# Learning and teaching languages: the role of "conceptual fluency"

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Despite considerable research in second language learning in class-
room environments in this century, and despite the many pedagogical
applications that such work has made possible, teachers and learners
alike still complain about the fact that autonomous student discourse
lacks the conceptual richness that characterizes native speaker
discourse. The purpose of this essay is to suggest that the notion of
"conceptual fluency", which has been derived from the current
research on the role of metaphor in language and cognition, can be
used to draft a teaching curriculum around the notion that metaphor
is the organizing principle of common discourse.

Like no other school subject area, second language teaching (SLT) in classroom
environments has been shaped in large part throughout this century by theories
and findings coming out of two scientific domains – psychology and linguistics.
The interplay between theory and practice has produced practitioners who are
among the most informed and pedagogically knowledgeable members of the
entire educational profession. As we approach the end of the twentieth century
it is, in fact, difficult to think of the SL classroom in high school, college, or
university as anything but a highly advanced learning environment.

So, why is there, despite the apparent sophistication, still so much discus-
sion going on in the methodological literature about what to do in the SL class-
room? In fact, SLT continues to be characterized by an age-long and wearisome
debate between formalists and functionalists, i.e., between those who focus on
the development of techniques that aim to foster in the adolescent/adult learner
a control of linguistic structure, or *linguistic competence*, and those who focus
instead on developing in the learner a functional knowledge of the uses of the
SL, or *communicative competence*. Although it has taken on an increasingly
sophisticated terminological guise, this debate is really as old as civilization
itself, dating back to the times of the Sumerians more than three millennia BC;
(Titone 1968: Kelly 1969)!

Against the backdrop of this debate, classroom teachers are becoming increasingly skeptical vis-à-vis many of the proposals put forward by the defenders of each camp. It would seem that the contemporary SL teacher has rejected the "all-or-none" approach of most methodologists, tending toward a "both-and" *modus operandi* that includes both knowledge of structure and skill at using the SL in functional ways. This is probably because the experience of the classroom has, time and time again, made it saliently obvious that the truth lies somewhere in between these two ideological camps. This reality is forcing researchers in second language learning (SLL) and experts in SLT methodology to move away more and more from the "camp mindset" toward a more enlightened "eclecticism" in drafting research agendas and instructional proposals. The goal is no more a standardized, profession-wide set of instructional procedures for SLT, but rather an approach that is more flexible and sensitive to the variation in student learning styles.

Given this *Zeitgeist*, given that the speech of SL learners is invariably characterized by an unnatural degree of "textbook literalness", and given the plethoric research in cognitive psychology and linguistics in the last two decades on the notion that language "reflects" an underlying conceptual system, which is in turn purported to be implanted in metaphorical reasoning, the time has come to look seriously at classroom SLL from a different perspective.

The current research on metaphor, in my opinion, gives us a probable explanation as to why student discourse is often so unnatural, no matter what methodological orientation is used to impart knowledge of the SL. In 1977 Howard Pollio and his associates showed that the average speaker of English invents approximately 3000 metaphors per week (Pollio, Barlow, Fine & Pollio 1977). Their work clearly showed, in other words, that metaphor is hardly a discourse ornament or option. Rather, they demonstrated that it constitutes a fundamental aspect of discourse programming. The typical "over-literalness" of learner discourse texts (oral and written), therefore, seems to bear witness to the fact that students have never had the opportunity to access the metaphorical structures inherent in the target language and culture directly. The purpose of this essay is to argue that students must be exposed to these very structures in tandem with grammatical and formalized communicative structures (i.e., conventionalized speech acts and discourse scripts such as greeting, ordering, etc.). Specifically, I will elaborate a working definition of "conceptual fluency", hinted at in previous work (Danesi 1993a, 1993b), present some pilot findings on this notion, draw some initial implications for SLL research and SLT methodology, and then draft some questions that it raises for future investigation, discussion, and research.

