Interference in Second Language Acquisition: A Review of the Fundamental Difference Hypothesis

Transferring the 'Pro-drop' Parameter from Spanish to English*

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Abstract

We assume that Universal Grammar (UG) constrains the specific formulation of the entire range of all possible grammatical constructions for human language. In the broadest sense, the proposal that invariant universal principles *(i)* make-up UG, and *(ii)* pertain to all languages is tantamount to saying that UG renders all languages identical. More specifically, the way in which a child goes about acquiring his/her first language (a UG variant) is then said to amount to little more than what is referred to in the First Child Language Acquisition literature as the adjusting of the Parameter Settings which overlay these inherent Principles in accordance to Chomsky's *Principles and Parameters Theory* (PPT) (Chomsky 1986, 1995). The question raised in this paper is to what extent does the first language's (L1) already set parameterization *transfer* and potentially *interfere* with the learning processes of a post-critical-period second language (L2). The L2 data are examined in light of the roles Case and Agreement play in Spanish as well as in English functional grammars—paying particular attention to 'Pro-drop'. We conclude that L1 Spanish speakers learning English as an L2 initially go through a series of subconscious language-specific *learning strategies* that enable them to cope with a divergent English input. Although there may be cognitive employs behind such strategies, we believe that the learning mechanisms involved here work in a more tacit manner coinciding with a modularity theory. These strategies however do not support general claims often made that UG is in any way accessible to the L2 post-critical learner as a 'clean-slate', nor do we believe the strategies suggest an L2 learning via 'Parameter-Resetting'. Rather, the data seem to characterize an overall approach to L2 learning that is based on partial overt/covert language specific problem-solving procedures—lending credence to Transfer Hypotheses. The aim of this short paper is to show where and how such L1 Spanish Parameter Settings might *interfere* with the learning of L2 English.

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1. Introduction

We assume that an innate Universal Grammar (UG), along with the potential transfer of L1 parameters, broadly constrains the formulation of all possible grammars, be it L1 or L2.[i] This goes against proponents of either *(i)* an L2 Direct UG Access Hypotheses (e.g., Krashen 1981, 1985) which (in their strongest forms) claim that UG is free to operate for the L2 learner more-or-less as a 'clean-slate', unaffected by L1 parameterization,[ii] or conversly, *(ii)* an L2 Non-UG Access Hypothesis which generally states that UG no longer continues to operate at all, and that explicit cognitive problem-solving skills are exclusively at work for the learning of L2. We consider the main attraction of a strong *innate* theory to be two-pronged. Firstly, an innateness theory fills-in otherwise unbridgeable gaps regarding *insufficiency problems* and *poverty of the stimulus* in the L1 input, as well as *systematicity in development* which do not seem to correlate with L2 input—such as age, L1 background, etc. Secondly, an innateness theory which assumes UG in general speaks to *theoretical parsimony* with regards to arguments surrounding both first and second language acquisition: (viz., an L2 must be an instance of natural language acquisition based on UG in the absence of a theory to the contrary). To carry this further, interlanguages—i.e., intermediate grammars that fall short of their target language—must also be constrained by UG. Hence, there in principle cannot be 'wild' interlanguages (or pidgins and creoles for that matter) that deviate from UG (*pace* Felix 1984, though see Clahsen and Muysken 1986 for a different view). In assuming that UG-Principles broadly constrain all languages, let's consider then what makes L1-language-groups$_{\alpha}$ differ from L1-language-groups$_{\beta}$. At this juncture, we need an additional component in the theory that permits some flexibility: one facet of the component must be innate, allowing for sufficiently fixed aspects of the theory to rule-out potential 'wild grammars', while a second facet must maintain enough permissiveness to generate the variations of grammars found around the world.

Principles and Parameters Theory: *Chomsky 1995.* In the above sense, these UG-Principles (substantive word-class Nouns, Verbs, Adjectives) constitute the *a priori* universality facet of the theory: these are *close-classed* form-meaning Lexical Categories which all languages share. Parameters, on the other hand, constitute the potential myriad language-specific facet that plays to notions of *a posteriori* input triggering. While the term input bears some resemblance to former empirical based notions of stimulus-response learning, crucial distinctions are preserved—viz., although this input-driven motor could be labeled as quasi-empiricism (of course, human sensory is mandatory for language), it falls well short of Skinnerian behaviorist approaches of the 1950s which rallied for a measured conscious awareness to learning. (See Kuhl & Meltzoff (1997: 7-44) in Gopnik (ed) *The inheritance and innateness of grammar* for a good overview on topics of innateness). Chomsky's notion behind Parameter settings are indeed input driven, but work on an entirely unconscious level (*pace* Skinner). These *open-classed* items include abstract Functors such as e.g. Determiners (*the/my/some*), Complementizers (*that/for/whether/if*), and Inflectional Constituents (Modals/Infinitive-markers/Tense/Agreement/Case...) which make-up the list of Functional Categories. (See §2 below).

