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Commentary

Native Language (L1) Transfer in Second Language Learning: From Form to Concept, the Implications

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1 The Role of L1 Transfer

The influence that a student's first language (L1) can have on their acquisition of a second language (L2) has been frequently noted by language teachers (Swan, 1997; Jarvis, 2007) and documented in the literature for decades. However, thinking has gradually evolved in terms of the form that influence could take. Early research work focussed on transfer of syntax or form, but recently the role that L1 conceptual information plays in transfer has come to the fore.

The 1960s saw a plethora of contrastive studies inspired by the work of Robert Lado (1957), where languages were analysed using the prevailing structuralist approaches to language description. These contrastive studies were conceived with the view to predicting the types of errors speakers of one language would make while learning another, and this became known as the Contrastive Analysis Hypothesis (CAH) (Lado, 1957). This view was based in the behaviourist paradigm of the time which saw language learning as habit formation. This implied that learning a new language meant the transfer of elements and features from the first language to the target language, and that old 'habits' may interfere with second language acquisition (Aarts, 1982). Pairs of languages were compared in terms of their similarities and differences looking at linguistic units in relation to the overarching system to which they belonged (see Vinay & Darbelnet, 1960; Agard & Di Pietro, 1965, for examples). However, the CAH was severely criticised in the late 1960s, as it did not seem to be able to predict any classroom errors that language teachers had not already noticed, and was not able to offer any solutions with regard to how to deal with these errors (Corder, 1967).

What emerged from this debate in the late 1960s in relation to second language acquisition was the notion that what should be invested in was not the prediction of errors, but instead the investigation of noticeable errors in L2 production and their cause, or *error analysis* (EA) (Corder, 1967). The principal aim of EA was to establish whether or not L2 production errors were a result of L1 transfer; or creative construction: the creation of an independent linguistic system through cognitive processes much like those used to acquire L1. Researchers investigating this question cited results from morpheme studies which showed that participants from various L1 backgrounds acquired features of the same language in the same order, and argued, that this went against the strong L1 transfer hypothesis (Van Pattern & Benati, 2010). This indicated, they maintained, that instead of relying solely on L1 habits, learners develop an independent system subject to other factors which has become known as *interlanguage* (Selinker, 1972).

At this point, the strong form of the CAH hypothesis was rejected in favour of a weaker form which saw L1 transfer as one of the five processes which influenced interlanguage: language transfer, transfer of training, strategies of learning, strategies of communication and overgeneralisation (Selinker, 1972). Currently, while diminished in intensity, the hypothesis that L1 transfer is a factor in interlanguage is still very much alive and this is reflected in renewed interest in it, and in particular in the form that this transfer might take.

2 What Sort of Influence does L1 Transfer have on Interlanguage?

Consider the following error:
   I know him for a long time.
This is a common error in Romance language speakers of English. In Romance languages such as French,

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Italian and Spanish the concept of *knowing someone for a long time* is expressed using the Present Simple tense, in English the Present Perfect is used: *I have known him for years.* At first glance, this would seem an error at the level of syntax or form; that the L1 Present Simple tense is translated into L2 English resulting in *I know him.* This purely syntactical approach was the approach taken in the 1960s and detailed above. The two forms are directly substitutable as the prototypical meaning of each tense is the same, in this case *a present state.* However, this is not the meaning which fits the concept – *knowing someone for a long time* in English, that an L1 English speaker would wish to convey, and distinguishes this learner production from that of a native speaker. In English the past to present feature of the state of *to know someone for a long time* is crucial and conveyed using the Present Perfect which denotes this past to present time span.

With more of a focus on language as a meaning making system and the advent of communicative approaches to language teaching in the 1980s, the notion of semantic transfer as an alternative emerged (Gass, 1983; Odlin, 2005; Pavlenko & Jarvis, 2008). Semantic transfer involves the transfer of the L1 form and the meaning that it holds for the speaker in to L2. Semantic transfer holds that the L2 speaker conceptualises the event in the same way as is provided for by the L1, but extends the use of the L1 form-function pairing to cover the concept to be denoted, in to the L2. Interference occurs at the level of connecting concepts with the correct L2 semantic representations and forms (Pavlenko & Jarvis, 2008). In terms of our example, this would mean that the L2 speaker takes the *I know him* form and its meaning of *present state* and uses it in L2, but understands the situation in the same terms as an English L1 speaker – as a situation which starts in the past and continues into the present.

More recently, research has been focussed on the possibility that L1 conceptual knowledge formed through socialisation into an L1 language system could play a part in L2 acquisition in the form of Conceptual Transfer (CT) (Odlin, 2005; Pavlenko & Jarvis, 2008). Jarvis (2007) describes CT in the following way:

> Conceptual transfer can be characterised as the hypothesis that certain instances of cross-linguistic influence in a person's use of one language originate from the *conceptual knowledge* and *patterns of thought* that the person has acquired as a speaker of another language.

CT holds that the speaker takes his/her L1 conceptualisation of the event, formed through L1 inductive learning processes (Croft, 2001; Pavlenko & Jarvis, 2008), and transfers this along with the form-function pairing into the L2. This implies that the perception of the event differs qualitatively cross-linguistically. This could account for some of the more persistent errors which seem to have a base in L1 and affect attainment of native speaker competence (Gruhn & Reshöft, 2014). Under the umbrella term of Conceptual Transfer, Jarvis (2007) distinguishes between two further types of conceptual transfer: *concept* and *conceptualisation transfer* (Jarvis, 2007). The former relates to the transfer of concepts stored in long-term memory and the latter to patterns of conceptualisation which are necessarily influenced by stored conceptual content.