## Conceptual fluency

Despite great strides made in syllabus design and proficiency-oriented curricula in recent years, the reams of research papers on SLL learning published in the last two decades attest to the fact that there continues to be something still not quite authentic in the actual speech samples produced typically by SL learners – something that seems to go beyond grammatical and communicative proficiency, i.e., something that cannot be explained in strictly grammatical and/or communicative terms. Both these kinds of knowledge – grammatical and communicative – can be considered to be constituent aspects of *verbal fluency* (VF). While student-produced discourse texts often manifest a high degree of VF, they invariably seem to lack the conceptual appropriateness that characterizes the corresponding discourse texts of native speakers. To put it another way, students "speak" with the formal structures of the target language, but they "think" in terms of their native conceptual system: i.e., students typically use target language words and structures as "carriers" of their own native language concepts. When these coincide with the ways in which concepts are structured in the target language, then the student texts coincide serendipitously with culturally appropriate discourse texts; when they do not, the student texts manifest an asymmetry between language form and conceptual content. What student discourse typically lacks, in other words, is *conceptual fluency* (CF).

My claim is that to be conceptually fluent in a language is to know, in large part, how that language "reflects" or encodes concepts on the basis of metaphorical reasoning. This kind of knowledge, like grammatical and communicative (pragmatic) knowledge, is by and large unconscious in native speakers. If I were to speak about "ideas" in English, my mind would automatically scan conceptual domains that typically reveal an *A is B* structuring. So, if I were to say something like "I don't get the *point* of your idea," or "I don't quite see how your idea is *parallel* to mine," the conceptual domain enlisted by my mind has the form *ideas are geometrical objects*. Of course, my mind can search out other appropriate domains – e.g. "Your ideas are coming to fruition", or "Your ideas are growing on me" (conceptual domain = *ideas are plants*), "Your ideas are well constructed", or "Your ideas are grounded on a solid foundation" (conceptual domain = *ideas are buildings*), etc. – or combine them in various ways. The grammatical forms and categories that are used in actual discourse are consistently linked cohesively to such conceptual domains.

There are two comments that must be made right from the outset vis-à-vis the notion of CF. First, whether or not all concepts are structured metaphorically, as for example Lakoff and Johnson (1980) would claim, is a question that is open to research and debate. As SL educators, it is certainly judicious to at least entertain the possibility that a wide range of concepts is metaphorical in structure. Second, even if this were so, it must not be forgotten that there are many aspects of language learning that are not conceptual. These may be perceptual, iconic, indexical, or denotative, for instance. What can be

cautiously claimed, therefore, is that metaphorical reasoning is always a potential factor in shaping discourse, a point also argued recently by MacLellan (1994). The "textbook literalness" of learner discourse certainly seems to bear witness to the fact that students have had little or no opportunity to access the metaphorically-structured conceptual domains inherent in SL discourse. To put it another way, it can be said that "metaphorical competence" – to coin an analogous term to grammatical and communicative competence – is almost completely lacking from the discourse programming abilities of SL learners.

A rethinking of SLT in terms of conceptual, rather than in strictly verbal, terms will require a new and major focus on culture in SLT. As Jonathan Arries (1994) has recently pointed out, the question of how to incorporate culture into SLT is really an old one, betraying two traditions: (1) the "activity" approach, by which students are involved in a range of activities designed to impart "cultural knowledge (e.g. culture assimilators, mini-dramas, field trips, etc.)"; and (2) the "anthropology-process" approach, by which units of study are structured so that students can use the SL to make hypotheses about the SL culture. Using the concept of "ego-dynamicity" developed by Titone and Danesi (1985), Arries illustrates how to integrate these two approaches, showing that a syllabus based on the notion of conceptual fluency is not only possible, but highly desirable. The focus in this paper is to provide a theoretical justification for such a syllabus.

It should be mentioned here that recently the whole notion of a culture-based "syllabus" has come under close scrutiny. Kramsch (1993), for instance, argues successfully that the topics and verbal structures in a teaching unit should reflect cultural notions and concepts. So-called "task-based" (e.g. Crookes & Gass 1993) and "lexical" (e.g. Nattinger & DeCarrico 1992) approaches are also showing how to integrate language, cognitive processes, and culture in a coherent way in SLT syllabi. But the notion of metaphorical competence as a guiding framework for developing culture-based syllabi seems, by and large, to be lacking (see also MacLellan 1994 on this point).


## Some cases-in-point

The idea of including metaphorical competence on the SLL and SLT research agendas has not as yet penetrated the mindset of researchers and practitioners, probably because its general implications for language learning and for discourse programming have not as yet been exhaustively examined. It is, for SL researchers, still a virtually unknown area. But, in the same way that researchers have gained specific insights from psychological work in the past – e.g., sequencing structures according to a so-called natural acquisition order, putting comprehension before production to comply with a natural learning tendency, etc. – so too, in my view, can concrete insights be gleaned from the relevant work on metaphor for both SLL research and SLT methodology.