While we assume PPT to be correct—largely to the extent that we agree that some innate mechanism is mandatory in linguistic processes—there is a growing consensus among developmental linguists involved with Child Language that the processes of first language 'acquisition' (L1) is somehow Fundamentally Different from the processes involved in 'learning' a second or foreign language (L2). This amounts to saying that whatever drives the initial language acquisition motor for L1—i.e., the Language Acquisition Device (LAD) in Chomsky's terms—is no longer operative in the same manner for the adult now learning an L2. In fact, the distinctive labeling of Acquisition *vs.* Learning often bandied about in Second Language Acquisition (SLA) literature illustrates what is at the heart of the issue: namely, and what we believe to be the cornerstone to a *Fundamental Difference Hypothesis* (FDH), that adults cease to operate as children in respect to their processing of linguistic information.

In an attempt to account for these fundamental differences, some developmental theorists have returned to earlier notions of a Critical Period (CP) (Lenneberg) and have attempted to reshape what is now understood about the underlying causes of CP into refashioned Maturational Hypotheses—hypotheses that speak to Chomsky's Principles of Universal Grammar. In sum, one possible story goes something like the following. Initially, children's only means of a linguistic reference guide (internal) to any possible linguistic input (external) come in the form of an innate template called UG. The fact that UG is universal, and coupled with the fact that children do eventually acquire their first language, suggests that the receptive L1 input does interact in some crucial way with UG in shaping a coherent model towards the actual target language. The way in which this type of initial and innate tacit acquisition is achieved, however, bears little if any resemblance to what is typically referred to as 'learning' via conscious cognitive problem-solving skills (cf. Piatelli-Palmarini: 1989): there can be no learning whatsoever involved with L1 if we take it that learning requires some sort of cognitive awareness. For instance, it is now better understood—e.g. The *No Negative Data Assumption* (Chomsky 1981), *Structure-Dependency* (Chomsky 1980)—that the totality of all native L1 ambient inputs is inefficient to allow the structuring of feasible linguistic rules: the inputs simply run counter to any possible logical-formation of linguistic configurations.

Notwithstanding the poverty of input, how the child achieves the target grammar goes beyond any form of possible tactical awareness. It is in this sense that UG is indispensable for the child: UG not only restricts and narrows down an otherwise potentially chaotic input flow into potentially legitimate grammars—sifting the material into meaningful units, rendering all foreseeable wild grammars illicit—but also aids the child in a kind of grammar bootstrapping operation which ultimately guides the input (=external) to take certain pathways (=internal) which will eventually lead to correct assumptions about the target language (=parameterization). Such a Fundamental Difference Hypothesis (FDH) contrasting the nature of Child L1 Acquisition *vs.* Adult L2 learning could be outlined as follows (cf. Bley-Vroman 1990, Clahsen & Muysken 1989, Schachter 1989):

(1)

Child L1 'Acquisition'	Adult L2 'Learning'
a. Universal Grammar (+UG)	c. L1 Knowledge (+$UG_{/L1}$ Principles)
• [+]Principles intact	• [+]Parameters already set
• [+/-]Parameters yet unset	• Knowledge of language
b. Acquisition based on data input	d. General problem solving skills
• Learning procedure (LAD)	• Scaffolding for new input
• Hypothesis testing	• Learning Strategies
• Parameter setting	• L1 Transfer of Parameters

(2) **L2 Learning Model: Indirect UG**

L1 input ===>{Bioprogram UG/+L_0 Principles & Parameters}===> L1 Language
L2 input ===>{Bioprogram UG/+L_1 Parameters}====> L2 Language

