What transfers?

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This paper explores native language (L1) transfer as a phenomenon, asking
what it means to say some element of the L1 transfers second language (L2)
acquisition. Despite advances in linguistic theory, current L2 research is still
often couched in descriptive terms, expecting difficulty in L2 acquisition
where there are differences between the native and target languages.
Improving on this Contrastive Analysis-type approach requires a more fully
specified understanding of Language. This paper attempts to elaborate on the
question of what transfers by assuming a derivational approach to language
and then exploring the idea of transfer by discussing what it means to say that
there is transfer of functional morphology.

1. Introduction

Research in the field of L2 acquisition cannot ignore the question of the role of
the L1 given that L1 effects in L2 learner data clearly indicate the existence of L1
influence. Indeed, the early Contrastive Analysis programme rested crucially
on the idea that difficulty in L2 acquisition could be predicted based on the
(descriptive) properties of the relevant L1 as compared to the target language.
Though this programme eventually fell short in the face of empirical investi-
gation (Dušková 1984; Richards 1974; Zobl 1980, among others), an equally
fatal flaw in the Contrastive Analysis approach was the lack of a theoretical
framework for transfer to underpin it.

  More recent models of L2 acquisition within the generative tradition have
sought to make the role of the L1 explicit. Minimal Trees of Vainikka and
Young-Scholten (1996), Valueless Features of Eubank (1996), Full Transfer/Full
Access of Schwartz and Sprouse (1996), the No Transfer position of Epstein,
Flynn, and Martohardjono (1996), the Conservation Hypothesis of Van de
Craats, Corver and van Hout (2000), and the Structure Building Hypothesis
of Hawkins (2001) each specify a role for the L1 by characterizing the initial

state of L2 acquisition in relation to the existing L1. In the next section, I point out that the precise role of the L1 beyond the initial state is not entirely clear, however, especially in terms of how transfer interacts with Interlanguage (IL) development. Furthermore, there is a need for a more articulated character-isation of L1 transfer. Though most assume that there is L1 transfer, few are explicit about what it means, exactly, to say that the L1 transfers. I argue that any such discussion of transfer needs to first make explicit the theoretical ba-sis of language that is assumed. Accordingly, in the third section of this paper I outline the theoretical assumptions underlying my subsequent discussion of L1 transfer.

I then turn in section four to one noteworthy attempt to articulate what transfers: the proposal by Montrul (2000) which claims that L1 transfer is modular in that it implicates morphology but not argument structure. Though this approach deserves much credit for further specifying what transfers, it re-mains somewhat limited. Building on Montrul's work, I explore the notion of L1 transfer, paying specific attention to the notion of 'transfer of morphology'.

Using the derivational model of Emonds (2000) I articulate in a step-by-step fashion what transfers from the L1 to the Interlanguage. My aim is to show that by providing a more explicit analysis of what transfers, we can begin to make more specific and principled predictions of success and failure in L2 ac-quisition. I begin, however, with a brief overview of L1 transfer in the field of generative second language acquisition.

2. A brief historical perspective of L1 transfer

The existing framework underlying work in L2 acquisition from a generative perspective grew out of a reaction to the behaviourist view in which language learning, like other kinds of learning, was a process of habit formation. (See Mitchell & Miles 2004 for one clear discussion.) From that perspective, an L2 learner (L2er) must change his/her L1 habits to those of the target language. The assumption was that in that process, structure and meaning from the L1 were 'transferred'. At the time, the term *transfer* was used by psychologists to refer to a general process within learning in which existing knowledge is transferred over to a new learning situation (Gass & Selinker 2001:66). Lado (1957) in his influential work, *Linguistics Across Cultures,* epitomises this be-haviourist assumption in the basic tenet of the influential Contrastive Analysis programme: L2 learning will proceed with ease where there are similarities be-tween the L1 and L2, and difficulty where there are differences. To quote Lado:

> Since even languages as closely related as German and English differ signifi-
> cantly in the form, meaning, and distribution of their grammatical structure,
> and since the learner tends to transfer the habits of his native language struc-
> ture to the foreign language, we have here the major source of difficulty or
> ease in learning the structure of a foreign language. Those structures that are
> similar will be easy to learn because they will be transferred and may function
> satisfactorily in the foreign language. Those structures that are different will
> be difficult because when transferred they will not function satisfactorily in
> the foreign language and will therefore have to be changed.   (Lado 1957:57)

From this perspective the process of L2 learning is seen to be driven by the na-
tive language. This kind of thinking gave rise to notions of 'positive' transfer
where the L1 was perceived as facilitating L2 acquisition, and 'negative' trans-
fer where there was perceived interference. Yet this notion of positive versus
negative transfer erroneously conflates the effect of transfer with the process of
transfer itself. The question that arises is how are we to understand the concept
of L1 transfer? Current research uses terms like L1 transfer, L1 influence, L1 ef-
fects, crosslinguistic influence and even L1 conservation. But what do we mean
when we use these terms?