It is perhaps the research of Lakoff and Johnson in linguistics over the past decade (e.g., Lakoff & Johnson 1980; Lakoff 1987; Johnson 1987) that is the most germane to developing the notion of metaphorical competence for SLT. The essential claim made by these two scholars is that our most common concepts are forged via metaphor. They show this by simply taking concepts apart linguistically and revealing their underlying metaphorical structure. Consider, for example, the following common metaphorical portrayals of health by our culture (Lakoff & Johnson 1980: 15 and 50):

      1) Your at the *peak* of your health.
      2) My health is *down*.
      3) You're in *top* shape.
      4) My body is in perfect *working order*.
      5) My body is *breaking down*.
      6) My health is going *down the drain*.
      7) His pain *went away*.
      8) I'm going to *flush out* my cold.

The first three sentences represent health in terms of an orientation analogy: i.e., the state of being healthy is conceptualized as being oriented in an upwards direction, while the opposite state is conceptualized as being oriented in a downwards direction. This is probably because in our culture, as Lakoff and Johnson (1980: 15) point out, serious "illness forces us to lie down physically". Sentences (4) and (5) compare health, and its converse, to a machine. And in the last three sentences health and its converse are envisaged as being entities within a person. This is why they can *go away*, why they can be *flushed out*, and so on. It can be said that "health" is an abstract metaphorical *topic* and that its various conceptualizations (as orientation, as an entity, as a machine, etc.) are its *vehicles*. The end result is a way of thinking and talking about health in English that takes place unconsciously in the domain of metaphor – "*healthiness is up/unhealthiness is down*", "*healthiness is a well-functioning machine/unhealthiness is a malfunctioning machine*", etc.

The work of Pollio et al. (1977), and the many surveys of the use of metaphor in everyday communicative behavior (e.g., Dundes 1972; Beck 1982; Kövecses 1986, 1988, 1990) have made it obvious that this kind of conceptualization is an intrinsic feature of discourse. The implications of this line of research for SLT are quite clear: the programming of discourse in metaphorical ways is a basic property of nativespeaker competence. As a "competence", it can be thought about pedagogically in ways that are parallel to the other competencies that SLT has traditionally focused on (linguistic and communicative).

To summarize, the gist of the work on metaphor has shown that metaphorical competence is closely linked to the ways in which a culture organizes its world conceptually. It inheres, as Lakoff and Johnson (1980: 5) remark, in

"understanding and experiencing one kind of thing in terms of another". As an example of how it might work in actual discourse programming, consider the following hypothetical situation. Let us say that I am practicing the piano (Danesi 1993a). It is a rainy day and I am playing a sad piece of music. Someone walks into the room where I am playing and asks me how I feel. The sad music and the rain outside have put me in a frame of mind that leads me to make a commentary on my mood. Seeing rain drops on a nearby window, I might answer my interlocutor with "I'm feeling *drippy*". In the context of the experiential domain in which the utterance was spoken, it makes perfect sense. The reason why it makes sense to my interlocutor is because it "reflects" an underlying metaphorical concept that *mood is an environmental state* ("I'm feeling under the weather", "I'm in a stormy mood today", etc.). This example shows how experience of the world (seeing a drip and associating it with feeling sad) is first conceptualized metaphorically (*mood is an environmental state*), and then verbalized in the form of a contextually appropriate discourse text.

Common concepts, ranging all the way from color and motion to love and justice, seem typically to be grounded in metaphor, and since communication is based in large part on the same conceptual system that we use in thinking and acting, then language is an important source of evidence of what that system is like. As Winner (1982: 253) has aptly put it, the recent experimental literature has made it conspicuously obvious that if "people were limited to strictly literal language, communication would be severely curtailed, if not terminated". Research on so-called anomalous strings (e.g., "Colorless green ideas sleep furiously") has shown, moreover, that the metaphorizing capacity forces people to extract meaning from virtually any well-formed combination of words (e.g., Pollio & Burns 1977; Pollio & Smith 1979). If people are required to interpret such strings, then they will do so, no matter how contrived the interpretation might appear. This suggests that metaphorical thinking is a dominant and ever-present option in discourse, and that literal thinking might actually constitute a special, limited case of communicative behavior. In the absence of contextual information for an utterance such as "The murderer is an animal", we are immediately inclined to apply the metaphorical mode in interpretation. It is only if we are told that the so-called "murder" was committed by a biological animal that a literal interpretation becomes possible. This is probably due to the fact that literal speech is tied to the verbalization of the finite universe of *actual worlds*, whereas metaphor extends discourse into the infinite universe of *potential worlds*.