As outlined above, what we are hypothesizing here is a highly constrained and subconscious *Indirect Access* to UG for L2 learning which permits only that portion of UG that is instantiated in the L1 (=$UG_{/L1}$) to serve as a surrogate UG in evaluating the possible arrangement of parameter settings to the extent with which they appear in direct opposition to the L1. In this view, L2 knowledge is inextricably linked to L1 and any interlanguage grammars that might manifest prior to the target L2 would make variant Non-L1-like parameterizations and functional categories illicit. This position assumes UG to be accessible for L2 only via a parameterized L1. Bickerton's *Bioprogram* Theory implicates aspects of the model (above) regarding both L1 and L2 respectively—as summarized nicely below:

> Children start with the *Bioprogram* (UG-driven) and graft onto it the language they are learning. This becomes their native language. In the matter of L2 non-native languages, the learner takes the native language grammar and moves it to accommodate a second grammar: hence, L1 acquisition proceeds from bioprogram to 'native-language' grammar; L2 learning proceeds from 'native-language' grammar to L2 (1984: 152).

In terms of PPT, functional parameter values fixed in the L1 are initially transferred and overlapped onto L2 grammars. (See §2 below).

In sum, the above characterization of L1 vs. L2 language learning begins to shed some light onto what we would expect regarding the nature of L2 learning. For example, if the universality basis of UG is no longer directly applicable to the L2 learner who's beyond the critical period (cf. Lenneberg (1967): a maturational threshold normally demarcated by the early teens, though at times cited in the literature to end as early as age 7), and a surrogate UG as made available via L1 begins asserting itself, then we should expect to find a high rate of L1 influenced errors of the type which are characteristic of L1 parameterization. Such errors would likely accumulate in the very beginning stages of

L2 language learning, and somewhat drop off at the later stages when strategies have been put in place in order to deal with the differing language input. The following section's aim is to address overall theoretical notions of this claim.

2. Theoretical Considerations: The Non-Resetting of Parameters

In light of the arguments made above regarding parameters in L1, let's consider what it would mean for parameter values set in L1 to be initially transferred as an initial strategy onto L2 grammars. But first, before we go on to more closely examine the transfer hypothesis, ponder the alternative position. If values were forever open (potentially remaining unmarked) throughout the course of one's linguistic learning, wouldn't it follow that L2 acquisition would proceed with similar benchmarks, pitfalls, as well as success rates as compared to L1 acquisition? In other words, learning a second language should be relatively straightforward. If this were the case, it certainly could be hypothesized that both L1 and L2 learners would simply go through the same processes of setting the appropriate parameters in face of the language input in accordance to the options permitted by UG. Surely, this is incorrect as made apparent by the reams of paper written regarding the limitations of L2 achievement. Proponents of a natural L2 acquisition have over the years steadfastly dealt with such apparent disproportionate patterns of development between the L1 and L2 by calling on some kind of non-language blocking device—e.g, such as Krashen's *Input Hypothesis* which posits that a learner-internal 'filter' is all that is involved in preventing the L2 input from getting into the otherwise available LAD. For such proponents, it is this sole input filter that complicates the L2 acquisition process, rendering L2 acquisition more convoluted than L1. Recall, Krashen believes that once this filter is eliminated, the nature behind L2 and L1 acquisitions become more or less the same: viz., UG is theoretical available to the L2 learner (like the L1 learner) as a 'clean-slate'. It remains to be spelled out by Krashen exactly what these filter are. At the very least, such filters must account for the relative ease of acquisition of a select few language categories over others (viz. Lexical *vs.* Functional categories). In one case, for example, such filters would need to explain how and why Spanish speakers learning English as an L2 would incorrectly perceive (or 'filter') an unmarked status for pro-drop (thus incorrectly producing possible Double Pronouns constructs as cited in this paper), whereas English speakers learning Spanish would, from the onset, correctly perceive that subjects could be omitted. (See Liceras 1989, Phinney (1987) for discussions on the unmarked status of Pro-drop). In any event, it may ultimately make little sense to talk about such filters as acting independently of UG Principles. In fact, there may arise a serious theory internal paradox when claims for a natural processes of LAD are on one hand independent of filters in L1, while, on the other hand, become somehow inextricably dependent on filters in L2 (Cook 1993: 65). Any probable workings of a filter would have to be nothing short of a component of the LAD grounded in UG. Hence, all metaphorical talk of 'filters' can easily be reduced to some aspect of PPT.