There is disagreement among current theoretical models of L2 acquisition
regarding the role of the L1. Aside from the No Transfer position (Epstein et al.
1996), these models range from positing transfer of a subset of the L1 (Eubank
1996; Vainikka & Young-Scholten 1996; Hawkins 2001 to the claim that the
whole of the L1 transfers (Full Transfer/Full Access, Schwartz & Sprouse 1996;[1]
Van de Craats et al. 2000).

What these and other models all have in common is that transfer is defined
in terms of the initial state. What the models are less explicit about, however, is
the role of the L1 in IL development. This is unfortunate since virtually all L2
data is, for practical reasons, from learners beyond the initial state. Perhaps the
most explicit model in terms of IL development is FT/FA, which proposes that
the initial state grammar will restructure (a UG-constrained process) when the
target language input conflicts with the existing L1-based IL grammar. Thus
throughout development, by FT/FA we would expect the IL to become more
like the target language and less like the native language. While FT/FA is to
be acknowledged for recognising transfer and development, what remains un-
specified is an explicit theory of the interaction between the two through the
course of IL development (see also Sharwood Smith and Truscott, this volume
for discussion of such issues).

As a starting point, however, any explicit theory of IL development requires
an explicit understanding of what transfers. What does it mean to say the whole

of the L1 transfers to the initial state? Does it include the strategies used in language processing? Or is it just the linguistic elements of grammar? If it's the grammar, should we view these as rules or constraints? And is it possible to isolate particular rules/constraints when language is in fact highly complex, depending on a range of linguistic domains including at a minimum syntax, morphology and phonology?

These questions take us to the heart of our understanding of Language. In this paper I am going to assume a Full Transfer/Full Access position, but explore what it means to say the whole of the L1 transfers in terms of a more articulated understanding of language.

3.   Language Assumptions and L1 Transfer

As a starting point, I must make some basic assumptions. Firstly I assume Language is modular and secondly I adopt a framework in which the output of Language is derivational. The reason I assume a modular model of Language is to limit the discussion of L1 transfer to the properties of the L1 grammar that are not subject to introspection and that cannot be seen to be explicitly drawn upon by the learner in the process of L2 acquisition. In other words, Language is assumed to be modular in the Fodorian sense; it is automatic, fast, and unavailable to introspection (Fodor 1983).

From this starting point, the question that naturally arises is which elements of language are modular and which are interface elements? The knowledge of a verb like *destroy* in English, for example, requires knowledge that it must occur with a nominal object as well as knowledge of the real world understanding of the concept associated with the word. The former is understood to be a property of the Language module while the latter is not, and instead, is included in the more general domain of encyclopaedic knowledge. Thus, the lexicon is considered to be at the interface between the language module and the realm of general cognition. This contrasts with other strictly modular linguistic processes such as the syntactic rules constraining, say, question formation which, arguably, are exclusively confined to the work of the computational component of the language module.

The second assumption is that within the language module, the generation of language is derivational. While the precise nature and limits of derivation have yet to find unified consensus, the idea that the generation of language in the computational component of the language module proceeds by phrase in some cyclic fashion is widely accepted in Chomskyan linguistics today. The

general idea is that a phrase is generated in a bottom-up fashion based around the head of the phrase. Phrases can then act as units for further syntactic operation, possibly forming larger phrases which, in turn, can act as units in syntax.

Taking these two general assumptions as a starting point, I further specify a particular model of language for the purposes of exposition. To begin with, I need a model that makes explicit which elements of Language are modular, as well as a model in which there is a stated process of derivation. The model used here is that of Emonds (2000) in which there is a Lexicon made up of two parts, i) a Dictionary at the interface – containing the real world meanings of words, and ii) a Syntacticon within the language module – containing linguistic specifications such as subcategorisation details. The Syntacticon lists both free and bound morphemes, obviating a need for a separate component for morphology. As for derivation in this model, the interaction of morphology in syntax is guided by a cyclic process of lexical insertion.[2] In this cyclic process there are three possible entry points for lexical items: before the syntactic derivation of a phrase, during the derivation itself or after a full syntactic cycle, at the level of phonological form.

