

Thinking for speaking and linguistic relativity among bilinguals: towards a new research agenda

Article

Accepted Version

Treffers-Daller, J. ORCID: <https://orcid.org/0000-0002-6575-6736> (2012) Thinking for speaking and linguistic relativity among bilinguals: towards a new research agenda. *Language, Interaction and Acquisition*, 3 (2). pp. 288-300. ISSN 1879-7873 doi: <https://doi.org/10.1075/lia.3.2.06tre> Available at <https://centaur.reading.ac.uk/29889/>

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To link to this article DOI: <http://dx.doi.org/10.1075/lia.3.2.06tre>

Publisher: Benjamins

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**Thinking for Speaking and linguistic relativity among bilinguals:
towards a new research agenda**

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Abstract

This article evaluates how the different papers in this special issue fill a gap in our understanding of cognitive processes that are being activated when second language learners or bilinguals prepare to speak. All papers are framed in Slobin's (1987) *Thinking for Speaking* theory, and aim to test whether the conceptualisation patterns that were learned in early childhood can be relearned or restructured in L2 acquisition. In many papers the focus is on identifying constraints on this restructuring process. Among these constraints, the role of typological differences between languages is investigated in great depth. The studies involve different types of learners, language combinations and tasks. As all informants were given verbal rather than non-verbal tasks, the focus is here on the effects of conceptual transfer from one language on another, and not on the effects of language on non-linguistic cognition. The paper also sketches different avenues for further research in this field and proposes that researchers working in this field might want to take up the challenge of investigating whether speakers of different languages perceive motion outside explicitly verbal contexts differently, as this will enable us to gain an understanding of linguistic relativity effects in this domain. Studying which teaching methods can help learners to restructure their conceptualisation patterns may also shed new light on the aspects of discourse organization and motion event construal that are most difficult for learners.

1. Introduction

There is a growing body of literature on how speakers of different languages talk about motion through space. The available evidence clearly shows, for example, that native speakers of English often choose manner of motion verbs, such as *run* or *rush*, to describe a motion event, whilst speakers of French opt to express manner much less frequently (Antonićević & Berthaud 2009; Hendriks & Hickmann 2011; Hendriks, Hickmann & Demagny 2008). Importantly, the choices speakers make are not idiosyncratic, but fall into systematic patterns which reflect typological differences between groups of languages. Talmy (1985; 2000) was the first to formulate a comprehensive framework in which these typological differences are explained. He shows that languages map particular meaning components such as manner or path of movement onto grammatical forms such as verbs or adpositions in systematic ways, which he called lexicalisation patterns. Thus, in French path is most

often lexicalised in verbs such as *entrer* ('to go into, to enter'), whilst in English path is generally mapped onto a preposition or a particle such as *into* or *through*. In Talmy's typology, French is classified as a verb-framed language (V-language), because in French path is encoded in the verb, and English as a satellite-framed language (S-language) because it is in satellites that speakers of English express path.

It was Slobin (1987) who first noticed that these lexicalisation processes might have cognitive consequences. As the editors of the special issue explain in the introduction, the typological differences between languages in the expression of motion have implications for the ways in which speakers conceptualise motion (i.e. think about motion) when talking about it. Speakers of languages in which manner is easily encodable in the verb tend to pay more attention to manner in construing motion events than speakers of languages in which this is not the case. Thus, in Slobin's Thinking for Speaking theory (TFS), it is in preparing to speak (write or translate) that a language can influence thought processes: a language user selects those characteristics of the object or event s/he needs to describe which are readily encodable in his/her language (Slobin 1987: 435).

In his work, Slobin makes a new link between the literature on language typology such as that of Talmy (1985; 2000) and the literature on linguistic relativity, which is above all associated with the work of Whorf (1956). Slobin (2003) explains that the research tradition, which focuses on linguistic relativity, is mainly concerned with the effects of language on non-linguistic cognition. As Lucy (1996: 48) has stipulated, research into the effects of language on non-linguistic cognition "should assess the cognitive performance of individual speakers aside from explicitly verbal contexts." Whilst this is clearly crucially important for our understanding of linguistic relativity, Slobin (2003: 157) adds a new element to the discussion by arguing that studies of linguistic relativity should not neglect the cognitive processes that are being activated when language users prepare to speak or write, as there are pervasive effects of language on the elements speakers pay attention to and also on the information they retain in memory about events they have experienced.