Having said this, there have been some reports in the literature to the effect that morphological development in L2 seems to sequence as L1 (see Dulay *et al*. 1982, Dulay and Burt 1974, for a contrastive L2-to-L1 analysis with the Roger Brown study). Such studies tend to merely point to underlying facts regarding abstract differences between *(i)*

UG-principles on the one hand, and *(ii)* language-specific functional parameters having to do with morphological properties on the other. Finding away to sort out this issue is not as convoluted as it first might appear. For instance, if an L2 learner were to share 'native-speaker' intuitions on relatively complex L2 structures (not to mention L2 phonological adaption such as accent), then it could be claimed that the L2 speaker has identical access to the same UG-based parameterizations for both languages. If this is not the case, as argued herein, then their L2 knowledge must be restricted to that which is instantiated in their native L1 language. As those of you who have ever attempted to learn a second language know, the former is usually not the case. (The success rate of L2 learners was first looked at by Selinker (1972) as was said to compose of a whooping disproportionate 95% to 5% success ratio. Also see Bley-Vroman in Gass & Schachter (1989) for a good current overview of L2 learning success rate). In addition to the intuitive gut feeling that this idea of a relatively unhampered L2 learning clearly cannot be correct, much empirical work in this area has further buttressed our claims that L2 parameter open-endedness or L2 parameter 're-setting' indeed does not proceed straightforwardly for the post-critical-period learner. The question is therefore put to us in the following form: Do L2 learners then start with their L1 settings of a given parameter and proceed to work within that already set parameter-framework—initially (in the very early stages) tweaking the L2 input to somehow map accordingly onto their L1 setting? If yes, in this view, L2 learners would reconstruct an L2 grammar based on the speech input they hear, all the while being guided not only by innate UG-principles, but also by biased assumptions related to their L2 parameter settings—in effect initially transferring their L1 parameter settings onto L2. (This initial *transfer period* may alter the L1 settings to serve as the functioning 'default status' toward L2 settings). Whenever mismatches occur between L1 and L2, arguably more cognitive-based strategies activate in dealing with the reconstruction of an L2 grammar. The mechanisms behind any cognitive apparatus here, as it relates to language, still must be bound to UG—and so preserving the distinct modular aspect of language while maintaining a Chomskyan separation between cognition and language (see Smith & Tsimpli 1995 on double disassociations between language and cognition). Of course, such a roundabout means of hypothesis testing and evaluating a language via an already conditioned L1 would be fraught with grave consequences, as the L2 success story stated above tells us. This observation has been summarized in the following way:

> The basic problems [of foreign language learning] arise not out of any essential difficulty in the features of the new language themselves, but primarily out of the special 'set' created by the first language habits. (Charles Fries in his foreword to Robert Lado's contrastive analysis textbook (1957: v) (Bley-Vroman op.cit: 55).

The above questioning leaves room to maneuver subsequent prospects: e.g. is there a possibility that what appears to be an appropriate 'L-2-like' parameterization on the surface phonology-level is for all intents and purposes not a parameterization at all, but rather an accidental processing similarity that has formed via an L1-to-L2 mapping exchange? Such a fortuitous resemblance would give false impressions of parameter re-setting. We believe there is some truth behind the proposals. Our claim is that while parameters cannot be reset from the values already fixed within L1 (Functional

Parameterization Hypothesis (FPH): Chomsky 1989; Tsimpli and Ouhalla 1990), non-parameterized cognitive-based strategies (circumscribed by UG) may allow some flexibility for imitating surface strings (see §3 below). It is our view that once these crutch-like strategies (termed scaffolding in SLA literature) are no longer needed for the L2 input, more stable L2 grammar-dependent measures kick-in. What these measures are exactly—outside of the notion that they are not instances of re-parameterizations—are concerns outside of the scope of this present paper. (But see Bley-Vroman (op.cit.) for more detailed considerations as outlined in (1)).

A number of empirical investigations have indeed shown that functional parameter resetting does not proceed straightforwardly in SLA after the post-critical-period. The seminal studies which first shed important light on the Subject-Verb Agreement (Agr) mechanism of 'pro-drop' parameter in L1 (Chomsky, 1982, 1981; Jaeggli, 1982; Rizzi, 1982, Hyams 1983, 1986) eventually expanded into matters concerning L1-to-L2 transfer. Languages such as Spanish and Italian differ in Agr from languages like English and French in that the former can have missing subjects, while the latter cannot (as show in (3) & (4) below. (Asterisk* marks ungrammatical sentence).