In sum, true to the spirit of the generative tradition, Language is viewed as a dynamic (and creative) process. Regulating the creation of any given sentence is a set of universal constraints which delimit the possible forms a language can generate such that a specific grammar will contain a subset of these constraints, giving rise to the particulars of that grammar. With these assumptions in place, the question is how L1 transfer manifests itself within IL development. A static view of L1 transfer leads to a monolithic view of transfer of a set of rules. More complicated is the question of what the transfer effects will be if we adopt a dynamic view of language that takes syntactic derivation into account. In addition to the transfer of the set of L1 rules and constraints, the question is how these rules will be applied in the specific instance of an L2er who is producing or comprehending an utterance in the target language. Before I explore the question of transfer from the framework of a derivational approach, however, I will first address one recent attempt to articulate more specifically what transfers in IL development.

4.   The modular transfer approach of Montrul

Montrul (2000) also addresses the question of what transfers when she argues that L1 transfer is modular. Montrul investigated L2 acquisition of the

causative/inchoative alternation (e.g. *Jo broke the window./The window broke)* in English, Spanish and Turkish. She provides a discussion of the syntactic properties underlying the alternation in each of the three languages, reducing the analysis to two 'levels', the level of argument structure and the level of morphology. Take, as illustration, the alternation in Spanish.

(1)   a.   *María rompió los vasos.*
          Maria broke   the glasses
          'María broke the glasses.'

      b.   *Los vasos   se   rompieron.*
          the glasses REFL broke
          'The glasses broke.'

Montrul asks whether a Spanish learner will transfer the argument structure or the functional morphology (or both) when acquiring a second language. For Montrul the relevant level of L1 transfer of the Spanish causative form (1a) is the argument structure level while the relevant level of transfer in the inchoative form (1b) is the level of morphology. This is because the inchoative form, but not the causative form, involves some functional morphology in Spanish, the reflexive *se.*

In Turkish it is the causative alternant that requires functional morphology with most verbs (2a), while for a subset of verbs it is the inchoative form that is marked by an overt morphological marker – in this case, the passive morpheme, *-ıl* (3b).

(2)   a.   *Düşman gemi-yi   bat-ır-mış*   (Causative)
          enemy   ship-ACC sink-CAUS-PAST
          'The enemy sank the ship/made the ship sink.'

      b.   *Gemi   bat-mış*
          (Inchoative) ship   sink-PAST
          'The ship sank.'

      c.   **Düşman gemi-yi   bat-mış*
          enemy   ship-ACC sink-PAST
          'The enemy sank the ship/made the ship sink.'   (Montrul 1997:45)

(3)   a.   *Hırsız pencere-yi   kır-dı.*   (Causative)
          thief   window-ACC break-PAST
          'The thief broke the window.'

      b.   *Pencere   kır-ıl-dı.*   (Inchoative)
          window   break-PASS-PAST
          'The window broke.'

    c. **Pencere kır-dı.*   (Montrul 1997: 46)
        window break-PAST

According to Montrul, for a Turkish learner of English (or Spanish), transfer will reflect the level of morphology with the majority of causatives forms and argument structure with their inchoative alternants because this is the dominant pattern in Turkish. Yet at the same time, the opposite will obtain for that subset of verbs in which morphology is implicated with the inchoative alternant in Turkish.

Montrul (2000) finds that learners do not analyse causative and inchoative structures in their Interlanguage in terms of whether the analogous verb in their L1 allows causative and inchoative forms, but instead they (dis)allow target language causative/inchoative sentences based on whether each sentence contains functional morphology that could be equated to the morphological shape of the structure in their native language. This allows her to conclude that transfer is implicated at the morphological level, but not at the level of argument structure, supporting her claim of 'modular' transfer, and arguing against the view of Full Transfer.

Montrul also finds a considerable degree of overgeneralisation among the learners, as their Interlanguage allows causative/inchoative forms whose analogues are not grammatical in the L1. In Whong-Barr (in press) I reconsider Montrul's results arguing that they do not constitute evidence against argument structure transfer, since the overgeneralisation can be seen as a stage of IL development beyond the initial state expectation of L1-based argument structure transfer. I suggest that this overgeneralisation is a product of IL development that occurs generally, regardless of the specific properties of the L1.

