Mental Translation into the First Language During Foreign-Language Reading

The Admonition to Think Directly through the Target Language while Learning and Using It

Actually [thinking in Spanish] is something that I've been working on, um... 'cause my Spanish teacher in high school said "You're not gonna get anywhere if you keep translating in your head."

This quote is from an advanced learner of Spanish at the university level (Hawras, 1996, p. 55). The student is simply echoing the oft-heard taboo against mental translation. In situations where the objective is to become fluent in a foreign language, both in the receptive and productive skills, learners such as the one cited above have often been encouraged to think through the target language as much as possible during the language learning and language use process. Learners may come to believe that it is detrimental for them to rely on their first language (L1) habits rather than making the effort to comprehend the target language on its own terms.

Whereas a fair amount of research has now been conducted to evaluate the benefits of explicitly teaching learners how to apply foreign language strategies in their language learning and language use (see Cohen, 1990; Cohen, Weaver, & Li, 1995; Dörnyei, 1995; McDonough, 1995; Mendelsohn, 1994; O'Malley & Chamot, 1990), the issue of the language of thought has not received much attention in the language learning strategy literature. As illustrated above, there is an intuitively-based assumption that it is beneficial for foreign language learners to think as much as possible through the language that they are learning. This assumption has been at the core of certain foreign language learning methods that have avoided the use of the learner's L1, at least during the initial phase of instruction—methods such as the Silent Way, Total Physical Response, and the Natural Approach. With regard to the Silent Way, Gattegno expressed his position as follows:

Throughout our oral work with the rods and the visual dictation on the charts, we have carefully avoided the use of the students' native languages. We have even succeeded in blocking them so that the students relate to the new language directly... (Gattegno, 1976, p. 99)

Asher (1977) described his Total Physical Response method as follows:
Understanding should be developed through movements of the student’s body. (p. 4)
When you cast material in the imperative, there is no translation. (p. 20)

Krashen and Terrell (1983) stipulated the following with regard to the Natural Approach:

(1) the instructor always uses the target language, (2) the focus of the communication will be on a topic of interest for the student, (3) the instructor will strive at all times to help the student understand. (p. 20)

In methods such as these three, teachers implicitly or explicitly discourage students from translating, and the learners themselves may come to feel that L1 or other-language thinking could be detrimental to the learning process. The argument is that by thinking in the target language, learners are increasing their chances of becoming idiomatically accurate in that language—that they are more likely to stop and ask themselves, “Now how would a native say or write that utterance?” The assumption behind the “don’t translate” philosophy is that it will lead to greater success at language learning.

This maxim has been applied to productive language skills—namely, speaking and writing—because they are so external and observable. With respect to speaking, for example, natives of a target language notice errors which are a result of negative transfer in the speech of nonnative interlocutors. For example, a native Hebrew speaker may say, “The policeman didn’t give me to enter here,” a direct translation from the L1. Teachers might suggest that such errors would disappear if the speakers were to think more through the target language while they are speaking.

As for writing, there has also been a focus on those errors which appear to be a result of negative transfer from the native language to the target language. Again, the assumption would be that thinking through the target language while writing would decrease the number of such errors. Yet there has been a series of studies which have looked at the influence of thinking through the L1 while writing in the second language (L2), and the results tend to go against the maxim. While Chelala (1981) found that the use of Spanish L1 to compose in the L2 was more harmful than helpful, Lay (1988) found, in a case study of four native Chinese-speaking ESL students at the intermediate level, that there were a number of benefits of thinking through the L1: brainstorming about topics and finding points to make about them, raising questions, working through complicated ideas, recalling past experiences, evaluating the organization of the essay, enhancing self-expression, increasing lexical variety, and displaying cultural sensitivity. In a study of 28 Chinese-speaking college students, Friedlander (1990) found that the students who initially used the L1 to describe a Chinese festival could more richly describe their experience in the L2, and that thinking and writing a rough draft in the L1 had a positive effect on their final product in the L2. Jones and Tetroe (1987) also report some benefits of thinking in Spanish when composing text in English L2. More recently studies by Kobayashi and Rinnert (1992) with Japanese-speaking EFL writers, and Brooks (1993) with native English-speaking learners of French also demonstrated that composing in native language first and then translating had benefits over composing directly into the second or foreign language. In both studies, outside raters determined that when intermediate learners of the foreign language were given an opportunity to write an essay in their first language and then translate it, they could express their thoughts and opinions more clearly, they were better able to convey subtle nuances of meaning, and their syntax was more complex than when they composed their essays directly in the foreign language.