(3)	a.	(pro) vado al cinema stasera. *('(I) go to the cinima tonight')*	(Italian)
	b.	(pro) salieron a las ocho. *('(They) left at eight')*	(Spanish)
(4)	a.	* (pro) go to the cinima tonight *('(I) go to the cinima tonight')*	(English)
	b.	* (pro) sommes partis à huit heures. *('(we) have left at eight o'clock')*	(French)

As shown above, this contrasting element of the four languages can be expressed in more technical terms by stating that in Spanish or Italian, pro is an empty category that can manifest without an overt counterpart (such languages are termed 'pro-drop'); whereas in English or French, pro is an empty category which must have an overt counterpart (such languages are termed 'non-pro-drop'). Many of the insights gained in this area, first being generated by L1 research, have now naturally expanded into SLA research. Recent studies in L2 acquisition of 'pro-drop' have come from White (1985, 1986), Flynn (1987), Phinney (1987), and Liceras (1988) among others. The overriding question which drives these studies has been the following: Assuming that L2 're-parameterization' is not a viable option, to what extent does L1 parameterization (particularly here, the case of parameterization of pro-drop) play a role in L2 learning?

The following section's task is to examine the Spanish Agreement mechanism and see if there is evidence of any Spanish (pro-drop) interference in the learning of English (L2) agreement. Since Agr is a functional category that is subject to parameterization, ('pro' vs. 'non-pro' being just one of a number of potential Agr parameterizations), we should find instances of Agr L1-to-L2 interference.

2.1 Agreement

English L1 Acquisition: Agreement Statistical data taken from Child First Language Acquisition do not in any way resemble those data taken from Second Language Learning. In L1 research, there is much evidence—cross-linguistic—that Functional Categories (e.g. Case and Agreement) are not as salient as Lexical Categories (e.g. Nouns and Verbs) in the protracted development of language development (cf. Radford: 1990). This lexical *vs.* functional distinction is well grounded in the FPH (as cited above). To my knowledge, I have never seen this simple observation fully utilized as an argument in dismantling any credible Non-Transfer Hypothesis. Recall that a strong version of a Krashenian Non-Transfer Hypothesis—which would, among other things, call for a 'clean-slated' UG to serve the L2 learner—reduces to the claim that L2 acquisition is nothing more than an impoverished version of L1 acquisition (differences applicable to L2 'filters' set aside). It would appear that such a hypothesis would stand in direct opposition to the Fundamental Difference Hypothesis as stated above. To make matters more concrete, the fact that English children do omit functional categories early-on in their protracted language development, coupled with the fact that L2 learners of English do not seem to make such pervasive stark omissions when set in highly rich learning sessions (cf. Lightbrown 1987, Pica 1985, among others)[iii] suggests, to me, that indeed a fundamental and qualitative difference in the two acquisitional processes is at hand. Prof. Bar-Lev (p.c.) claims that L2 students catch-on immediately to a new grammatical functional category when it is presently asymmetrically; even stem changes don't present problems. Clearly, biological maturation factors—characteristic of both the early protracted nature of L1, and the highly sophisticated general-problem solving nature of L2—are crucial in interpreting such empirical data. In addition to the explanation that such readily accessible properties get quickly mapped onto L2 with relative ease, a counter-measure applies which likewise may explain why those more difficult aspects of the L2 get avoided (see Schachter 1974 regarding L2 Error Analysis). If a Non-Transfer/Clean-slated UG Hypothesis were correct, why wouldn't we find similar adult omissions and frequency rates of non-salient functional categories as we do with children? Clearly, the input is the same. The obvious answer is that L2 learning is precisely that, 'Learning', and learning involves tactic cognitive awareness to the subject being studied. Hence, children don't really approach and study their L1 in quite the same manner as adults approach and study their L2. One very insightful empirical piece of evidence in support of the disparity between *Learning vs. Acquisition* (in view of the FDH) is taken from studies showing how adults—when treating L2 inputs in 'non-educational environments' and for purposes of common communication only—fossilize that L2 in the form of a pidgin (a rudimentary inter-language which leaves out non-salient functional morphology), whereas children whose only L1 input consists of that very same rudimentary pidgin actually begin to increase the complexity of the pidgin grammar and, in effect, create an otherwise non-existent functional layer to the language. (For Pidgins-Creolization see Bickerton 1981, 1983). In this sense, children of pidgin-speaking parents show very little conscious control over the outcomes of their initial grammar. What we find, however, and reminiscent of Bickerton's bioprogram, is children constructing a (variety of) superfluous morphology resembling UG-based optional parameters that have relatively little connection to the pidgin input.