Differences in results between the language groups based on differences in morphology are shown to occur even more consistently than indicated by Montrul (2000). Specifically, within the sets of data Montrul uses to argue against argument structure transfer there is evidence of transfer of morphology. The most revealing data in this regard is the L1 Spanish learners' responses to licit inchoatives in English like *The window broke.* The mean response of the Spanish speakers is negative, meaning that they reject licit English inchoatives. This compares with Turkish learners of English whose mean response is positive; and the difference is shown to be statistically significant by Montrul (2000: 258). Even more striking is the fact that the Spanish speakers are of intermediate and high-intermediate English proficiency while the Turkish speakers are of low English proficiency. That these sentences are possible with these verbs in all three languages – in other words, they are equivalent in terms

of argument structure – supports the claim that the difference in morphology is the cause of the Spanish rejection of these licit English sentences.

The more crucial claim, however, is that Montrul's results do not support a claim of modular transfer, but instead reflect the interaction of transfer and development. Because of transfer, L2ers go through a stage in which they reject structures where the L1 analogues require functional morphology; and as a product of development, there is a period of overgeneralisation in which more verbs are allowed to alternate than are, in fact, licit in the native or target languages.

In sum, Montrul's data is compatible with a view of Full Transfer if there is recognition of IL development. Montrul expects (and finds) that Spanish speakers of English have difficulty with the English inchoative because the Spanish inchoative involves *se* while English does not implicate any analogous functional morphology (see (1b) above). Note, however, that this expectation is not much different from the (discredited) Contrastive Analysis approach in which difficulty is predicted where there are differences between source and target language. In order to better understand what is happening, we need a more articulated understanding of 'ease' and 'difficulty' that is grounded in linguistic theory.

Additionally, a clear set of assumptions about the organisation of Language is required. The sense in which Montrul uses the notion of 'modules' is not clear. To argue that transfer is modular in that there is transfer of argument structure but not morphology seems to suggest two distinct 'modules' for argument structure and morphology respectively. The precise nature of these modules, however, is left unspecified. It may be that Montrul envisions submodules within the Language module more generally. If so, then one of these subcomponents, morphology, is said to transfer, but another, argument structure, does not. While this is a logical possibility, it is not clear why morphology, but not argument structure is subject to language transfer – especially if they are both viewed as subcomponents of the same language module.

Alternatively, argument structure could be seen as outside the language module, while morphology within, thus drawing the line at modular knowledge as being subject to transfer. But such a distinction would not cohere with current mainstream thought as argument structure phenomena (e.g. transitivity, alternations, unaccusativity, etc.) are generally seen as abiding by UG-constrained, language-specific properties.

Montrul's work deserves much credit for exploring the question of what transfers, but it stops short, leaving many questions unanswered. In the next section, I explore the question of L1 transfer by first grounding it in an ex-

plicit derivational theory of Language and then articulating step-by-step what transfers in L2 acquisition when there is functional morphology to consider.

5.   What transfers

Montrul's work is not alone in suggesting that functional morphology is implicated in L1 transfer. See, for instance, Juffs 1998; White, Brown, Bruhn-Garavito, Chen, Hirakawa, & Montrul 1999; Slabakova 1999, 2001; Whong-Barr & Schwartz 2002.[3] All of these studies show differences in Interlanguage grammars that can be traced to the existence of functional morphology in the native language. But there has been little discussion of what it means to say that functional morphology transfers. While the effects of transfer are evident, explicit discussions of the transfer process are lacking. In this section I further explore the idea of transfer of morphology.

Let us take as a starting point the assumption that syntactic derivation is a process that occurs in the Language module. Drawing from an approach like that of Emonds (2000), the process of derivation is as follows. Lexical items are chosen from the lexicon and inserted in the syntactic component. Particular structures are then derived in a bottom-up fashion beginning with the insertion of the verb.

For reasons of exposition, I will focus on the inchoative structure in Spanish like *Los vasos se rompieron* because it implicates a functional morpheme. The derivation is as follows. Firstly, there is the insertion of the verb, *romper*, whose subcategorisation frame requires the subsequent insertion of an internal argument, satisfied by the nominal phrase *los vasos*. Next in the derivation, there are two options. An external agent could be inserted to give rise to a causative structure: *Maria rompio los vasos*. Or, *se* can be inserted in the derivation thereby licensing an inchoative form.[4] By some form of the Extended Projection Principle, the already selected nominal object will then raise to subject position resulting in our desired inchoative variant: *Los vasos se rompieron*.

