Strongly agrees
- Agrees
- Disagrees
- Strongly disagrees

5. I like being offered more than one way of getting the job done (gloss, drawing, follow up sentence, bracketing)

- Strongly agrees



- Agrees
  - Disagrees
  - Strongly disagrees
6. The modality I like best to account for ambiguity is (only 1 answer)
- Gloss
  - Drawing
  - Follow-up sentence
  - Bracketing
7. The modality I dislike most to account for ambiguity is (only 1 answer)
- Gloss
  - Drawing
  - Follow-up sentence
  - Bracketing
  - None, I like them all
8. Anything else you'd like to share?

## NOTES

1. S.T.E.M. stands for Science Technology Engineering and Mathematics
2. Our translation.
3. At this stage, the multidimensional nature of oral language which also includes prosody and gesture is not mentioned.
4. The original idea of using syntactic ambiguity as a means to make students interested in syntax was given by Marine Riou, junior professor in Lyon 2, who used the famous sentences by Oettinger (1966) 'fruit flies like bananas/time flies like an arrow' in her classes. The authors would like to thank her for sharing her course material and her expertise.
5. See appendix.
6. The consent form committed to anonymizing all data, making it impossible to match the cohort of 93 students who participated in the exploratory activity and filled in the questionnaire with the cohort of 350 who completed the activity online.
7. There is no attendance policy at Sorbonne Nouvelle University, which accounts for the delta between the students present for the training session and those present for the examination session. A few students also refused to take part in the experiment.
8. This format was chosen as teachers anticipated that it would have to be taken online due to the Covid-19 lockdown. No user-friendly tool was available to allow for students to place the brackets themselves. It could have been possible to ask them to produce a gloss and a follow-up sentence, but this would have involved long hours of online grading as 350 students attend the course. In the end, the test took place in class with pen and paper.
9. It has since been decided that the sentence "he fed her cat food" would be discarded in the future as its ambiguity bears on the category of "her" that can be analyzed either as a determiner or as a pronoun whereas the focus of the session is on the postmodification of the head noun.
10. Students' comments are reproduced as is.
11. N=666 as 111 students took the test and each analyzed two ambiguous sentences by matching it with 3 items (drawing, gloss and follow-up sentence):  $111 \times 2 \times 3 = 666$ .
12. The chi-square statistic is 11.6533. The  $p$ -value is .000641. Significant at  $p < .05$ . The chi-square statistic with Yates correction is 10.662. The  $p$ -value is .001094. Significant at  $p < .05$ .
13. Students' comments are reproduced as is.

14. No statistical test was applied to compare the 2019 and 2021 results as the 2019 session cannot be described as “all things being equal”. Indeed it was not designed as part of the action research. The delta however leaves little room for doubt.

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## ABSTRACTS

This paper presents a research project conducted on four second-year English classes (approximately 110 students) at Sorbonne Nouvelle University (Paris, France) in 2021/2022. This project was motivated by the realization that students were struggling to understand the opposition between linearity and syntax and to grasp the basic syntax of noun phrases in English. This difficulty can be explained by two reasons: the students were not engaged in the learning process because they did not clearly understand what they had to learn about syntax; and what was expected of them – demonstrating their understanding of noun phrase structure by adding brackets – was beyond their reach.

The authors assumed that a non-verbal modality such as drawing could serve as a first step in understanding the opposition between syntax and linearity. They hypothesized that offering more than one modality to demonstrate one’s understanding of noun phrase structure would address both difficulties: engaging the students and helping them achieve the learning outcomes.

To that effect, they designed an activity that introduced the concept of syntactic ambiguity and that was both engaging and multimodal. Students were presented with syntactically ambiguous sentences such as "I saw a movie with Brad Pitt" and were asked to:

- discuss the two possible interpretations in their own words, i.e., produce a gloss;
- draw the two possible interpretations of the sentence;
- add a follow-up sentence to clarify the context;
- bracket the noun phrases to make the syntactic pattern visible.

A satisfaction questionnaire was completed by 93 students at the end of the session and 111 midterm exam papers were collected for analysis.

The results tend to prove that the original hypothesis was valid. Offering an array of mediums, including drawing, to describe the syntax of noun phrases made students feel confident and engaged. However, the lesson plan should also include activities that help students transition towards verbal expression as university students are expected to exhibit understanding in words.

Cet article présente un projet de recherche mené sur quatre classes de deuxième année d'anglais (environ 110 étudiants) à l'Université Sorbonne Nouvelle (Paris, France) en 2021/2022 dans le cadre d'un cours de linguistique. Ce projet est né du constat que les étudiants peinaient à comprendre l'opposition entre linéarité et syntaxe et à appréhender la syntaxe de base des groupes nominaux en anglais. Cette difficulté s'explique d'une part par le fait que les étudiants ne s'impliquaient pas dans le processus d'apprentissage car ils ne comprenaient pas clairement ce qu'il y avait à apprendre sur la syntaxe ; et d'autre part par le fait que ce qui était attendu d'eux, c'est-à-dire démontrer leur compréhension de la structure des groupes nominaux en ajoutant des parenthèses, était hors de leur portée.

Les autrices sont parties du postulat qu'une modalité non verbale telle que le dessin pourrait

servir de première étape pour comprendre l'opposition entre syntaxe et linéarité. Elles ont émis l'hypothèse qu'offrir plus d'une modalité pour analyser un groupe nominal permettrait à la fois aux étudiants de s'impliquer et d'atteindre les objectifs d'apprentissage.

Elles ont donc mis en place une activité d'introduction à la notion d'ambiguïté syntaxique à la fois impliquante et multimodale. Les étudiants sont confrontés à des phrases syntaxiquement ambiguës telles que "J'ai vu un film avec Brad Pitt" et sont invités à :

- discuter des deux interprétations possibles avec leurs propres mots, c'est-à-dire de produire une glose ;
- dessiner les deux interprétations possibles de la phrase ;
- ajouter une phrase pour clarifier le contexte ;
- parenthéser les groupes nominaux pour rendre visible le schéma syntaxique.

Quatre-vingt-treize étudiants ont renseigné un questionnaire de satisfaction à la fin de la session et 111 copies ont été collectées pour analyse lors de l'examen de mi-semester qui a suivi.

Les résultats tendent à valider l'hypothèse de départ. Offrir un éventail de modalités, dont le dessin, pour décrire la syntaxe des groupes nominaux, a permis aux étudiants de se sentir en confiance et de s'impliquer. Cependant, le plan de cours devra également inclure des activités qui aident les étudiants à verbaliser leurs explications, car à l'université, c'est par le langage écrit que les étudiants doivent faire preuve de leurs apprentissages.

## INDEX

**Keywords:** drawing, multimodality, syntactic ambiguity, linearity, noun phrase structure, active learning, engagement

**Mots-clés:** dessin, multimodalité, ambiguïté syntaxique, linéarité, structure du groupe nominal, apprentissage actif, implication

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