Regarding L2 errors, what one typically finds at a stage-1 highly motived learning level are functional parsing errors (and not usually omissions of functional categories) that occur in certain structures where the L2 grammar is sufficiently different in complexity to cause confusion. Since L2 learning is seldom completely successful, even at the final stages, the characteristics of fossilization typically are reduced to instances of highly formal *transfer errors*. Such highly abstract errors have been reported in Schachter (1989: p.73), and White (1989: 134) and come to include cases of complexity of movement such as e.g. Wh-Question formations, Subjacency, and Embeddings.[iv]

Studies in English acquisition suggest that there may exist a general *'No INFLection'* Stage-1 (14-30months ±20%) during which subject-agreements and possessor agreements go completely unmarked.[v] Radford and Galasso (1998), drawing on data from Galasso (1999), generally characterize this No INFL Stage-1 as Lexical-Thematic—hence, in the sense of PPT as sketched out above, a stage exclusively motivated by UG-principles composing of Noun Phrases & Verb Phrases alike—whereby all Case markings take the default Objective GENitive form, and coupled with the fact that a rank of functor word omissions proceed: e.g., omissions of Poss. *'s*, and 3Sing. *'s, (inter alia)* cited in (5) & (6) below:

(5) a. That *Mommy* car (Mommy's). That *me* car (my). No *you* train (your)
b. It's *him* house (his). *Me* go home (I). Him do it (He) *Him* is going (He)
c. Baby *have* bottle (has). The car *go* (goes). The other one *work* (works)

(6) a. That [$_{IP}$ Mommy [-agr ø] car] a'. That [$_{IP}$ Mommy's [+agr] car]
b. It's [$_{IP}$ him [-agr ø] house] b'. It's [$_{IP}$ his [+agr] house]
c. Baby [$_{IP}$ have [-agr ø] bottle] c'. Baby [$_{IP}$ has [+agr] bottle]

As mentioned above, such wide spread Agr errors are rarely cited even in the very beginning stages by those attempting to 'properly learn' English as an L2 (save Pidgins). Rather, what seems to be the norm in L2 learning are potentially random and optional omissions of such inflections—the fact that L2 students optionally project Agr merely indicates the classic distinction made between the L2 students' *acquisition* of Inflection *vs.* the *mastery* of Inflection (using R. Brown's 80%-90% criterion for mastery).

English L2 Learning: Agreement Most data taken from English L2 data-bases have shown that the Agr mechanism is to a certain extent actively projected onto the L2. Unlike English children errors of omissions and substitutions (as in the Accusative default case settings cited above), the type of errors typically reported tend to be *misanalyses* that fall into a overgeneralization class. The fact that there are more wide-spread overgeneralizations, as compared to omissions, is a sure tale-tell sign of the nature of L2 learning processes: namely, there is certainly a rule-based apparatus at work in formulating the L2 grammar—a grammar based on UG, but to some extent influenced by the parameters of the L1. The following section looks at two such reanalyzed overgeneralizations: *(i)* Agreement of Subject Pronouns, and *(ii)* Agreement of Number.

3. The L2 Study & Results:

Methods This short six month observational trial study (part of a city 'refugee-project') was conducted in a classroom setting with the sole aid of daily diary notation (no recordings were done). In-class Writings and Speaking Skill sessions produced much of the naturalistic English L2 data I collected. The study's original goal was to test an ESL method known as *The Sheltered Initiation Language Learning* (SILL) (the results of which will be examined in a short follow-up paper) the creation of Zev Bar-Lev (San Diego State University) (see note 6). Without getting into details here, the main idea behind SILL is that L2 students seem to work best in learning a foreign language (=L2) when confronted with a series of carefully arranged (albeit at times generically modified) grammatical bench-marks. Prof. Bar-Lev steers learners enter a language through a series of natural grammatical progressions—in a sense, he constructs a sheltered English input stream by which he rears the L2 learner into some of the old same intrinsic 'bench-mark-properties' of L1 acquisition. He refers to this natural progression as 'planned inter-language levels', hence, exploiting to some extent Bickerton's 'Bioprogram' (with reference to Pidgin languages) as noted earlier (§1). This use of this 'L1-like' strategic intervention by the instructor puts little or no emphasis on correcting language errors. Hence, the first weeks of our study regurgitated the arranged prompts of verbs (volition, necessity) and Personal Nominative Pronouns without any correction input.