Actually, as a general working model, it can be posited that a concept starts out as a percept: i.e., as a model of some aspect of experience or reality. *Models* are the result of the process of taking in and *re*-forming the *information* emanating from our sensorial and affective responses to the world. Once such models are connected metaphorically, we come to "conceptualize" them, i.e., to think of them in terms of other models or image schemata. This process constitutes our *re*-presentational cognitive mode.

As a concrete example of how this model might "explain" various conceptual phenomena, consider the use of the prepositions *since* and *for* in sentences such as the following (Danesi 1993a):

> 9) I have been living here *since* 1980.
> 10) I have known Lucy *since* November.
> 11) I have not been able to sleep *since* Monday.
> 12) I have been living here *for* fifteen years.
> 13) I have known Lucy *for* nine months.
> 14) I have not been able to sleep *for* five days.

An analysis of the complements that follow *since* or *for* reveals that those that follow the former are "points in time", i.e., they are complements that reflect a conception of time as a point on a timeline which shows specific years, months, etc.: 1980, November, Monday, etc. Complements that follow *for* reflect a conception of time as a quantity: fifteen years, nine months, five days, etc. These two conceptual domains *time is a point* and *time is a quantity* are the *image-schemata* that Lakoff (1987) and Johnson (1987) so ably talk about. They are, clearly, conceptual domains that result from metaphor. They reflect our propensity to imagine a phenomenon such as "time" in terms of something concrete. These conceptual domains can then be seen to have a specific representation at the level of language in terms of a grammatical dichotomy: complements introduced by *since* are *reflexes* of the conceptual domain *time is a point*; those introduced by *for* are *reflexes* of the conceptual domain *time is a (measurable) quantity*.

This conceptualization of time is also present in such other symbolic creations as word problems in algebra. The only way to solve a problem such as the following is if the solver has access to the above conceptual domains:

> John is five years older than Mary. In four years
> from now, he will be twice her age. What is the
> present age of each?

This problem can be solved algebraically by setting up a so-called linear equation as follows: The letter symbol $x$ can be used to represent Mary's present age. Therefore, John's present age can be represented by $x + 5$. The reason for this is because we have access to the conceptual domain *time is a point*. John's age-point is "5 points" away from Mary's age-point, which can be considered the origin or "point 0" on the timeline:

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Mary's starting age-point | | | | | John's age-point |

Identical reasoning can now be applied to represent John's and Mary's ages in four years time. We simply move their age-points "up by four" on the time-line. This translates into $x + 4$ for Mary and $x + 5 + 4 (= x + 9)$ for John. Now we shift to the conceptual domain *time is a quantity* to relate their ages further. John's age is quantifiable as twice that of Mary's age. This is, of course, a relation that can be expressed by multiplying Mary's age by two: $x + 9$ [John's age] $= 2(x + 4)$ [twice Mary's age]. Solving this equation reveals that Mary is at present one year old and John six.

Take as one other example, the ways in which different languages treat weather verbs (e.g., Ruwet 1991). In a Romance language like Italian, for example, the verb *fare* 'to make' is used to convey a weather condition – *fa caldo* (literally) 'it makes hot', *fa freddo* (literally) 'it makes cold'. The condition of "hotness" and "coldness" is conveyed instead by the verb *essere* 'to be' when referring to objects – *è caldo* 'it is hot', *è freddo* 'it is cold' – and by *avere* 'to have' when referring to people – *ha caldo* 'he/she is hot', *ha freddo* "he/she is cold". The use of one verb or the other – *fare, essere,* or *avere* – is motivated by an underlying image schema of bodies and the environment as *containers*. So, the "containment context" in which the quality of "coldness" or "hotness" is located determines the verbal category to be employed. If it is in the environment, it is 'made' by nature *(fa freddo)*; if it is in a human being, then the body 'has' it *(ha freddo)*; and if it is in an object, then the object 'is' its container *(è freddo)*. Examples such as this suggest that the development of grammatical categories is motivated by experiential or osmotic factors.

