

On Morphological Competence

Donna Lardiere
Georgetown University

1. Introduction

My goals in this paper are (a) to argue that parameter-resetting is the wrong metaphor for explaining variability in the production of morphological inflection in second language acquisition; (b) to attempt to illustrate just a few of the types of learning problems confronting an adult native speaker of one language who is learning the grammatical features of another; and (c) to underscore the seemingly mundane and obvious point that such learning involves figuring out how to reconfigure features into new or different formal configurations in the L2.

The claim that second language acquisition requires parameter-resetting was an idea that carried great promise. It offered a principled way to cope with the issue of L1 influence in L2A, although in my view it has never coped well with the issue of variable performance—which of course is a hallmark of second language development. In general, however, the failure of many adult language learners to reach nativelike proficiency could be modeled in terms of the failure or inability to reset one or more parameters from the L1 value to that of the L2. In this paper I would like to address a more recent and theoretically interesting instantiation of parameter-resetting-failure in SLA, known as the *representational deficit* approach (e.g. Hawkins 2000, 2003, Hawkins & Chan 1997, Hawkins & Liszka 2003, Tsimpli 2003). This approach attributes L2 inflectional variability or error to a failure in the selection of parameterized formal features. The theoretical point of departure is that of Chomsky's more recent Minimalist assumptions, as exemplified in the quote shown in (1) from Chomsky (2001):

- (1) S_0 determines the set $\{F\}$ of properties ('features') available for languages. Each L makes a one-time *selection* of a subset $[F]$ of $\{F\}$ and a one-time *assembly* of elements of $[F]$ as its lexicon LEX, which we can take to be a classical 'list of exceptions,' putting aside further issues. (Chomsky 2001, p. 4, emphasis added.)

According to the representational deficit approach, it is at the point of selection of particular features that languages vary. Parametric differences arise when languages make different selections among optional syntactic features (Hawkins & Liszka, 2003). In the case of adult second language acquisition, parameterized formal features (perhaps restricted to uninterpretable ones) which are present in the L2 but not selected in the learner's L1 are hypothesized to be unacquirable, due to critical period effects. This sort of hypothesis has also been referred to in earlier work as the Failed Functional Features Hypothesis (Hawkins & Chan, 1997).

Note that if we are to assume uniform interpretability across languages in the LF or SEM(antic) component, then certainly the necessity for selecting new *interpretable* features in the L2 is not at all self-evident. This assumption presumably entails that all languages include the same primitive semantic features and operators (so as to be uniformly interpretable), regardless of whether they are overtly spelled out or not. Moreover, Chomsky, as quoted above, makes no apparent commitment to

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how such features must be realized, whether in the form of bound or free grammatical morphemes or embedded within various lexemes. How such features are idiosyncratically assembled and realized in each language, whether inflectionally or lexically, or even overtly or covertly, constitutes the real nub of crosslinguistic variation—a point, I think, that is fairly obvious.

Therefore in this paper I'd like to focus not on the selection but rather on the *assembly* of elements of features in SLA. I think that accounting for morphological variability simply by appealing to the parametric (non-)selection of features is too simplistic. Instead I will try to show that the ways in which grammatical features are morphologically combined and conditioned may well affect their overt realization in SLA. I'll discuss a few specific examples of the kind of learning problems presented by the different ways in which primitive features are clustered in different languages (specifically, in the L1 vs. the L2), and will argue that there is a kind of *morphological competence* that must be acquired by the learner.

What is meant by morphological competence? I don't mean performance issues, like problems with lexical retrieval, automaticity, or online performance pressure due to something like 'cognitive overload' although I do think these may well contribute to morphological error in production. Morphological competence includes, most obviously, the knowledge of which forms 'go with' which features. But consider what additional kinds of knowledge are required: What are the conditioning factors and are these phonological, morphosyntactic, semantic or discourse-linked? Are certain forms optional or obligatory, and what constitutes an obligatory context? In which domains are various features expressed, in combination with what other features, and why is supposedly the same feature expressed in some domains in some languages but not others?

To give an example of what I mean by the assembly of features, consider the data in (2). A recent query posted to the Linguist List inquired about the source languages for the number-marking systems described by Ken Hale in a commentary on a 1996 paper by Epstein, Flynn & Martohardjono (1996). The Epstein et al. paper was concerned with the role of UG in constraining 'wild grammars' in second language acquisition, and the description by Hale of the phenomena in question went something like this:

- (2) a. Add the suffix *-sh* to animate nouns to form the dual and plural, add the same suffix to inanimates to form the singular and dual. [Jemez]
 b. In cardinality DPs, with numerals from 3 through 10, use the feminine [gender] for a masculine noun, and vice versa, and use the plural form of the noun; with numerals from 11 through 19, use the singular accusative for the noun, and for the teen subpart of the nominal use masculine for a masculine noun and feminine for a feminine [noun], and for the unit part of the numeral use feminine for a masculine [noun] and vice versa. [Arabic] (Hale (1996: 729))

We might say that both these languages 'parametrically select' the feature $[\pm\text{number}]$ or $[\pm\text{plural}]$, but this fact hardly eases the pain for a speaker of another language, say, English, whose language also selects $[\pm\text{plural}]$ trying to learn how to mark number in either Jemez or Arabic; moreover, it is not clear how to restrict the set of parameters to define these particular parameter values, and even if we could, the explanatory value of having parameters like this would then surely be compromised because the term would simply mean something like 'any idiosyncratic difference' between languages. Think of the thousands of parameters we'd need to handle differences like these.