Whereas a fair amount of research has now been conducted to evaluate the benefits of explicitly teaching learners how to apply foreign language strategies in their language learning and language use, the issue of the language of thought has not received much attention in the language learning strategy literature.

While there has been some research done on the impact of L1 thought on L2 writing, few studies have considered the impact of L1 on L2 reading. Part of the problem is that much of reading is far more internal and unobservable process. Fortunately, verbal report methodology is improving (see Pressley & Afflerbach, 1995; Smagorinsky, 1994; Cohen, 1995) and so now there are more finely-tuned means available for studying what has until now gone largely unresearched.

Where studies of L1 impact on L2 reading have appeared, their primary emphasis has tended to be on transfer from L1 to L2 reading—especially on negative transfer.

While translation of L2 text into the L1 is a widespread occurrence, it is usually viewed as a crutch to be avoided if possible. The position taken by many language educators has been that translation into the L1 may have negative consequences for L2 reading.
A Study of Mental Translation to the Native Language During Foreign Language Reading

A recent study of native English speaking readers of intermediate French by Kern (1994) suggests that there are positive consequences of mental translation into the first language while reading in a foreign language, just as there are negative ones. The researcher explored the actual uses for translation into the first language in the language learning/using process. He had 51 college students of French at the intermediate level (in high, medium, and low reading ability groups) participate in verbal report interviews while reading French texts at the beginning and the end of a fifteen-week semester. Kern used a pretest-posttest research design in order to determine if propensity to translate changed over the semester. The subjects were presented with a French text one sentence at a time, which they were to read silently, and then were to report what they were thinking as they read each new sentence. They were asked 1) what they understood, 2) what they did not understand, 3) how they went about making sense of what they read, 4) whether they made any predictions or inferences, and 5) whether they translated into English. Subjects were free to return to earlier sections of the text as needed for clarification.

An analysis of the verbal report data provided a series of reasons why the learners of French as a foreign language chose to perform mental translation into their first language, English. The study provided a number of insights as to why readers of a foreign language may well choose to think through their first language or some other language instead. The following is a list of some of the potentially positive consequences according to Kern:

1. First-language processing facilitates semantic processing. Storing words as discrete units is more of a burden on memory and it is easier to chunk lexical items into semantic clusters in the first language.

2. The use of mental translation helps to keep the train of thought when chunks are long or syntactically complex. Mental translation allows the reader to represent portions of the text in a familiar, memory-efficient form long enough for meaning to be integrated and assimilated.

3. The reader's network of associations is richer in the first language, so the concepts come alive. The semantic potency of words is greater in the first language than in the second.

4. The input is converted into more familiar, user-friendly terms, enhancing the readers' confidence in their ability to comprehend it—thus producing an affective boost and reducing feelings of insecurity.

5. Mental translation may help in clarifying syntactic roles, verifying a verb tense, or checking for comprehension.

The following are some of the disadvantages of mental translation:

1. Attempts at mental translation may be inaccurate, leading to miscomprehension.

2. Micro-level (e.g., word-by-word) translations may not lead to integration of meaning. They may produce a bottom-up sense of how portions of text and isolated items function and what they mean, without a top-down sense of what the material is all about. Some or much of the thought during mental translation may be of a technical or perfunctory nature—e.g., searching for literal equivalents of second-language forms, rather than determining the general coherence of the text.

3. There is a risk of attending to second-language forms only briefly, with the bulk of meaning processing reserved for the first-language mental representation. It is possible that during much of the meaning-integration process, learners focus primarily on transformed first-language representations rather than on the original second-language forms, diminishing possibilities of second-language acquisition.