To summarize, the point to be made here is that our unconsciously-embedded image schemata of time as a "point on a line" and as a "quantity", or of "hotness" and "coldness" as being contained in Nature, people, or things, constitute conceptual domains that have reflexes or "markings" in the grammars of specific languages. Knowledge of such differentiated reflexive properties is what guides competent translators implicitly when they convert one language text into another successfully. As Bressan (1987: 69) has put it, the translator interprets diverse "markings" in the source language on the conceptual-semantic level, and then compares them to their closest equivalents in the target language: i.e., for Bressan the task of the translator is to "determine [conceptually-appropriate] devices for more accurate translation".


## Some relevant data

In an attempt to gain a better understanding of various issues related to metaphorical competence and SLL in classroom environments, I undertook several pilot studies at the University of Toronto over the last few years. The complete results of two of these studies have been reported elsewhere (Danesi 1992). Here, it will be sufficient to comment upon them briefly in terms of the general patterns that they reveal.

At the end of a course, or program of study, the student is generally capable of applying the grammatical and communicative skills and knowledge gained to new domains and tasks. In general, the learner can compute linguistic and communicative tasks within a predictable range of proficiency. The question that the first study aimed to investigate was to what extent, if any, do typical classroom learners, at various stages of learning, comprehend SL metaphors.

Two groups of students of Italian at the University of Toronto were examined: Group A consisted of 12 non-native students, 4 from each of the three levels of study offered at the University (elementary, intermediate and advanced). Group B, the comparison group, consisted of 12 students of Italian backgrounds who spoke Italian as a native language. In B as well there were 4 students from each level (elementary, intermediate, advanced). Given the limited size of the sample, it was not possible to draw inferences of statistical significance from the results. But the idea was not to establish any pattern statistically, but simply to get some indication of whether typical classroom learners were capable of comprehending metaphor.

The subjects were not informed of the goals of the study. Each student was given various comprehension tasks separately within the last two weeks of the academic year 1991. Two of these were:

> The first task required the students to select the meaning of 10 metaphorical statements on a questionnaire from three given cues – one literal and two metaphorical (of which only one represented the true meaning). The "literal interpretation" simply took the words in the metaphor at face (literal) value. Thus, in the metaphor *Giovanni è una volpe* ('John is a fox'), three options were given for the student to select: 1. *Giovanni reagisce come un animale* ('John reacts like an animal') (literal); 2. *A Giovanni piacciono le galline* ('John likes chickens') (false metaphorical); and *Giovanni è furbo e astuto* ('John is wily and astute') (correct metaphorical). The idea here was to see if the learners were able to understand explicit metaphorical statements in the SL.

> The second task was a translation task consisting of 10 metaphorical sentences, 5 from Italian into English and 5 from English into Italian. This task required the learners to decode (Italian to English) and program (English to Italian) statements metaphorically.

The results on the first task were as follows: Group A achieved, overall, a 57% correct response level, and Group B an 83% level. Most of the correct responses in both groups came from students enrolled in the advanced courses. It is obvious that Group A tended to interpret and translate SL metaphors literally. Group B performed much better on the tasks, especially at the advanced level.

The translation task, clearly the more difficult one, produced lower results. Indeed, overall, of all the possible translations, Group A came up with a 23% acceptability level and Group B a 34% one. This was calculated by taking the total number of sentences translated by all the students into account.

Clearly, in order to test for statistical significance, a much larger sample

size is required. But in the context of a pilot study, these results suggest that metaphorical competence is virtually nonexistent in typical classroom learners. The reason for this is not that they are incapable of learning metaphor, but more likely that they have never been exposed in formal ways to the conceptual system of the target language and culture. To be "conceptually fluent" in the SL, the student must be able to convert common experiences into conceptually and linguistically appropriate models. At the present time there seems to be nothing in SLT methodology that takes this into account.

A second study was conducted later in 1991 to measure CF in students who had completed a minimum of three years of Spanish at the University of Toronto. The sample in this case consisted of a group of 30 third- and fourth-year students of Spanish at the University of Toronto who were separated into two groups of 25 non-native speakers (A) and 5 native speakers (B). As in the previous study, the native group constituted a comparison group, albeit a rather small one.