To give another example, we can say that English, Irish, and Somali all 'select' a grammaticalized formal feature that we label $[\pm\text{past}]$, but surely this is not a primitive feature, nor is it restricted to any particular domain: in English, in addition to what we normally think of as 'past,' this formal feature also appears to encode perfective aspect in events (3a), and irrealis mood in conditionals (3b), and it is not obligatorily expressed in so-called 'historical present' contexts (3c) (and see also Ogihara, 2004); in Irish [past] shows up on complementizers in the CP in agreement with the tense of the embedded clause (4) (McCloskey, 1979); and in Somali [past] is expressed on determiners and adjectives in nominal DPs, where it indicates not only 'past time' agreement (5a), but also temporal habitualness (5b), or whether the nominal referent is evidently visible or not to the speaker (5c) (Lecarme, in press, 2003):

(3) English

- a. The cow *jumped* over the moon.
- b. If I only *had* a brain...
- c. So we *asked* some guy to come over and help us. So he *opens* the car and everyone *gets* out...
(narrative data reported in Schiffrin, 1981).

(4) Irish (data from McCloskey, 1979)

Deir sé *gurL* thuig sé an scéal
 says he that.past understood he the story
 'He says that he understood the story.'

(5) Somali (data from Lecarme, in press, 2003)

- a. árday-*gii* hore
 student-detM.past before
 'the former student'
- b. (weligay) dúhur-*kii* baan wax cunaa
 (always) noon-detM.past F.1S thing eat.pres
 'I (always) eat at noon.'
- c. Inán-*tii* hálkée bay joogta?
 girl-detF.past place-detM.Q F.3S stay.F.pres
 'Where is the girl?'

Here again, it is obvious that what constitutes the feature 'past' (in other words, how it is 'assembled') in one language is not necessarily the same as what constitutes it in another, although of course we expect there to be some overlap. Moreover, the domains in which it can or cannot or must appear and restrictions on its use must all be painstakingly learned.

In what follows, I would like to provide a few more concrete acquisition examples based on case-study data from Patty, a native speaker of Mandarin and Hokkien Chinese who acquired most of her English as an adult immigrant to the United States. Data collection was begun after Patty had already been living in the U.S. for about 10 years. The data are based primarily on the first three of four audiotaped recordings and approximately 25 written (mostly e-mail) samples collected over a period of time now extending to about 16 years. The areas I will look at are definiteness and number, wh-movement, and raising and case-marking. Let us turn first to look at some aspects of Patty's acquisition of definiteness and number, where we can clearly see the nature of the remapping problem facing a native Chinese speaker acquiring English.

2. Definiteness and number

First, let us consider the status of the feature [\pm definite] in Chinese. Leung (2001), following Cheng & Sybesma (1999), argues that this feature is absent in Chinese, that its presence vs. absence in a language constitutes parametric variation and that parameter-resetting involving this feature 'fails' in L2 acquisition. I doubt this claim, although I follow an alternate analysis of Chinese DPs with somewhat different theoretical assumptions, that of Aoun & Li (2003), which I return to in a moment.

It should also be pointed out that it is conventionally assumed that Chinese does not have either definite or indefinite articles. There is, however, a quantifier *yi-* ('one') that, when unstressed, appears to be in the process of becoming grammaticalized and "beginning to take on some of the functions" of the indefinite article (according to Li & Thompson 1981:132; see also Aoun & Li 2003:141, 152). Chinese also has demonstrative determiners *nei-* or *na-* ('that') and *zhei-* ('this'); *nei-/na-* is likewise claimed to be taking on some of the functions of the definite article in English. Some examples are shown in (6).

(6) ta shi yi-ge mishu jian daziyuan (Aoun & Li 2003, p. 141)
 he is one-CL secretary and typist
 'He is a secretary and typist.'

ta kan-guo de (na-ben) shu (Aoun & Li 2003, p. 152)
 he read-ASP DE that-CL book
 'the book that he has read'

Let's now turn to Patty's definite and indefinite article production for both spoken and written (e-mail) obligatory contexts. Patty's overall rate of suppliance of articles, though variable and non-nativelike, is nonetheless quite high. Definite articles are supplied at about a rate of 84% and indefinite at about 75.5%. Consistent with what has been widely reported in the English L2 literature, Patty is also significantly more accurate on definite than on indefinite articles.