In thinking about transfer, then, it is the whole derivational process that transfers to the IL grammar. When an Spanish learner of English is faced with producing an inchoative in English, the properties of an analogous verb in the L1 is inserted to begin the derivation of the IL inchoative. Then, there is the additional requirement for the insertion of a functional morpheme. This contrasts with the target-like derivation of an English inchoative, in which there are no requirements for lexical insertion in the derivation. The morpho-

logical requirement in Spanish that transfers to the IL grammar of the Spanish speaker learning English can be thought of as transfer of morphology.

This understanding of transfer elaborates on the view that L2 learners reject sentences because the target language form does not match the native grammar morphologically. Indeed, learners are not assumed to apply a surface level analysis of the two constructions. Instead the derivational process transfers resulting in a mismatch between what the Spanish learner of English requires to produce an inchoative and what the target language input supplies.

In considering how an English inchoative such as *The vase broke* is analysed by an Ll Spanish speaker whose IL grammar requires a functional morpheme, firstly, there is the pre-derivational insertion of the verb, *break,* along with its internal argument, *vase.* To make this string grammatical for the L1 Spanish learner of English, however, either an external agent must enter the derivation or some analogue of the functional morpheme, *se,* is required to license the agentless form. When neither an agent nor an analogous morpheme is forthcoming, the derivation cannot proceed and thus the string is deemed ungrammatical. The expected outcome, then, is rejection of English inchoatives by Spanish speakers.

As we have seen, Montrul found that her Spanish learners of relatively high English proficiency incorrectly rejected inchoative sentences like *The vase broke* at higher rates than the Turkish learners who had low levels of English proficiency (2000:258). This can be seen as a direct result of L1 transfer: the Spanish speakers have an IL grammar that contains a morphological requirement for inchoatives. Yet, assuming as I will, Full Transfer, this is an initial state expectation. What happens, then, with IL development? Can the English inchoative ever be learned by a Spanish speaker?

It is reasonable to expect that the transferred morphological requirement can be overcome once there has been sufficient input to indicate that inchoatives in English do not require any such functional morphology. By FT/FA, this is UG-constrained restructuring. Recall, however, that the results found by Montrul (2000) suggest a period of overgeneralisation. If overgeneralisation is a natural stage of IL development in the acquisition of an alternation like the causative/inchoative, then Spanish learners may be expected to enter a stage in which they freely accept inchoatives in English, even with verbs that do not allow an inchoative variant. For example, they might accept illicit sentences like *The evidence destroyed* as an acceptable counterpart to the causative *John destroyed the evidence.* This is not necessarily evidence against transfer for argument structure, but instead a manifestation of IL development as it interacts with transfer.

If it is not possible for L2ers to restructure their modular linguistic knowledge, it may be that the morphological requirement remains a part of the L2er's grammar. If L1-based rules within the language module cannot be overridden, then language learning may have to rely on general learning mechanisms instead. Such a strategy may be likened to notions put forward by researchers working in the Fundamental Difference framework (Bley-Vroman 1990) who posit L2 processing to involve general cognitive mechanisms and not the language module proper. This familiar UG or no UG debate, however, takes us beyond the scope of this paper.

6. Conclusion

In this paper I have suggested that it is useful to articulate a more explicit view of L1 transfer in order to go beyond descriptive properties and beyond language-specific rules to the dynamic process of syntactic derivation as well. By unpacking our assumptions about how Language works, we are able to state more explicitly what it is that transfers. The next step, then, is to further explore the interaction of transfer in the process of IL development. A more explicit analysis of what transfers may in turn lead to more specific and principled predictions about success and failure in L2 acquisition, thereby reviving one of the original aims of the Contrastive Analysis approach.

Notes

1. An exception is made for the L1 transfer of phonetic matrices only.

2. The term *lexical insertion* applies equally to insertion of full lexical items and bound morphemes.

3. This discussion excludes questions of missing surface inflections (See White 2003 and reference therein), which can be seen as qualitatively different from the argument structure affecting morphology considered here.

4. The precise mechanics underlying the ability of this morpheme to license a subjectless form requires investigation.

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