In some ways the analysis of data for this study was problematic in that what the investigator called reports of translation describe different kinds of translation behavior. For one thing, the subject was sometimes reporting the translation of a single word, in other cases a phrase or whole sentence. So there was variation in the amount of material being translated. Perhaps the traditional linguistic elements framework is inappropriate for this kind of analysis since the translation of different isolated words may constitute radically different types of translation phenomena. The translation of one word may serve to check on its grammatical form whereas that of another word just to help store the meaning in a memory buffer. Thus, there is most likely both a grammatical reality of mental translation and a separate psycholinguistic reality.

The Kern study certainly raises the issues of just how much translation goes on while the reader is grappling with text, how it is used and why, and what the results are in terms of comprehension of
text. What role does translation play in the reader's effort to determine the meaning of the text?

**A Recent Replication of the Mental Translation Study**

Hawras started from the same premise as Kern, that the reading research had not fully addressed one of the fundamental differences between first-language and foreign-language comprehension: that foreign-language readers have two languages at their disposal rather than one. And this situation frequently poses what for many is a conundrum: just what is the proper place of the first language in the learning of a foreign language?

He asked the following research questions: (1) To what extent do beginning, intermediate, and advanced-level Spanish students translate mentally as they read Spanish texts? (2) To what extent does mental translation actually facilitate foreign-language reading comprehension?

The subjects were 27 University of Minnesota students from eight different sections of Spanish language classes, representing three different proficiency levels. So whereas Kern had worked only with intermediate learners and studied them at the beginning and end of a term, Hawras looked cross-sectionally at three levels at the same time. The subjects were informed that this was to be an exploration of how foreign-language learners mentally process a reading task. They were given a reading task consisting of the first two paragraphs of an essay on European culture (about 220 words). The essay was presented using a technique from Fillmore and Kay's (1983) text protocol procedure. It was printed on ten separate sheets of paper: the first sheet had the first sentence only, the second sheet had the first two sentences, the third sheet the first three, and so on, so that the respondents were presented only one new sentence at a time, but each new sheet included all the preceding sentences. The first two sentences served as the "warm up," to acclimate the students to the task, and were therefore not counted in the data. The students could read the sentences either silently or aloud. If they did not do so on their own, they were always asked to provide verbal report data as they read each sentence before going on to the next one. The verbal report consisted primarily of introspective and retrospective self-observation as to whether and how they understood each sentence. The interviews took between 12 and 30 minutes each and were tape-recorded.

The beginning and intermediate students reported translating portions of text mentally into English about as often as they got the meaning directly from Spanish. The advanced group used mental translation into English only about one quarter of the time. This finding that advanced students translated the least would likewise be expected, as the more proficient one becomes in a foreign language, the less reliance on the first language is necessary.

It also appeared that the more advanced a learner was in the foreign language, the more that translation facilitated comprehension. However, for the beginning group, comprehension was achieved in only about half of all the instances of reported mental translation. For this group mental translation into English either did not help them understand some linguistic unit or caused them to misunderstand it as often as it actually facilitated comprehension. The intermediate and advanced groups were found to be similar with respect to what they comprehended. When they did avail themselves of mental translation, these two groups had a similar success rate in terms of the proportion of accurate comprehension of all reported instances of mental translation: 62% for the intermediate group to 68% for the advanced group. This finding might suggest that as learners are more proficient in a foreign language, they acquire a sense of just when mental translation into English will yield better results.

With regard to the qualitative portion of the study, Hawras noted that there were perhaps two general strategies or guiding principles employed by the respondents. For some of the beginners, it was to translate word for word. For most students the guiding principle was to read directly in the foreign language, Spanish, and to translate only when necessary. The following is a quote from an advanced respondent who used this principle:

"Yeah, the first scan-through I just read it usually without... thinking, I just read it and I hear the words... or... in my head. And then if I don't understand just reading it I have to... go back... and I read it slower. Then I stop and think: 'OK, what's that in English?' And then if I still don't get it I have to go back and read the whole thing in English, like translate word for word. But I usually don't translate word for word unless I really am having trouble understanding it. That's like the last case thing, 'cause it takes so long. (p. 54)"

The last statement of this respondent calls attention to a potential disadvantage to the use of mental translation, namely, that word-for-word mental translation can be painstakingly slow.