We also find that articles are used in context appropriately, for example the use of the indefinite to introduce a referent into the discourse and then subsequent use of the definite to refer to the same noun, as illustrated in the examples in (7):

(7) I remember my dance company have *a* party ... so I invite A. to # to *the* party
 I know D.'s gonna have *a* show ... well she's so busy on *the* show
 we have *a* maid ... *the* maid uh, pick up a lot of Hokkien from us

Let us turn now specifically to the feature [definiteness]. In English we assume that, in addition to the definite article, possessive pronouns and demonstratives are also definite. Patty produces these perfectly, with the exception that she occasionally confuses the 3sg masculine and feminine forms *his* and *her*. Some possessive pronouns are shown in (8).

(8) *her* sister and *my* cousin are friends
 but they also spoke Vietnamese in *their* household
 I really like *your* friends
our kitchen is almost finish

In addition, we can test for definiteness effect violations, following White (2003). In English, definite DPs are prohibited from existential contexts following *there*, as shown in (9).

(9) There is a unicorn in the garden.
 *There is the unicorn in the garden.

We predict, then that if Patty has acquired knowledge of the feature [\pm definite] in English, then she should observe the requirement that the DP in an existential *there* construction must not be definite. This in fact is what we do find. There are 37 contexts for existential *there* constructions, and no definite articles were produced in any of them, despite the fact that Patty tends to overuse definite more than indefinite articles overall. Some examples are provided in (10):

(10) there were some changes in my life recently
 there is a signal to show you who are on line
 there was a breakdown in the agency

In sum, Patty appears to have acquired knowledge of definiteness in English even though her use of definite articles is not perfect. This suggests that it is indeed possible to acquire this feature, contrary to Leung's claim. Why is Patty better on definite determiners than indefinite determiners? For one thing, definite articles in English need not take number and the count/mass distinction into account, which makes their conditioning environment less featurally complex than that of indefinites. But let us look more closely now at the feature number, or more specifically, [+plural], to see how, for

a native Chinese speaker, the features definiteness and number must be disentangled and reassembled in English.

Although Chinese presumably lacks a definite article, it does appear to have definiteness. More precisely, nouns may receive a definite (or indefinite) interpretation by virtue not only of their discourse/pragmatic context (as Leung notes), but also by pre- or post-verbal sentence position, co-occurrence with classifiers or other grammatical elements such as possessive or demonstrative determiners, and, apparently, plurality—another feature which Chinese is often claimed to lack. Here I return to Aoun & Li's analysis of the Chinese DP. Aoun & Li argue that the Chinese nominal plural/collective marker *-men*, which is highly restricted in its usage, is the realization of a number feature occupying the head position of a Number projection, assuming the structure shown in (11).

- (11) Aoun & Li (2003): Chinese plural/collective marker *-men* realizes a number feature in Num⁰:



If the classifier position is empty, a noun can be raised to Number, checking the plural feature of *-men*, and then further raised to D to check the definite feature there; crucially, nouns suffixed with *-men* **must** be interpreted as definite, as shown in (12).

- (12) ta hui dai *xuesheng-men* hui jia
 he will bring student-PL back home
 'He will bring *the* students back home.'
 *'He will bring (some) students back home.'

The example in (13) shows that a noun can still move up to Number when D is occupied, say, by a demonstrative, and the classifier position is empty.

- (13) laoshi dui *zhe/na-xie xuesheng-men* tebie hao
 teacher to this/that-PL student-PL especially good
 'The teacher is especially nice to these/those students.'

However, if the classifier position is filled, it blocks the raising of a noun to Number, so the noun cannot be pluralized, as shown in (14):

- (14) *laoshi dui (*zhe/na*) *ji-ge xuesheng-men* tebie hao
 teacher to this/that several-CL student-PL especially good
 'The teacher is especially nice to those several students.'

Precisely because nouns suffixed with *-men* must be definite, their existence cannot be posited in existential constructions, which would create a definiteness effect violation, nor can these be negated, as shown in (15) and (16):

- (15) *you ren-men cf. you ren
 have person-PL have person
 'there are some persons' 'there is/are some person(s)'
- (16) *mei you ren-men cf. mei you ren
 not have person-PL not have person
 'there is nobody' 'there is nobody'

The learning problem for a Chinese speaker acquiring English, then, involves teasing apart the relevant features from the way they are assembled in the L1, and re-assembling them as required by the L2. Concretely, this means *de-linking* definiteness from plural number. The examples in (17) below suggest that Patty has managed to accomplish this. Here we find plural *indefinite* nouns in existential constructions, such as those in (15) above which are disallowed in Chinese:

- (17) there were *some changes* in my life recently
 there are *so many lessons* to learn in your lifetime
 they [sic] are *so many things* I want to do