The Study The students involved (20 in all) were initially screened and were shown to have had very little or no previous English knowledge. (What little background knowledge they might have had, from the outset of the project, would have been confined to a splattering of English lexical borrowings). The students' educational experiences ranged anywhere from the completion of a U.S. grade 4 (i.e., basic proficiency in reading and writing with a school completion age of 7-9 to the completion of an educational level comparable to the second year of U.S. High School (4 students in all). The sample sets of data which form the bases of our discussion on Inflection & Agreement come from my diary notes (weeks 1-6) taken from the writing/speaking exercises and are without any tests or significance analyses other than the actual figures and percentages I give which constitute the demarcation of my Stage-1 *vs.* Stage-2 cited in Table 1 below (§3.1).[vi]

In the case of Double Subject Pronoun constructs (DSP) (§3.1), though I wouldn't consider this phenomenon to be wide spread by any means, (as their production and distribution, when held up against the backdrop of the entire study, amounts to little more than a few confined sporadic examples within the first six weeks of the study), I did find its occurrence rate, at times on an individual basis, high enough to warrant some detailed discussion. For instance, on any given day, on average, there would be between 4-6 ($\geq$25%) individual students producing such DSPs: in the first two weeks, not a day went by that I didn't note at least one DSP in my diary. At first glance, I was confused about the nature of these constructs and I originally postponed any analyses of them. It wasn't until later when I began to revisit my data collection that I began to unravel some sort of pattern—a pattern that seemed to link DSPs to a relatively high occurrence rate of erroneous Pro-drops among English constructs. (See Table 1 below). In other words, a correlation seemed to hold regarding Pro-drop acceptability and DSP acceptability. This is to say that we consider our Stage-1 to be defined by both the erroneous emergences of

DSP and Pro-drop constructs alike, even though the two systems are manifestations of different paradigm realizations. Stage-2 is therefore characterized by a two-pronged realization that English requires *(i)* an obligatory overt subject (in declarative sentences), and *(ii)* that potentially derived DSPs—once considered as morphological verbal inflections—are now understood to be functor pronouns which take anaphoric relation. It is in this sense that we can draw some connection between the increase in overt subjects on one hand with the decrease in DSPs on the other.

3.1 Double Subject Pronoun Constructions

The first of the two striking features of potential L2 Transfer takes shape early-on in the form of Double Subject Pronoun constructs (DSPs):[vii]

(7) Double Subject Pronouns: Stage-1 (weeks 1-6)

a. Ø i-like speak English.	b. Ø i-like tripa	c. Ø he-like(s) Ford cars
a'. José i-like speak English.	b'. You i-like tripa	c'. John he-like(s) Fords.
d. Ø he-like(s) work.	e. Ø i-want #	f. Ø i-need paper
d'. John he-like(s) work	e'. You i-want #	f'. I i-need paper (2x)

(8) Pro-drop in English L2 without Affix Inflection: Stage-1 (weeks 1-6)

a. Ø need paper.	b. Ø like more money.	c. Ø like fast cars.
a'. I need paper.	b'. Robert like more money	c'. We like fast cars.
d. Ø can like work.	e. Where Ø going?	f. Ø want no more.
d'. I can like work.	e'. Where you going?	f'. He want no more

Table 1

DSP ratio to pro-drop: Stage-1 vs Stage-2

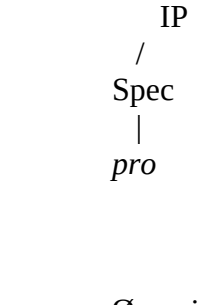
	Pro-drop (%)	*DSP**
Stage-1 (weeks 1-6)	16% approx.	n.= 52 (7%)
Stage-2 (weeks 7-12)	0%	n.= 4 (0%)

* These represent token examples. I don't figure into the count repetitions marked in my diary that were over-generated perhaps due to the nature of the speaking/writing tasks at hand. Out of the 56 DSPs, more than half make-up the *{# "i-like"}*-class. The 4 examples in stage-2 all came from one student.
The statistics n.= 52 for DSPs and 16% for Pro-drop (Stage-1) come from out of a possible total appropriate context environment of 700+. A combined total of 23% of all declarative SV(X) (X=Adverbial) sentences at Stage-1 were either of the 'non-target' Pro-drop or DSP type.