Hawras found that a series of specific translation strategies emerged. One was for dealing with long sentences, as was evident with several of the subjects in the study. The following is an example of a long sentence and the response from an intermediate-level student:

**Con la progresiva industrialización y urbanización y los muchos contactos internacionales que esto implica, y también la continua emigración entre**
países, todas las naciones avanzadas empiezan a parecerse más. [With the progressive industrialization, urbanization, and the many international contacts that this implies, and also with the continued emigration between countries, all advanced nations are beginning to resemble each other more and more.]

Student: I don’t know, “Advanced nations are starting to . . .” um, kind of come up more with “industrialization,” and “urbanization . . .” I’m not really sure what this sentence . . . is getting at.
Interviewer: This is kind of a longer sentence.
Student: Mm-hm.
Interviewer: Are you just trying to get the whole meaning of the whole sentence all at a time?
Student: Yeah. Um, well, actually I’m reading . . . no, I’m reading, um, I take kind of bits and pieces of it, like I took con la progresiva industrialización y urbanización and then, but then I look down at todas las naciones avanzadas empiezan a parecerse más [all the advanced nations are starting to resemble each other more]. Um, so I kind of divided it by the commas, almost, and trying to tell what that little fragment meant, and then, put it together with . . . but, I still don’t know what it means, so . . .

Interviewer: You’re getting the meaning of the individual words directly through Spanish?
Student: Mm-hm. (p. 56)

Here the student agreed that she was not mentally translating the words of the text. However, she did

Es que las diferencias culturales dependen hasta cierto punto del aislamiento. [That is to say that cultural differences depend to a certain point on isolation.]

Student: Instead of seeing chunks, I see a long list of words I need to go through . . . Maybe, maybe it’s saying something like, “Cultures are gonna be different until there’s no more isolation.” (ha ha ha) or something like that. It doesn’t sound like a very logical thought, but . . . (p. 58)

The sentence does not lend itself to division into more manageable chunks. The learner ended up resorting to translation, and got the general idea, but did not get it exactly, nor was she very confident of having gotten the right meaning. In this case, the physical size of the linguistic unit would seem to have little direct bearing on the complexity of the psycholinguistic processing called for.

Hawras also found that translation makes material more user-friendly and removes affective barriers, as had Kern in his study. One strategic use of mental translation was to shift into L1 syntax. The following is an explanation of this strategy by an intermediate respondent:

I guess what I try, what I do, ’cause I know all these words in here, but the order in which they are don’t often, don’t always, make the proper sentence in mind. So then I have to, . . . I guess I kind of translated it a little bit . . . ‘Cause often you know Spanish sentence structures aren’t always the same as English, so I put them in, sometimes in English structure, but still using these words. (Hawras, p. 59)

Another strategic use for mental translation was to verify that a segment of text was accurately comprehended. The advanced learner in the following example reported striving to initially read and get the meaning of the text directly in Spanish, and only going back and translating when necessary. However, at one point she remarked:

OK, this one I pretty much got the first time through, but then I went back to make sure, . . . and, um, . . . you know, I went back and kind of translated it as I went along to make sure that I had it. I don’t think I did that the first time. (p. 60)

Even though she did understand the meaning of the sentence “the first time through,” she translated it anyway. Thus, translating the sentence for verification may serve to reduce a lingering insecurity that
even advanced students may feel when reading in a foreign language.

**Limitations with the Mental Translation Studies**

There are limitations with this study, just as with the Kern study. One limitation is that the genre of the text can have an effect on the extent to which mental translation is used and benefited from. In both studies, the texts were in the humanities and were of an academic nature. Perhaps other kinds of texts would prompt other types of behavior with regard to mental translation. Another limitation was that the procedure allowed for no pre-reading of the text. Readers could refer to the previous text, each time a new sentence was added, so they needed to read someway into the text before they could get a sense of the global meaning of the text. Once they reached the final sentence, they could then read the full text. It could be argued that this procedure could have generated more mental translation than would have occurred had the entire text been available at the outset.

Another limitation is that in neither of the studies was there any investigation of how well the respondents read in their native language, English. It could be argued that those who have greater difficulty keeping the main idea in their minds as they read along in native-language text would be those who need to resort more to mental translation when reading in a foreign language.