Nonetheless, we do find what appear to be lingering transfer effects in that there is a significant increase between the first and subsequent recordings on her plural marking in quantified contexts. These are the most clearly unambiguous obligatory contexts for plural marking in English, since plural marking on the noun is required to ‘agree’ with the semantic plurality of the quantifier, such as in ‘six students’ or ‘several students’ or ‘both students’. However, in Chinese, these are exactly the contexts that *cannot* occur with plural marking on the noun. Table 1 shows that plural marking was rarely supplied in these contexts in Patty’s first recording, then subsequently jumped in the second and third (there is about an 8-year gap between the first and second recordings):

Table 1. Production of plural marking in obligatory quantified expressions

		Suppliance/contexts	%
Recording	1	2 / 23	08.70
	2	24 / 51	47.06
	3	14 / 24	58.33

I have skipped over other relevant aspects of the acquisition of plural marking in English by a native Chinese speaker, such as the fact that *-men* affixation in Chinese is obligatory only on pronouns and otherwise optional, and appears in highly restricted semantic contexts. The main point, I hope, is clear: that the acquisition of definiteness and plural marking is not a matter of mere parameter-resetting from a ‘minus’ value in Chinese to a ‘plus’ value in English. Rather, it involves a more painstaking process of *reassembling* the relevant features from the way they are conditioned and realized in the L1 to that of the L2.

3. *Wh*-movement

3.1 *Question formation*

Let us turn next to some of the learning problems that are associated with the acquisition of questions and relative clauses in English by a native Chinese speaker. In English, *yes/no* questions exhibit subject-aux inversion, or I-to-C movement; in *wh*-questions there is additionally clause-initial fronting of the *wh*-element, that is, movement into Spec of C, inserting dummy-*do* if necessary. In Chinese, on the other hand, there is no I-to-C movement: *yes/no* questions are formed using question particles (e.g. *ma*) as in (18a);¹ and *wh*-expressions are not fronted in the overt syntax but instead remain *in situ*, as shown in (18b-c) (Mandarin examples from Li & Thompson, 1981; Hokkien from Bodman, 1987).

¹ There is another way of forming *yes/no* questions in Chinese, the so-called *A-not-A* construction, which will not be discussed here. The choice of ‘A-not-A’ vs. question particle constructions is governed by pragmatic factors (see Li & Thompson 1981: pp. 548ff. for extensive discussion).

- (18) a. ni xihuan neiben shu ma ? (Mandarin)
 you like that-CL book Q
 ‘Do you like that book?’
- b. women jintian wanshang chi shenme? (Mandarin)
 we today evening eat what
 ‘What are we having for supper tonight?’
- c. ni qu nar ? (Mandarin)
 li khi toulou? (Hokkien)
 you go where
 ‘Where are you going?’

The difference between question formation in English and Chinese illustrated here has been accounted for formally by positing the presence of a strong vs. weak, or alternatively, the presence vs. absence, of a [+wh] or [Q] feature in C. In English, this interrogative feature induces movement of the *wh*-expression into the CP to check the *wh*/Q feature in C (Chomsky 1995; Freidin 1999). In Chinese, however, this interrogative feature is weak (or absent); thus, no overt raising occurs. Once again, this distinction has been cast in terms of different parameter settings. I will try to show, however, that the situation appears to be a little more complex. I will first briefly present examples from Patty’s English production data suggesting that she has acquired the English feature-value, before turning to *wh*-movement in relative clauses.

Given Patty’s massive exposure to English for so long, we should not be surprised that she easily produces so-called ‘Stage 6’ questions, which are the most advanced type within the developmental scale described by Piemann, Johnston & Brindley (1988) (adapted and cited in Lightbown & Spada 1993:63). At ‘Stage 6’ the learner produces embedded questions with correct subject-aux word order, as well as the correct formulation of tag questions and negated questions. Acquiring these entails the prior acquisition of subject-aux inversion of *do* and other auxiliaries in *yes/no* and *wh*-questions, which Patty has certainly acquired. Some examples from Patty’s data are provided in (19):

- (19) didn’t he know that it will get back to me?
 I don’t know how long we are going to wait
 I tried to analysis what kind of a person M. is
 It’s funny that you always late when the place you want to go is so close, isn’t it?

We can even find an instance of an exclamative utterance in the data with correct subject-auxiliary inversion:

- (20) not in a million year would I stop going to high school

Overall, the data suggest that Patty has indeed acquired I-to-C movement of the copula, modals, auxiliaries and expletive *do*, implicating the presence of a strong feature in C that triggers the overt movement, presumably on the basis of positive evidence such as the presence of *do*-support.