The subjects were asked to write a short in-class essay on one of the following topics: 1) *¿Qué es la amistad?* ('What is friendship?'); 2) *El teléfono: la invencion que ha revolucionado nuestra sociedad* ("The telephone: The invention that has revolutionized our society'); 3) *La presencia de los soldados canadienses en el Golfo* ("The presence of Canadian soldiers in the Gulf"). The essays were collected and examined for the presence of metaphor in terms of CF. An index of "metaphorical density" was computed for each essay. This simply measured the number of metaphorical sentences as a percentage of the total number of sentences written. A metaphorical sentence was defined as a token or instantiation of the underlying conceptual system: e.g. an orientation metaphor, an entity metaphor, etc. Repeated instantiations of a conceptual metaphor were not counted again, since these can be seen to be simple elaborations. An average metaphorical density was then computed for both groups. The difference in densities between Group A and Group B was significant at the $p < .05$ level, with Group B scoring over 80% percent higher in average density. And when we compared the actual sentences that were tagged as metaphorical in Spanish with corresponding ones in English, we found that they matched: i.e., the students tended to use conceptual metaphors that were alike in both languages. This means that they learned virtually no "new ways" of thinking conceptually after three or four years of study in a classroom.

## General implications

These pilot studies support the common impression that student discourse is marked by an unnatural degree of "textbook literalness" and that it is not, in general, conceptually appropriate. In previous work (Danesi 1986, 1988), I suggested that metaphorical competence is as teachable as linguistic or communicative competence. It can be claimed, in fact, that this can be done by simply

structuring designated units of study around conceptual domains (love, time, etc.), and then by teaching the appropriate grammar and communication patterns of the language as "reflexes" of these domains, in ways that have been touched upon in this paper. If the grammatical system is viewed as a reflexive code of an underlying conceptual system, then a radical rethinking of SLL and SLT will have to be envisaged. As Henry Schogt perceptively remarks (1988: 38), one can no longer ignore the growing body of evidence that shows how all languages "have meaningful units that articulate human experience into discrete elements".

So, the question now becomes: how can a conceptually based syllabus be organized? The idea would be simply to identify and catalogue the *vehicles* that underlie specific *topics*, together with the grammatical/communicative categories that reflect them. So, for instance, when teaching an English-speaking student about the weather in Italian (the *topic*), it will be necessary: 1) to inform him/her about the conceptualization of *hotness/coldness* as substances that are *contained* in specific *contexts* (the *vehicles*); 2) to teach him/her how to use the verbs *fare*, *avere*, and *essere* as reflexes of the vehicles (including relevant morphosyntactic information); 3) develop appropriate textual and practice materials based on this explanatory framework. It is interesting to note that in Italian "being right", "being sleepy", etc. are also conceptualized as "contained" substances. This is why to say "I am right", "I am sleepy", etc. in Italian one must say *ho ragione*, ('I have reason'), *ho sonno* ('I have sleepiness'), etc. Shibles (1989), too, has shown how easily metaphorical vehicles for emotion in German can be compared to English ones for pedagogical purposes in ways that are very similar to the ones suggested here. This kind of analysis entails the development of appropriate techniques for identifying grammatical and semantic units in terms of the conceptual domains they reflect. A "conceptual syllabus" would, first and foremost, connect the verbal categories to be learned with their related conceptual domains.

Actually, the idea of making concepts the basis for a SL curriculum was forged by the so-called "notional-functional" approach of the early seventies (e.g. Van Ek 1975; Wilkins 1976), which deployed speech-act and notional typologies as the organizing frameworks for developing the teaching syllabus (and more recently for developing SL reading skills [on this point see also Kaplan 1978; Piper 1985; Grabe 1991; Leki 1991]). Throughout the seventies, and for most of the eighties, this new functionalism in SLT was greeted with widespread enthusiasm throughout Europe and America. Unlike the traditional methods, it provided the teacher with greater room for imparting CF. But now that the wave of enthusiasm has passed, it has become obvious that notional-functional teaching leaves many gaps to fill and many important questions unanswered. In my view, the main problem with the "notions" delineated by the methodologists was that they were not conceived to be *topics* related to specific *vehicles* that were then reflected at the level of grammar and communication. The teacher was simply given a typology of the *notions* with verbal illus-

trations. A "metaphorical analysis" such as the one carried out above was never envisaged by the functional-notional methodologists.

There are several general implications for SLL and SLT that derive from the notion of CF. First, the primary function of metaphor, as a property of the mind, is to connect units by imposing on them the structure A is B. The implication is that for authentic discourse to emerge, students will have to learn how all the different A's are instantiated as B's (as grammatical categories, as lexical items, etc.).