The contributions to the current volume test claims derived from Slobin's Thinking for Speaking framework by focusing specifically on how second language learners (L2 learners) construe situations at the sentence level and in longer stretches of discourse when using their second language. The key question for the current volume is to what extent L2 learners are able to learn new ways to talk about motion, particularly if motion is lexicalised very differently in their first language, and how L2 users refer to complex interrelated sets of events in longer pieces of discourse, given different ways of marking information structure in their source and target languages. In learning how to talk about motion, children develop routines for the mapping of semantic units onto forms in their first language that are presumably built up through regular exposure to input which contains lexicalisation patterns described above. With Slobin the authors in the current volume assume that it is very difficult to overcome these routinized patterns in learning a second language, because the routines which are

being activated in talking about motion in the first language are well-rehearsed and automatized. As Slobin (1996: 89) puts it, the training children receive in this way is “exceptionally resistant to restructuring in adult second-language acquisition”, and therefore it is likely that the patterns learnt in early childhood are transferred to a second language.

According to Lucy (1996, cited in Pavlenko 2005: 434) language and thought interact with each other at three different levels. First and foremost, language impacts cognition at the *semiotic level*, which refers to the general impact of the use of any natural language on cognition. Thus, for example, natural languages use discrete colour terms to refer to the continuous spectrum of colours in the rainbow, but each language has its own set of terms and thus carves up reality in this domain in different ways. Second, at the *structural level* the focus is on the role of specific morpho-syntactic and lexical categories in shaping cognition. Third, at the *functional or discursive level*, attention is paid to the ways in which social communicative practices influence habitual behaviour in verbal interactions. Under the latter view, it is not just grammatical differences between languages that need to be analysed in studies of linguistic relativity, but also alternative constructions of reality that are found among different socio-cultural groups.

The current volume focuses on the last two of the three areas of interaction between language and thought as distinguished by Lucy (1996), with particular attention to the impact of language-specific factors on event construal during language production. The papers all address the extent to which Thinking for Speaking patterns can be relearned or restructured in L2 acquisition. The studies involve different types of learners, language combinations and tasks. Three of the four papers in the volume (Carroll, Weimar, Flecken, Lambert & Von Stutterheim; Iakovleva; Soroli, Sahraoui & Sacchetti) focus on the impact of specific linguistic categories on speakers’ verbal representations, namely motion event construal among different groups of L2 learners, whilst Benazzo, Andorno, Interlandi & Patin look at perspective-taking in discourse and analyse how L2 learners differ from monolinguals in their verbalisations of contrast. As research into discursive relativity is only beginning to emerge, it is particularly important that the current volume contains a contribution on this issue.

In this final article, I will try to highlight how the current volume moves the agenda forward in a number of key issues in the field of bilingual cognition in general and Thinking for Speaking in particular and where there are still gaps in our knowledge that future studies could address.

2. Language and Thought or Thinking for Speaking?

First of all, it is important to clarify whether a particular study aims to investigate the relationship between language and thought *per se* or focuses on the online processes involved in Thinking for Speaking. In studies of language and thought, on the one hand, it is the contents of thought or different ways of seeing the world that are being analysed. For example, Lucy (1992) examines how differences in number marking on nouns between English and Yucatec affect the perception of the

number of objects by speakers of each language in an experimental task. Importantly, the claim here is that if different cognitive patterns are found, these also characterize everyday behaviour outside of the assessment situation (Lucy, 1996: 48; cited in Slobin 2003: 257). In other words, although it remains difficult to prove in the absence of further data, we are probably looking here at effects of language on long term memory, which appear regardless of the test situation in which they have been elicited.

Studies of Thinking for Speaking, on the other hand, most often rely on Levelt's (1989) model of speech production and look at how online processes of retrieving particular categories or routine procedures affect the representation of reality and/or the selection of information in a specific task. The claim here is that this effect is visible *in a specific context*, namely when preparing to speak, write or translate, and not necessarily outside this situation. While some of these effects may only be possible if there are also differences in the information which is stored in long term memory (e.g. different routine procedures mentioned above), it is their recall in short term memory which is being investigated and no claims are being made regarding the appearance of any effects outside the specific contexts of the task.