One interesting possibility here is that Patty’s acquisition of the strong English *wh* or Q feature is tied to her acquisition of the lexical differentiation in English between *wh*-question words such as *who* or *what* and quantifier expressions such as *anything* or *everything*, which may be conflated in Chinese—another bit of delinking and reassembly of features that must be learned. The examples in (21) from Huang (1995, p. 171, his examples (170-172a) illustrate the point:

- (21) a. ni xiang mai shenme (ne)?
 you want buy what Q
 ‘What do you want to buy?’

b. wo bu xiang mai *shenme*
 I not want buy *anything*
 ‘I don’t want to buy anything’

c. wo *shenme* dou mai
 I *everything* all buy
 ‘I will buy everything’

Huang suggests that *wh*-phrases are assigned the features of an interrogative, existential or universal quantifier and must be interpreted within the domain of an appropriate binder, e.g. as an interrogative quantifier in the presence of a question operator in (21a), an existential quantifier in the presence of a negative particle *bu* ‘not’ as in (21b), or a universal quantifier in the context of the adverb *dou* ‘all’ (21c).

Returning to Patty’s data, note that she never produces *wh*-in-situ questions (except appropriately as in echo contexts). Moreover, she uses quantifiers such as *anything*, *everything*, *nothing*, *something*, etc. completely appropriately in English, with correct polarity, as shown in the examples in (22):

(22) you don’t have to tell *everyone* in the world
 you don’t have to tell *anyone*
nobody like to hear *something* bad
 there is *nothing* more I can do
 and can’t even see *anything*

This suggests that she has indeed acquired the features associated with these specific lexical items in English vs. *wh*-question words such as *what*. Another way to say this is that she has managed to correctly *re-map* the syntactic and semantic features of quantification and clause type such as interrogative or exclamative onto the corresponding lexical items in English, with the correct syntactic consequences in terms of overt movement.

3.2 Relative clauses

English relative clauses can be introduced by a *wh*-element (a phrase or relative pronoun), or by the complementizer *that*, or (in non-subject relativizations) by a covert (null) operator, as shown below in (23a-c) respectively. A ‘strong’ [wh] feature of English is assumed to induce movement of the *wh*-phrase or a null operator to Spec of C, leaving behind a trace (*t*) that functions as a variable. When a *wh*-phrase has moved into Spec-CP, then the head C must be left empty; conversely, if the operator in Spec-CP is null, then the head C may be either filled by *that* or left empty.

(23) a. the boy [_{CP} who_i [_C e I met *t*_i]]
 b. the boy [_{CP} Op_i [_C that I met *t*_i]]
 c. the boy [_{CP} Op_i [_C e I met *t*_i]]

The main diagnostic for determining whether a *wh*-phrase or null-operator has moved or not is by observing whether such movement exhibits locality effects, i.e., is constrained by subadjacency. Operations involving ‘fronted’ elements should result in unacceptability if they violate certain locality constraints (however these are theoretically formulated). Conversely, when the resulting utterance appears to violate these constraints but does *not* give rise to unacceptability, it is assumed not to have been derived by movement, but rather to result from base-generation in that position to begin with. The essential idea is that subadjacency-type constraints simply do not apply if there is no movement.

Chinese has been argued not to have *wh*/operator movement because sentences which appear to violate locality constraints are nonetheless perfectly acceptable, as shown in (24) (from Hawkins (2001: 274):

- (24) Ni xiangxin [[[Lisi mai-le shenme]_{IP} de_{CP}] shuofa_{DP}]_i?
 you believe Lisi buy-PERF what C claim
 *‘What_i do you believe the claim that Lisi bought_i?’

However, it appears that in restricted cases in Chinese, namely those involving relativization of adjuncts, subjacency violations do occur. Ning (1993), Li (2002) and Aoun & Li (2003) argue that these are in fact derived via movement of a (null) operator which is “equivalent to a *wh*-operator in English” (Li 2002, p. 58, citing Ning 1993). The Chinese examples in (25) and (26) show that long-distance movement in these cases is subject to locality (subjacency) effects and that violations of these constraints give rise to ungrammaticality (examples from Li 2002, pp. 58-59, and Aoun & Li 2003, pp. 177-178). Sentence (25) is a violation of the complex NP constraint and sentence (26) violates the adjunct island constraint:

- (25) *zhe jiu shi [[[[ta xihuan [t_i nianguo shu] de] ren] de] difang]_i
 this exactly is he like read-ASP book C person C place
 ‘This is the place where he likes the person(s) that studied.’

- (26) *zhe jiu shi [[[[ruguo ta t_i shengqi] ni hui bu gaoxing] de] yuanyin]_i
 this exactly is if he angry you will not happy C reason
 ‘This is the reason (x) that you will not be happy if he gets angry (because of) x.’

The overall point to be made here is that English and Chinese, despite clear differences in word order (i.e. head-direction) and other properties within relative clauses, also appear to share some similarities at least for some types of relative clauses (e.g. adjunct relatives). Thus the differences between the two languages appear not to boil down to a single stark parametric choice that divides ‘English-type’ languages from ‘Chinese-type’ languages. This is precisely the argument made by Aoun & Li (2003:191ff), who suggest that various relativization strategies may instead be tied to particular morphosyntactic and semantic properties of the particular phrases to be relativized, and that these appear to be permuted both within and across-languages. Once again, we see that it is the assembly and for SLA the re-assembly of features that must be acquired. Oversimplifying, it would appear that for a native Chinese speaker acquiring English, the properties of adjunct relatives in Chinese must be extended to all relatives in English.