In recent years, there has been an increased interest in Conceptual transfer and its influence on L2 interlanguage. A number of studies in both SLA and Bilingualism have shown that L1 conceptual categories have a significant effect on language production (Carroll & von Stutterheim, 2003; Bylund, 2009; Bylund & Jarvis, 2011; Schmiedtová, von Stutterheim & Carroll, 2011; Schmiedtová, 2013; Türker, 2015; Sharpen, 2016). Research has centred on conceptual transfer with its origin in cross-linguistic difference in the grammaticalisation of various concepts such as motion events (Negueruela, Lantolf, Jordan & Gelabert, 2004) and aspectual distinctions (Bylund and Jarvis, 2011). Investigators have used a variety of techniques often combining verbal elicitation tasks with co-verbal measures of behaviour such as eye-tracking and recording speech onset time (SOT) (see Schmiedtová et al., 2011; Schmiedtová, 2013). Such combinations of verbal production data with consistent measures of behaviour have produced compelling evidence for cross-linguistic differences in L1 conceptual information impacting on L2 production. In a notable study, Schmiedtová (2013) established that cross-linguistic differences in the grammaticalisation of aspect were evident in the L2 German of English L1 speakers. English encodes aspect in the form of the progressive (+*ing* form of the verb), whereas German does not. They found that this lead to English L1 speakers of German L2 mentioning fewer end points when describing an event in progress, than native German speakers. The SOT times also resembled those of native English speakers, suggesting that the L1 English speakers were maintaining L1 conceptual patterns when speaking in L2.

3   L1 Transfer in the Classroom

It is evident then, that L1 conceptual transfer is a factor in interlanguage and the effect that it has on L2 production does considerably differentiate the language of learners from native speakers. Enabling learners to overcome or circumnavigate the conceptual constraints of their native language could play an important role in helping them to achieve native-like competence in L2 (Gruhn & Reshöft, 2014).

Conceptual transfer research shows us that language as a meaning making system represents a diverse range of concepts, and triggers varying conceptualisations cross-linguistically. Focussing on linguistic meanings, and not forms, could help to raise students' awareness of inter-lingual diversity in conceptual information, and also how their own L1 impacts upon their use of L2. It falls then to language teachers to help students to develop a metalinguistic awareness (Cook, 1995) which enables them to separate form and meaning and consider language as having a potential which goes beyond the meanings that are held in speakers' minds, and on to the power that there is in the world view created by these meanings and how their manipulation can create different meanings.

Gruhn and Reshöft (2014), for example, aimed to increase students' metalinguistic awareness by introducing some psycholinguistic tests into the second language classroom (Gruhn & Reshöft, 2014). The participants in the Gruhn and Reshöft study (German L1 High School students of English L2) were introduced to a number of psycholinguistic tests such as *Endpoint* (Von Stutterheim & Nuse, 2003) and *Frog story* (Slobin, 1996) which have been used to investigate cross-linguistic conceptual influence. Participants were then facilitated in replicating the tests and reporting their results. The authors argue that by becoming aware of findings in conceptual transfer research and engaging with the experimental design, the students gained increased metalinguistic awareness. Replicating psycholinguistic tests in the classroom is certainly not possible for all language teachers who are often faced with limited resources and time. However, the study raises some interesting points with regard to raising language students' awareness of conceptual transfer effects through presentation of relevant research, and increasing their metalinguistic awareness through classroom activities targeted to do just this.

As detailed above, conceptual transfer is a cognitive phenomenon with its origins in the socialisation of a subject into a particular L1, where language is learnt through interaction with the physical world and experience of it. This implies that successful learning of an L2 should involve similar processes, where the language is experienced as meaning. This is the view taken by proponents of the embodied approach to language who maintain that humans employ the same neural mechanisms to experience the world as they do to process and understand language (Buccino & Mezzadri, 2015). This relatively new approach is grounded in neurophysiological evidence which suggests a connection between, for example, the motor system and language, through mirror neurons. Mirror neurons discharge both when a physical action is performed and when the same action is observed as being performed by another. These neurons have also been revealed to activate when the actions are described verbally (Rizzolatti & Craighero, 2004). This leads Buccino and Mezzadri (2015) to conclude:

> When a content has to be expressed and learned in a second language, it should refer to something which has been experienced sensori-motorically and emotionally by the learner.

This has a number of implications for the classroom. It means that language should be tied to experience, so that i) students should not be expected to learn language to refer to events or situations which they have not yet experienced (particularly relevant when teaching children); ii) that learning should be tied to sensori-motor experience with the world where possible and iii) that learning should start from the student's real world experience of the target language referents and build on from there (Buccino & Mezzadri, 2015). This approach may be instrumental in building new conceptual categories and conceptualisations from the outset of language learning, reducing reliance on L1.

4 Conclusion

The study of L1 transfer has evolved considerably over the last half-century from a concentration on syntax and form through to current interest in the transfer of L1 constrained conceptual content and conceptualisations. It is clear that Conceptual Transfer is a significant factor in inter-language and could account for errors which persist even at higher levels of proficiency in the target language. Gaining a deeper understanding of the way that L1 concepts and conceptualisations impact on L2 production can help up to develop strategies to help students overcome these constraints.

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