The papers in the current volume propose hypotheses derived from Slobin's framework in studying motion event construal and the verbalisation of contrast. As all papers focus on the effects of language on verbal cognition, and the authors gave participants verbal tasks rather than non-verbal tasks, the choice of Slobin's TFS hypothesis is clearly the most appropriate one. As indicated above, it would only be possible to frame the studies in the context of the linguistic relativity hypothesis in the sense attributed to this term by Lucy (1992) if participants had had to carry out tasks aside from explicitly verbal contexts, which is not the case in the studies reported here. In summary, the studies in this volume deal with specific instances of conceptual transfer (Pavlenko 2011) from the L1 on the L2, that is the influence of conceptual distinctions made in one language on those made in another, rather than with the effects of language on non-linguistic cognition.

In future work, researchers working in this field might want to take up the challenge of investigating whether there are differences between speakers of S-languages and V-languages in their perception of motion *outside* explicitly verbal contexts, as this will enable us to gain an understanding of linguistic relativity effects in this domain. Studies which focus on motion perception in non-linguistic tasks will help reveal whether the pervasive differences between speakers of different languages, such as French and English, in construing motion events in their oral or written productions are limited to contexts in which they carry out a verbal task (that is are effects of TFS), or whether such results reflect different underlying cognitive patterns that exist outside verbal situations, and are therefore probably linguistic relativity effects. In this context studies of L2 learners and bilinguals will be extremely important, because they may (or may not) reveal whether their perception of motion changes as a result of using another language. Developing a research design to study motion perception outside verbal contexts is

clearly challenging, but co-operation with cognitive scientists working in the field of motion perception may well offer new ways forward.

3. Main findings of the papers in this volume

Benazzo et al. fill an important gap in our knowledge about variations in discourse organization (or what Lucy (1996) calls *discursive relativity*) by focusing on the perspectives adopted by different learner groups in the expression of contrast in French and Italian as a second language. The first languages of the two groups of L2 learners differ in relevant ways with respect to the feature under investigation. In the current study, the authors found some evidence for transfer from French in the interlanguage of learners of Italian, as they overuse the emphatic pronoun *lui* to mark contrast, which is common in French. The German learners did not do this when speaking Italian. However, the transfer effect is less evident in the French interlanguage of Italian and German speakers: in this case, both groups tended to mark contrast preferably with lexical markers, such as *par contre* “by contrast”, which leads the researchers to conclude that the influence of the first language on learning the targetlike expression of contrast may not be that important, as it is actually overruled by learner-specific tendencies. The authors make the very interesting observation that both learner groups prefer to use lexical means over grammatical means to express contrast, whilst native speakers typically choose grammatical means. As the authors point out lower level learners have been found to use this strategy (see Perdue 1993) but the current study shows more advanced learners may sometimes do the same. There is also a striking parallel between this conclusion and the principles of input processing distinguished by VanPatten (2002: 758). The second of these principles states that “learners prefer processing lexical items to grammatical items (e.g., morphology) for the same semantic information.” It may therefore be of interest to use VanPatten’s framework in further studies of the expression of contrast among L2 learners.

Soroli et al. focus on the similarities and differences between aphasic speakers with agrammatism (SWA-speakers) and L2 learners with respect to verbalisations of motion, which is very original and provides new insights into this domain. The question whether losing (access to) one’s first language results in the adoption of general strategies in re-thinking space that do not depend on the language used is an important one, which few researchers have addressed before. The authors conclude that one’s native language is not the only factor determining TFS patterns in the L2. Some similarities were observed between L2 learners and SWA-speakers in that both groups produced utterances of low semantic density and with special focus on *Path*. However, aphasic speakers were different from the L2 learners and similar to the native-control group in mapping Manner onto verbs and path onto satellites.