Has Patty managed this? Her production data overwhelmingly suggest that she has. There are about 120 relative clauses in the data, of all types. Some examples of subject relatives are provided in (27), object relatives in (28) and oblique relatives in (29):

- (27) you will find someone *who share your belief*
 and then they find this place *that will do the catering*
- (28) there’s a poem *that you have to memorize*
 the language *that you don’t know*
 there are book club in Hawaii *you may like to join*
 I got *what I wanted*
- (29) I have a girlfriend *that I can introduce you to*
 he’s the only person *I spoke to*
 you don’t know *who you should associate with*
 I have couple # couple university *that I apply to*

The last set of examples, those in (29), are particularly interesting because they illustrate Patty’s robust acquisition of preposition stranding in oblique object relativization. Preposition stranding is not allowed in Chinese; indeed, these are contexts which in Chinese require obligatorily *overt* resumptive pronouns, suggesting that Patty has acquired operator movement. These examples also demonstrate that Patty’s acquisition of relative clauses in English has developed beyond the so-called ‘null prep’

stage argued for by Klein (1993, 2001), in which obligatory prepositions are dropped rather than stranded (or pied-piped). Since analyses of L2 null-prep phenomena (Klein 2001; Dekydtspotter et al. 1998) attribute the lack of an overt preposition in null-prep contexts in part to the base-generation of the *wh*-expression in Spec of C rather than derivation via *wh*-movement, Patty's suppliance of overt prepositions suggests that she is probably not base-generating *wh*-expressions in Spec-CP but rather deriving them via *wh*-operator movement. In other words, she appears to have acquired the 'English' feature values for relative clause formation.

Finally, we can look at the results of a grammaticality judgment task she completed which was partly similar to that administered to native Chinese speakers by Hawkins & Chan (1997). The task consisted of 50 sentences containing relative clauses, 20 grammatical and 30 ungrammatical. The ungrammatical sentence types, summarized in (30) below included doubly-filled CP violations ($n = 5$), resumptive pronouns in various positions ($n = 11$), and ten subjacency violations of two subtypes: extractions from adjuncts ($n = 5$) and extraction from noun complements ($n = 5$). In addition, four sentences of an error-type Patty produced in about 5% of her relative clauses were included. This type looks quite similar to a Chinese clause type described by Li & Thompson (1981) which they refer to as a 'realis descriptive serial verb construction' (p. 611). This type was not addressed in Hawkins & Chan's study, but both Patty's production data and her results from the GJT indicate it bears more looking into for future research, and that Patty appears to be maintaining in her English a distinction between clause-types that in fact exists in her native Chinese.

(30) Grammaticality judgment task test items (in addition to 20 grammatical relative clauses):

- a. Doubly-filled CP violations (e.g. **The girl who that lost her way cried*) $n = 5$
- b. Resumptives in various positions (e.g. **The boy who I play with him is my cousin*) $n = 11$
- c. Subjacency violations ($n = 10$):
 - extraction from adjuncts (e.g. **I bought the book my professor became famous after he wrote*) $n = 5$
 - extraction from noun complements (e.g. **They want the land the manager made the decision that we should sell*) $n = 5$
- d. 'Realis descriptive serial verb constructions' (following Li & Thompson (1981:611) (e.g. **She is the classmate always forgets her assignments*) $n = 4$.

The results for Patty from this task are in fact highly consistent with the view that she has acquired an English-like representation of relative clauses, as previously suggested by her production data. She correctly rejected all five doubly-filled CP violations (100%), 10/11 of the sentences with resumptive pronouns (91%), and 9/10 of the subjacency violations (90%, 5/5 adjunct extractions and 4/5 of the noun complement extractions). In these cases, the findings suggest that she *has* acquired operator movement that is subject to locality constraints similar to those represented by native English speakers. The only non-nativelike results were for the serial verb construction type, in which she correctly rejected only 1/4 (for a 25% rejection rate), consistent with what her production data suggest. Once again, the learning problem here confronting Patty did not require the simple resetting of a parameter from a 'minus' value in the L1 to a 'plus' value in the L2 value but rather her learning that an operation (operator movement) that is highly restricted in her native language needs to be extended more widely to other types of relativization in English.

4. Raising and case-marking

In this section I would like to elaborate on why I think the representational deficit view, with its emphasis on locating the source of morphological omission in the syntax rather than in a morphological component, is flawed. I will place this argument in the context of subject-raising and case-marking, for which I rely heavily on theoretical assumptions sketched in Chomsky (1998, 1999) and Radford & Ramos (2001). The latter paper involves a case-study of a specific-language-impaired English-speaking child who produces incorrect case-marking on pronouns (among other things).