Secondly, CF entails a re-deployment of Contrastive Analysis as a heuristic pedagogical technique. In its original form, Contrastive Analysis came to be accepted both as a theory of SLL and as an organizing principle around which to plan for SLT. The view was that the native language was a template used by the learner for deciphering and organizing the linguistic and communicative categories of the target language. Contrastive Analysis was shaped initially by the intellectual *Zeitgeist* of structuralism in linguistics and behaviorism in psychology. It was Charles Fries (1927, 1945) who entrenched this view during the forties, claiming that the unconscious transfer of native language structural and lexical patterns to the learning of the target language produces characteristic errors in those areas of the target language where such patterns are divergent or nonexistent. In so doing, Fries founded applied linguistics as an autonomous branch of general linguistics – a branch that was entrenched by Lado's classic 1957 study on Contrastive Analysis (Lado, incidentally, was Fries' student).

In the sixties and seventies, the mood vis-à-vis Contrastive Analysis changed abruptly. The association of CA to linguistic structuralism and psychological behaviorism became a stigmatic one, as generative linguistics and cognitive psychology came to the forefront. In the eighties the coordinates in applied linguistics changed once again, as interest in Contrastive Analysis was somewhat rekindled by the possibility of extending its methodology into the area of pragmatics and cross-cultural analysis (e.g. James 1980; Fisiak 1981). Today, Contrastive Analysis is not alone, as it was in the forties and fifties, as an organizing frame for developing suitable instructional techniques and curricula. It is in competition with other perceptions of, and approaches to, SLT which have become much more fashionable.

Perhaps the greatest problem with Contrastive Analysis is still that it portrays the process of SLL solely in terms of a flow from the native to the target language, assigning no active role to the individual learner in the process. In the sixties, some theorists envisioned a more active role played by the learner. Newmark and Reibel (1966), for instance, claimed that learners would consciously enlist the resources of their native language when they needed to get a message across. These two scholars saw the reliance on the native language as a "borrowing" strategy. In my view, it is likely that both the unconscious transfer of native language patterns and the intentional utilization of its resources characterize the early stages of SLL. Some of the categories of

the native language are so embedded in psychomotor habits or in cognitive schemata that they are not readily available to conscious attention. Such categories will more likely be transferred. Others are more readily perceivable as available ones for application to unknown target language domains. The articulatory habits of the phonological system and the categories of lexical organization are more likely to be transferred to the learning of the target language: i.e., it is highly unlikely that adolescent and adult learners will consciously rely upon engrained articulatory movements or upon the components of their conceptual systems to formulate messages. On the other hand, errors in syntax and in communicative appropriateness (when to use polite forms and honorifics, how to negotiate a social contact, how to order at an eatery, etc.) are likely to be the result of a conscious reliance on the native language.

With or without Contrastive Analysis, modern instructional techniques have been rather successful in training SL learners to gain a firm control over grammar and communication – the latter being understood in the usual sense of how to do things with the language in specific interactional contexts. So, the issue of whether grammatical syllabi and formalistic instructional styles are more or less productive than communicative or functional ones is, in my view, a moot one. As Savignon (1992) has recently suggested, it is perhaps more appropriate, and certainly more useful, to think of the two kinds of syllabi as cooperative and complementary contributors to SLL in the classroom, not as antagonistic or mutually exclusive competitors. Both these kinds of knowledge, as mentioned, are part of VF. I think that Contrastive Analysis will come to have an increasingly larger role to play in the future for studying conceptual systems, not verbal ones. By documenting and analyzing many student discourse errors on the basis of their conceptual appropriateness, I envision the contrastive technique to be used as rather straightforward. Rather than contrasting verbal structures on their own, it will be necessary to contrast them in terms of the conceptual domains they reflect. The errors that result from the unconscious transfer of conceptual formulas can be labeled "conceptual transfers" (Danesi & Di Pietro 1991: 55). An important question for future SLL research would thus seem to be: to what extent do the conceptual domains of the native and target cultures overlap and contrast? The notion of CF, therefore, provides SLL research with a convenient category for viewing certain aspects of interlanguage behavior (e.g. Selinker 1972; Robinett & Schachter 1983) that cannot be explained in other ways, such as, for example, the common observation that student-produced discourse texts seem to follow a native language conceptual flow that is "clothed", so to speak, in target language grammar and vocabulary. For example, if a student were hypothetically to write "I would like to discuss my ideas *through* this paper", rather than "*in* this paper", the error would not be classified as strictly "linguistic". It would be seen to be an application of *a paper is a conduit* formula in the learner's native language in lieu of the formula *a paper is a container* as required by English. The questions that a conceptually-focused Contrastive

Analysis would ask are therefore: what kinds of conceptual interferences come from the student's native conceptual system *(interconceptual interference)*, and how much conceptual interference is generated by the target language itself *(intraconceptual interference)*?