Carroll et al. offer a fine-grained analysis of the trajectories encoded in motion events and show that it is important to distinguish between entity-based and ground-based concepts. Spatial concepts derived

from the entity in motion include expressions which offer an orientation towards a particular object, as *to head for x* or *to approach x*. Ground-based concepts are those associated with features of objects that make up the ground, as in *around the corner*, which relates to the corner's curvature, or *over a bridge*, which involves a raised surface. In French, motion concepts are usually entity-based, whilst in English or German they tend to be ground-based. Carroll et al. argue that these different ways of verbalising trajectories in the L1 constitute impediments for learners of French in gaining full proficiency in English and German. Thus, whilst French learners of English and German can use manner verbs to an extent similar to native speakers of the two target languages, they are less likely to employ the ground-based concepts with which native speakers combine these verbs. Thus, instead of expressing the contours of the trajectory, learners use locative expressions as in *a car is driving on a road*, instead of *a car is driving along a road*. It is possible that verbalising location is simpler for learners than verbalising full trajectories. Similar preferences for locative expressions were found in a study of among low-level British learners of French, who used static, verbless expressions of location, as in *un homme dans une banque* "a man in a bank" instead of dynamic verbalisations of path, as in *un homme entre dans la banque* "a man enters a bank" (see Treffers-Daller & Tidball in press). Clearly these structures are different from those produced by the learners in Carroll et al.'s study, as the latter are all grammatically and semantically acceptable but represent different perspectives taken on the same event.

Iakovleva also focuses on the domain of event conceptualisation in a study of two groups of Russian learners of English. The choice of this language pair is interesting because the L1 of the learners is typologically similar to that of the target language (as both are assumed to be satellite-framed), and most studies in the field concentrate on learners whose L1 is typologically different from their L2. The subtle differences between the languages could potentially provide opportunities for learners to transfer elements of their L1 into their L2 productions, but the author concludes there is little evidence for such a transfer. Iakovleva's study is important because it illustrates that conceptualisation patterns do not always transfer: there are certain intervening factors which need to be taken into account, and Iakovleva shows that typological similarity between the contact languages is only one such factor. The author also found that learners display tendencies which can be explained neither by L1 nor by L2 influence: in ACROSS-events, for example, the learners use Path verbs four times more often than the English and Russian natives, which is highly unexpected. Thus, Iakovleva finds some evidence for the fact that in learning to verbalise motion, learners do not necessarily rely on transfer but can also make use of different strategies: the outcome of the learning process can also be that learners use creative or hybrid constructions that are not found in either language (see Pavlenko 2011, Treffers-Daller & Tidball in press).

Although the different contributions to this special issue all deal with the role of transfer in bilingual Thinking-for-Speaking patterns, they differ in their approaches to gathering evidence for transfer, as discussed below.

4. What constitutes evidence for transfer?

The issue of the role of the first language in acquiring a second language (and the reverse influence of a second language on the first) continues to occupy a central position in the field of SLA as well as in the field of Bilingualism (see Treffers-Daller & Sakel 2011 for a full discussion). The contributors to the current volume make an important contribution to the ongoing discussion about the role of conceptual transfer in L2 acquisition in that they make in-depth analyses of the cognitive implications of learning new ways of Thinking for Speaking. Proving that particular features are the result of the effect of one language on another can turn out to be rather difficult, as Iakovleva's paper illustrates. Jarvis (2000) and Jarvis and Pavlenko (2009) provide detailed information about the evidence that needs to be obtained in order to prove beyond reasonable doubt that a feature is due to transfer. These authors recommend including in the study two different groups of L2 learners who are learning the same target language. The first languages of the two groups of L2 learners need to differ in relevant ways from each other with respect to the feature under investigation. If each group of L2 learners produces *different* non-targetlike features in their L2 spoken or written output, and these features are similar to those found in their respective L1s, it is likely these are due to transfer. In other words, there is then evidence for *intergroup heterogeneity* (Jarvis 2000). If the two groups produce the *same* non-targetlike features in their interlanguage, it is more likely that more general and presumably universal factors are at stake. Of course it remains possible that more than one factor explains the result: both universal factors and transfer from the L1 can contribute to the final results, as Benazzo et al. point out in this issue. If the researcher cannot obtain relevant data from another L2 group, it is of course preferable if all groups are part of the same study and carry out the same tasks under the same conditions.