In brief, nouns and pronouns are assumed to enter the syntactic derivation with an unvalued case feature. They receive a case value by entering into an agreement relation with a c-commanding head, or *probe*. If the head is a finite T, the case value will be nominative; if a little *v*, then accusative. Additionally, Radford & Ramos propose that the domain for valuing genitive or possessive case is definite D. Moreover, if the head—in this example we’ll refer to T, following Chomsky—carries an EPP-feature, it projects a specifier into which a subject moves. However, in order for T to even have an EPP-feature, it must bear agreement features with which its subject agrees. These assumptions are summarized in (31).

- (31) [*u*Case] □ NOM if in the domain of T_{+FIN}
 □ ACC if in the domain of (transitive) *v*
 □ GEN if in the domain of D_{+DEF}

T carries an EPP-feature that triggers subject raising

T carries an EPP feature if it is ‘□-complete’ (has a complete set of person/number agreement features).

For acquisition, these assumptions lead to the prediction, directly quoting Radford & Ramos, that “Failure to mark tense or agreement (or both) in obligatory contexts would be expected to result in concomitant case-marking errors” (p. 7). However, the specific technical detail that I’d like to zero in on here is that, for purposes of the syntactic computation, apparently such tense or agreement can be abstract, or phonologically null. Let’s look at the concrete example provided by Radford & Ramos:

- (32) Mary has burned John’s letter.

Here, Radford & Ramos have used the auxiliary form *has* which happens to exhibit overt 3sg agreement in English, but of course the mechanism by which subjects raise and nominative case marking is valued would presumably be exactly the same even in the absence of any *overt* agreement distinctions, for example in the case of a modal auxiliary construction, as in (33):

- (33) Mary/She should burn John’s letter.

In this case, we assume that there is abstract agreement nonetheless, because we can see its syntactic consequences: *Mary* has raised into Spec of T and is assigned (abstract) nominative case which we could check by substituting the appropriate pronominal form *she* (which in English does require overt case-marking). Indeed, for accusative case valuation, null abstract agreement must be posited since English doesn’t exhibit overt verb-object agreement. Similarly, Radford & Ramos posit a null abstract possessive morpheme and a null definite determiner in possessive DP structures as in *John’s letter* (shown in (34)), noting explicitly that “The null definite determiner carries abstract agreement features which agree with the possessor *John*” (p. 3). On their account, this abstract possessive morpheme subsequently gets spelled out as ‘apostrophe-s’ (*John’s*).

- (34) [DP [D_{+AGR} \emptyset] [POSSP John [POSS \emptyset] letter]]

The overall point here is that there is no apparent requirement for features that trigger syntactic derivation to have any morphophonological content at all. The abstractness of features leads to the inescapable conclusion that overt inflectional marking is located squarely in the PF component and we simply cannot derive inferences about the syntactic representation from ‘missing’ or ‘null’ morphology. Of course, we would like to maintain that the overt marking of various sorts of agreement in specific conditioned environments is part of the assembly of features within the lexical items of specific languages, but this is part of *morphological competence*, as I outlined at the beginning of this

paper. Chomsky himself “puts aside” questions about how the features are assembled in lexical items.² There is probably no sense in which we can claim that such morphological marking *triggers* syntactic operations such as subject-raising and structural case valuation, although it may indirectly reflect the ‘history’ of such operations.

As I have reported elsewhere (Lardiere 1998a), Patty’s nominative case-marking on pronouns is perfect and completely conditioned by finiteness in T. Moreover her subjects are always appropriately raised. Given the minimalist assumptions outlined above we have to assume that her T in English has the appropriate EPP feature entailing the appropriate agreement relation, despite the fact that she doesn’t always mark agreement and in fact rarely marks *regular* 3sg *-s* agreement (Lardiere, 1998b, 1999). She also frequently fails to mark tense (Lardiere 1998a). Radford & Ramos’s prediction that a failure to mark tense or agreement should lead to concomitant errors in case-marking is simply not borne out for Patty.

Note furthermore that her L1 Chinese has *no* overt case-marking nor overt agreement. However it appears that subjects are also raised, at least over modals, in Chinese, implicating the presence of an EPP feature which in turn implicates the presence of abstract agreement:

- (35) *Zhangsan* hai dei xie yi-pian lunwen (based on Li & Thompson, 1981:303)
 John still must write one-CL dissertation
 ‘John still has to write a dissertation.’

From this we can conclude that the acquisition of nominative case marking in English by a native Chinese speaker doesn’t involve anything like the resetting of a parameter in terms of syntactic feature selection, but it does involve acquiring morphological knowledge about how the lexical items for pronominal raised subjects in finite clauses are assembled in English. This is part of morphological competence.