**Suggestions for Further Research**

With regard to future studies, it would seem worthwhile to include a measure of native-language reading ability, especially using texts that place demands on the reader both in terms of vocabulary and syntax. It might also be beneficial to determine how skillful the readers are at translating text from the target language to their native language. Students could be asked to provide an oral translation of the entire text and then to explain their translation. In other words, the purpose would be to see how capable they are at providing a functional translation that captures both the essence and the particulars of the text. Another purpose for such research could be to see which strategies the readers use for producing their oral translations and how they use them. This information might provide added insights into the nature of mental translation in foreign-language reading. It may be that the extent and types of mental translation used by readers of a foreign language may be determined to some extent by the strategies for translating from the foreign to the native language that the readers possess.

It may also be valuable to investigate the role that the educational system might play in the development of translation skills. In the North American context, for instance, middle school and secondary school students are discouraged from systematic use of translation in their foreign-language reading, whereas in Japanese junior and senior high schools, learners may be explicitly trained to read English by translating. Is it the case that those who are systematically trained in translating develop a more refined set of strategies for performing mental translation than those who are not?

Another issue to investigate would be that of the distance between the L1 and the L2. How would mental translation from Spanish or French L2 into English L1 (as in the studies cited in this article) compare with mental translation from Japanese L2, for example? What might be the relationship between the extent of mental translation and the similarity between the languages in question?

In addition, it may be valuable to look at the extent to which individual readers’ use of mental translation differs significantly according to their language learning and use style preferences. Even within the same educational system, some individual readers may be more likely to employ mental translation than others.

Finally, an analysis could be made of the time needed to translate mentally. The Hawras study found that mental translation had the potential of slowing the reader down. Where time is a factor in performance (e.g., on reading comprehension tests), the use of extra time for translation may be a major concern. In other circumstances, extra time in reading may enhance comprehension. In still other cases, the use of mental translation may move the reading process along more rapidly.

**Pedagogical Implications**

If teachers choose to look upon mental translation as an unnecessary and perhaps unfortunate crutch, they might request that students make every effort to process written text directly through the foreign language when they read. Teachers could warn learners against doing more translation than they need to, with the assumption that such translations may inhibit the development of an independently functioning L2 system. The challenge is to distinguish a genuine need for translation from a perceived need. For example, a reader may feel a need to employ a heavy dose or even overdose of mental translation in order to comprehend a given text successfully, but without necessarily learning much of the L2 in the process. They may actually improve their reading ability in that language more by resisting translation and instead making an effort to generate meaning directly from the L2 text.

The Kern and Hawras studies, however, do provide some evidence that nonnative readers systematically (and not so systematically) use mental translation to successfully store and understand text. On the strength of these findings, language teachers might be encouraged to view mental translation as
offering at least an interim set of reading strategies while reading proficiency is developing. The assumption here would be that if mental translation has genuine benefits, then teachers should stress those beneficial areas or strategies to all foreign-language readers so that they might choose from among mental translation strategies. For example, learners may be advised to use their L1 to chunk material into semantic clusters, to keep their train of thought, to create a network of associations, to clarify grammatical roles, and to convert the input into more familiar and consequently more user-friendly forms.

Undoubtedly, some mental translation activities are unconscious and therefore would fall outside the realm of strategies that are consciously selected. The strategies research cited at the outset of the paper would indicate that there is some advantage to making language users more conscious of the processes that they use, so that they may take more responsibility for their own language learning and language use. Teachers may help to raise to a level of awareness those unconscious mental translation processes that learners may be engaging in while reading.

Teachers might also suggest mental translation more for some students than others—according to their cognitive styles and strategies of language learning and language use. The above studies would suggest that the less advanced students of language indulge more in mental translation than the more advanced ones. Perhaps teachers could alert learners at these lower levels to the fact that they will translate while reading and even to contemplate the various roles that such translation can play.

Let us return to the foreign language-learning principle presented at the outset of this paper, namely that learners should avoid thinking in their L1 when learning and using an L2. Given the issues raised in this article and the empirical evidence provided with regard to reading research, there appear to be grounds for language educators to speak out on behalf of systematic use of mental translation in the face of pronouncements against its use.

References

The authors may be contacted c/o Dr. Andrew D. Cohen, ILASLL, 130 Klaeber Court, University of Minnesota, 320 16th Avenue S. E., Minneapolis, MN 55455, USA.

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