Benazzo et al.'s design follows Jarvis' guidelines to study transfer very precisely, because they compare German and Italian learners of French, as well as French and German learners of Italian. Carroll et al. have chosen a design which is similar, although it does not involve the acquisition of the same target language by different groups, but rather L2 learning of English and German by learners who have the same L1, namely French. While English and German are of course typologically similar, in that both are S-framed languages, they do differ from each other with respect to the means used to verbalise path, as the authors explain in detail in the paper. It would no doubt be very interesting to see how Russian learners of English, as studied by Iakovleva, or Dutch learners of German and English, as studied by Carroll et al. in other papers, would cope with the tasks set in the current paper, as this would provide crucial evidence regarding intergroup heterogeneity with respect

to the features under investigation. Importantly, Carroll et al. and Benazzo et al. offer detailed statistical analyses of the data, which are essential to gain a deep understanding of the learning process in L2 acquisition (also see Jarvis 2000 and Jarvis & Pavlenko, 2009, for further details on the importance of carrying out inferential statistical analyses in studies of transfer).

5. Factors which affect bilingual Thinking for Speaking patterns

As some studies in this issue find evidence for transfer from the L1 but others do not, further research could focus on the factors which influence learners' ability to restructure their interlanguage grammars with respect to motion event construal or discursive perspectives taken by learners.

Athanasopoulos (2011: 37) lists the following linguistic and socio-cultural variables that may affect bilingual Thinking for Speaking patterns, several of which are also discussed by the authors in this special issue.

- a) Specific language proficiency: knowledge of the specific linguistic property under investigation
- b) General language proficiency (ideally measured by independent language tests)
- c) Age of language acquisition
- d) Amount of language use
- e) Interactional setting (whether or not bilinguals were in a monolingual or bilingual mode when carrying out their task, see Grosjean 2008)
- f) Length of stay in Lx-speaking community

While it is clear that studying all these background variables is hardly possible in one study, it is crucially important to provide as much information as possible about them in a study, as their careful measurement allows for correlational studies between cognitive performance and these socio-cultural variables (Athanasopoulos 2011: 32). Conflicting evidence between studies can sometimes be explained on the basis of methodological differences, as Grosjean (2008) explains. It becomes difficult to compare the results of one study with another if we do not have basic information about the variables mentioned above, preferably in an agreed format. Although the data presented in this issue were very well controlled, for example with respect to the most important variables, one further step forward would be to measure participants' ability in both languages using an independent language test, as Athanasopoulos (2011) proposes. In the current volume, Iakovleva illustrates how learners can be split into two groups with different English competence levels using the Oxford Quick Placement test. The problem is, of course, that such tests do not exist for the majority of languages. An alternative for researchers working on languages for which standardised tests are not available is to use a story telling task: language ability can then be measured in the transcript of the story with the help of measures of lexical richness (see Treffers-Daller 2011 for details). Further advantages of this

approach are that measures of lexical richness can be obtained for both languages of the learner or the bilingual, that the measures can be obtained on written or oral samples (as appropriate for the informants) and that the task is ecologically valid in that it represents a task most informants would also carry out outside the context of the study. An additional advantage is that these measures are available free of charge.

As far as the other variables on Athanasopoulos' list are concerned, age of acquisition of the two languages and length of residence in the countries where the L1 and the L2 are spoken are often relatively easy to measure. Quantifying language use is much more difficult, however, as the amount of use a speaker makes of each language will differ per domain. It would be extremely useful for the research community if a questionnaire of language use domains could be developed and be available for all researchers in the field to use/adapt for their own purposes. Finally, there is evidence that the interactional setting in which the data are collected has a subtle but measurable influence on data collection, as Grosjean (2008) points out. This aspect is often neglected in studies of bilinguals and L2 learners and the field of bilingual cognition is no exception.

6. Discussion and conclusion

The contributions to this special issue have helped to move the research agenda in the field of bilingual cognition forward in a number of important respects, in particular in relation to the important issue of whether or not learners can restructure their L1 way of Thinking for Speaking and how typological factors impact on the outcome of the process of restructuring. Benazzo et al. deal with what Lucy (1992) calls 'discursive' or 'functional relativity', by studying the use of contrastive devices in discourse. They open up a fascinating new field of investigation by demonstrating that we need to look beyond the acquisition of lexical items or grammatical constructions and study their deployment in discourse, in particular at higher proficiency levels, where learners know the words and constructions they need but struggle with the pragmatics of their deployment in discourse. Further research in this field is clearly needed.