Finally, turning briefly to possessive or genitive case-marking, Radford & Ramos present us with a methodological problem which resonates within our own SLA context as well. Assuming that the D head in possessive structures bears abstract agreement features, as mentioned earlier (see the structure in (34) above), what are we to make of data such as bare nominal possessors, of the type produced invariably by their case-study informant ‘JC’, and variably by Patty, as exemplified below in (36)?

- (36) a. Where *Giovanni* sticker? (JC, from Radford & Ramos 2001, p. 15)
 b. *Debbie* brother was very rich (Patty)

Specifically, what might account for the omission of possessive ‘apostrophe-s’ marking? Radford & Ramos suggest a variety of factors, including lack of its phonetic salience, the fact that it has phonologically conditioned allomorphy, its relatively low frequency of occurrence in adult speech, or “problems which SLI children have in acquiring regular affixes” (pp. 15-16). Radford & Ramos moreover point out that we really cannot empirically distinguish between the failure to acquire the morphological spell-out of genitive case-marking (a problem of morphological competence) vs. failure to assign genitive case in the syntax (a representational deficit). They write that “indeed it is hard to envisage what kind of empirical evidence could in principle” distinguish between these alternatives. If the possessor is genitive case-marked, D carries agreement features; if the possessor is caseless, D lacks agreement features. However, since D is *null*, it is “obviously impossible to determine whether it is marked for agreement or not” (pp. 15-16).

In Patty’s case specifically, we fortunately do have another type of evidence which points to a morphological rather than syntactic deficit for missing ‘apostrophe-s’ marking: the fact that her suppletive pronominal possessive forms are all perfectly case-marked. The fact that Patty only variably

² Specifically: “The properties of features and assembly form a large part of the subject matter of traditional and modern linguistics; I will put these topics aside here, including questions about organization of assembled features within a lexical item LI. Also left to the side is the question of whether LI is assembled in a single operation or at several stages of the derivation, as in Distributed Morphology (Halle and Marantz 1993).” (Chomsky 1998:13, n. 27).

produces affixal case-marking but invariably produces correct suppletive case-marking suggests that the problem is indeed a morphological one (or perhaps partly phonological, along the lines suggested by Goad et al. (2003) regarding prosodic difficulties facing native Chinese speakers acquiring English).

The inescapable moral of the story is that, where we find morphological variability, it is probably not the case that an entire language L—here the L2 idiolect—has simply not selected the features in question. Formal models of minimalist syntax do not care whether features get spelled out suppletively vs. affixally or even overtly at all. However, formal models of morphology do, and that is where we should be focusing our efforts if morphological variability is what we are interested in explaining.

5. Towards a possible model?

This final section is necessarily brief and speculative, a promissory note for future research. It is clear that my locating the source of morphological variability in a distinct morphological (or PF) component of the grammar (by characterizing it as a ‘mapping’ or ‘re-mapping’ problem) requires a separationist model of grammar, in which the output of syntactic computation is indirectly mapped via PF or morphological module-specific ‘translation’ procedures to actual phonological forms. One such possible framework is that of Distributed Morphology, in which the assembly of lexical items is ‘distributed’ throughout the grammar; specifically, the spell-out or selection of phonological features is post-syntactic, carried out in an operation which selects and inserts the closest-matching *vocabulary entry* (including the possibility of a default ‘elsewhere’ entry) into terminal nodes containing morphosyntactic feature bundles. (See Embick & Noyer (2001); Halle & Marantz 1993; Marantz 1997 for more detailed descriptions of this model. For other types of separationist models see Anderson (1992); Aronoff (1994); Beard (1995); Jackendoff (1997).)

Consider the schematic vocabulary entry shown in (37) below (from Parrott, 2002, who addresses the question of individual morphological variability within a variationist context):

(37) Vocabulary Entry [F1, F2, F3...]	□	/phono/	/ _____
<i>Morphosyntactic/semantic features (abstract)</i>		<i>Phonological features</i>	<i>Contextual features</i>

Within a formal model such as Distributed Morphology (for example), we might ask exactly how vocabulary entries are constructed in second (as well as first) language acquisition. To what extent could the learner be transferring or otherwise somehow tacitly comparing particular vocabulary entries between the L1 and L2? Assuming the learner has constructed a vocabulary entry with the correct *combination* of features as shown to the left of the arrow in (37) (an assumption which itself would need to be empirically verified somehow), how do they come up with the right contextual or conditioning features (to the right of the slash)? How do learners figure out if the overt expression of features is even obligatory? (In Chinese, for example, the overt expression of abstract agreement features is apparently only rarely obligatory.) Do learners transfer their knowledge of optionality from one language to another?

It is relatively easy to specify the conditioning factors for nominative case-marking on pronouns in English, much more difficult for complex entries such as definite articles or past tense marking. Overall, the ‘selection’ part seems easy; it’s the ‘assembly’ part that’s hard, particularly if it’s complicated by already having learned how features are organized and assembled into lexical items in one’s prior language(s). Chomsky (1998) may perhaps indulge in putting such details aside, but acquisitionists may not.

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