## Questions for future work

The notion of CF raises some specific questions for future research. A few of these are as follows.

First, are all concepts metaphors? And, if not, to what extent is the conceptual system based on metaphorical reasoning? Second, if CF is a plausible construct, then a portion of future work on language will have to document how grammatical and semantic categories reflect conceptual structures or domains. The guiding question then becomes: what are the verbal cues which reveal conceptual domains? In this paper, the prepositions *since* and *for* were related to the conceptual system as reflexes of differentiated formulas: *time is a point* and *time is a quantity*. The work on so-called "cognitive grammar" by Langacker (e.g. 1987, 1990) is leading the way in showing us how to conduct extensive analyses of this type.

A third question is to determine to what extent and in what ways, if any, CF relates to, or is embedded in, world knowledge. Is world knowledge built up from metaphor as some would claim? And if so, how is this incorporable into a language curriculum? Some possibilities have been explored above. A related question is: to what extent is "literal" meaning intertwined with metaphorical reasoning? As Way (1991: 18) judiciously suggests, before "Lakoff and Johnson's claim that all language is metaphorical can be properly evaluated, we must come up with a more careful analysis of how we ordinarily use the concept of 'literal'." I would also add another caveat: metaphorically-shaped knowledge is perhaps just one possible form in which knowledge of the world is coded by humans. As Levin (1988: 10) has aptly remarked, there appear to be many modes of knowledge: "innate knowledge, personal knowledge, tacit knowledge, spiritual knowledge, declarative and procedural knowledge, knowing *that* and knowing *how, certitude* (as well as certainty), and many other varieties". The more appropriate goal for SLT should be, therefore, to determine to what extent language is based on conceptual knowledge and to what extent it is based on other forms of knowledge.

A fourth question is: if concepts are to be placed at the core of language courses and curricula, on what basis should they be selected and sequenced? In my view, the "conceptual syllabus" should be integrated with grammatical and communicative syllabi, since these latter two can be seen to reflect it. Clearly, the notion of CF entails a fascinating and promising research agenda indeed.

## Concluding remarks

This century has produced some rather interesting hypotheses, constructs, and suggestions for modeling SLT practices and curricula. Today, like never before, SLT practitioners appear to be truly interested in creating the most ideal "conditions" for SLL to take place in classroom environments, as Spolsky (1989) has put it. Needless to say, there is always bound to be controversy over innovations in pedagogical theories and practices. But, in my opinion, such controversy can only generate even more interesting and comprehensive research frameworks within which to address issues of general importance to SLL and SLT. This is, after all, the nature of true scientific inquiry.

The idea of incorporating CF into SLT is meant to be a target for consideration and research. Up till now, the assumption has been that a language teaching curriculum should be based on the sequential organization of linguistic and/or communicative structures for classroom utilization.

Needless to say, not all domains of language and language learning are tied to the conceptual system, as it has been defined here. The interlanguage studies have amply documented error phenomena that are purely grammatical, communicative, etc. SLL and SLT should, of course, continue to assess the role played by such mechanisms in the overall process of classroom SLL. However, it is also true that the possibility of incorporating metaphorical competence into the *modus operandi* of SLT can no longer be ignored. The work of Lakoff, Johnson and others has shown that there is a systematicity to metaphorical concepts. The process of learning this system is, arguably, identical to the one enlisted for learning grammar and communication. To ignore metaphor is to ignore a large segment of the native speaker's competence. As Mitchell (1993: 3) so aptly remarks, the conceptual system "encompasses recognition, categorization, and analogy-making, and its central feature is the fluid application of one's existing concepts to new situations". The true sign of proficiency in the SL, as a matter of fact, can be considered to be the ability to demonstrate this "fluid application" of target language structures to novel discourse tasks.

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