Soroli et al.'s study of L2 learners and aphasic speakers with agrammatism (SWA) breaks the boundaries between SLA and research into speech and language impairment, and reveals highly interesting facts about the similarities and differences in the (re-)acquisition of aspects of motion event construals among these two groups of speakers. As researchers often work within the boundaries of rather narrow disciplines, studies which make links between different fields are particularly welcome.

Carroll et al.'s study demonstrates that studying motion event construals at a fine-grained level, providing in-depth analyses of path trajectories, can lead to import new insights into the difficulties learners experience in this field. What the appropriate level of granularity of our analyses must be remains an issue that needs to be investigated further. Is it sufficient to distinguish between the

different components of motion as distinguished by Talmy (1985) or do we need to dig deeper into these components, for example as is done for path in Daller, Treffers-Daller and Furman (2011)? Or is it necessary to distinguish between event types, such as movements on a horizontal versus a vertical plane (see also Pavlenko 2009)? Perhaps we even need to go down to the level of the individual word, because individual items behave in idiosyncratic ways. A possible way forward is to link our analyses more closely to theories of lexical semantics than we have done hitherto.

Investigations of different ways in which motion event construal can be taught also have the potential to provide new information about the aspects which are easy or difficult for learners. Most researchers agree that acquiring a new way to conceptualise motion is difficult, but there is virtually no research into how this could possibly be taught. A possible reason for this could be that this issue does not figure highly on the priority list of teachers of modern foreign languages and is not dealt with in great detail in textbooks. Research into the learnability and/or teachability of motion event construal could perhaps make good use of VanPatten's (2002) input processing theory. This theory focuses on how learners manage to map forms onto meanings whilst processing input. Clearly, in the process of learning how to construe motion in a second language, learners go beyond learning how to map new forms onto existing meanings: they often need to learn the labels for entirely new concepts (such as what constitutes a boundary crossing in French or Spanish) or learn how the concepts of glasses or cups overlap only partially in English and Russian (Pavlenko 2011). While there is considerable evidence that learners struggle with the acquisition of motion event construals in a second language, some learners are clearly successful. It is therefore no doubt worthwhile to establish which kinds of learners produce target-like constructions and which teaching methods can help learners to be successful.

The implications of the studies into TFS for Levelt's (1989) model of speech production could also be investigated in more depth in further studies. Aspects of this model may need to be rethought as a result of studies such as these offered in this volume, as there is increasing evidence that there are multiple interactions between the Conceptualiser and the Formulator stages during processing. This special issue has therefore not only provided a wealth of new information about TFS, but also drawn our attention to a wide range of issues that can be studied in future studies on this fascinating topic.

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Résumé

Cet article évalue comment les différents papiers de ce numéro thématique contribuent à améliorer notre connaissance des processus cognitifs qui sont activés quand des apprenants d'une langue seconde ou des sujets bilingues s'approprient à parler ou à écrire. Tous les articles testent l'hypothèse du *Penser pour parler* de Slobin (1987), et visent à vérifier si les schèmes de conceptualisation appris en L1 au cours de l'enfance peuvent être appris à nouveau ou restructurés lors de l'acquisition d'une langue seconde. La plupart des contributions vise à identifier des contraintes qui agissent sur ce processus de restructuration, parmi lesquelles le rôle des différences typologiques entre les langues en contact est étudié en profondeur. Les études impliquent différents types d'apprenants, de combinaisons de langues et de tâches. Tous les informateurs ont accomplis des tâches verbales, plutôt que des tâches non-verbales, l'attention étant centrée sur les effets du transfert conceptuel d'une langue à l'autre et non pas sur ceux de la langue sur la cognition non-linguistique. Cet article indique également des pistes de recherche ultérieures à développer dans ce domaine. En particulier, un défi

sera de déterminer si, au-delà de contextes verbaux, les locuteurs de langues différentes perçoivent différemment le déplacement, ce qui nous permettrait de mieux comprendre les effets de la relativité linguistique. L'étude des méthodes didactiques, notamment de celles qui peuvent aider les apprenants à restructurer leur manière de conceptualiser les situations afin de les verbaliser, pourrait également mettre en évidence quels sont les aspects les plus difficiles pour l'apprenant dans l'expression des situations de déplacement.