A left dislocation analysis could account for sentences such as *John, he like(s) work* (ex.7 d') where there would be an antecedent of the pronoun with proper phi-features (person, number, gender). The problem with this analysis however is that the students had no exposure to them in the sheltered English input (and dislocations are not common in native English). A dislocation analysis would also fail to account for token sentences (7a', b', e'). Example (7f-prime) that I found twice in my diary notes (uttered in repetition) perhaps makes the strongest case against any dislocation analysis and seems to suggest that the gemination of morphology here unfolds unhampered by any phonological constraints.

In (7) above, a potential analysis of Non-Parameter-Resetting seemingly gleams out. Consider the role in which the L1 Spanish parameterization might be playing on the English input here. As presented in (2) and (3) above, Spanish is a 'Pro-drop' language—if anything, there probably should be no pronoun subjects, let alone double pronouns. How can we account for this anomaly that is certainly not part of the English input? Well, for starters, the fact that Spanish is a pro-drop language doesn't necessarily mean that subjects always get (optionally) dropped. In fact, instances of otherwise normal pro-drop constructs, at times, actually get analyzed as being somewhat marked for native Spanish speakers: such common strings as **?Hablo espanol vs. Yo hablo espanol ('(I) speak Spanish')* tend to require an overt subject (in certain contexts). Moreover, the fact that Spanish is indeed a pro-drop language does seem to be triggering some sort of overgeneralization here. For instance, Double Subject Pronouns often occur in my data along side seemingly target single pronoun subjects. However, what may appear to be a seemingly innocent and correct target construct is in all actuality psycho-linguistically derived from a non-target pro-drop parameter which, in the mind of the Spanish speaker, is for all intents and purposes nothing other than a correct procedure given his L1 status as a pro-drop language. In other words, what might appear to be fine in the surface Phonetic Form (PF) level is actually an erroneous grammatical construction. In order to make matters more concrete here, let's consider what type of phrase structure a Double Pronoun Subject might have (irrelevant phrase structure details omitted):

(9)



In (9) the overt pronouns simply would occupy the Spec-IP position, voiding out the pro-drop construction. *The example given in (9b) is unattested in my data and is presented here only to preserve the theoretical paradigm.

a. Ø i-like speak English
b. Ø you-like tripa*
c. Ø he-like(s) Ford cars

What (9) above suggests is that Spanish speakers learning English may create an erroneous strategy by which they 'cognitively misanalyze' the English obligatory overt pronoun as an agreement affix which adjoins to the main verb: i.e., they are in fact reanalyzing overt subject pronouns as Heads of IPs. Firstly, such a strategy is not so far fetched as one might imagine.[viii] Given that Spanish is a pro-drop language, the speaker's first course of action is to assume that English too is a pro-drop language. Studies examining the role of transfer of the pro-drop option between L1 and L2 have come a long way in confirming this (cf. White 1985, 1986, 1989). In addition, such findings support the notion that the pro-drop option in UG has an unmarked status (Liceras 1989). Secondly, a seemingly paradigmatic English affix INFL-marker does seem to parallel what one finds in Spanish—specifically, if we look at the verbal suffix conjugations where a verb stem such as **Habl-ø* (*habl-ar* 'to speak') cannot occur without some type of inflectional morphology. Notwithstanding the fact that Spanish generates its verbal morphology as a suffix at the end of the stem (like English *+s*), the fact that there lies a measurable contrast in the two inputs between whether or not the main verb stem is required to be 'morpheme-bound' may somehow contribute to this overgeneralization.

The *stem-parameterization* (Hyams 1987) stipulates for a verb type to be either [-bare stem] as **habl-ø* for Spanish (e.g. *Yo Habl-ø, 'I speak'), or a [+bare stem] as *speak-ø* for English (e.g. 'I speak') and *Je Parl-ø* for French (e.g. 'I speak'). More specifically, what we are claiming here is that by first erroneously assuming the default status of the pro-drop option for English, the phonological onsets regarding the verb stem overcompensates in forming spurious Agreement morphologies, hence rendering double pronoun constructs. In closer examination, the fact that English has very little in way of verbal inflection anyway, may shift the focus of morpho-phonetic saliency to the preverbal affix position. This shift—recognized here as a mode of strategy of specific 'Spanish L1 transfer'—affects the way in which the speaker assesses the verbal input leading to a hypothesized paradigm of the L2 language. Again, since Spanish doesn't allow verb stems without inflection, the strategy is to first construct a Spanish style template in order to fit the input into that template.

In an unrelated paper, Grodzinsky (1985) claims that this [-bare stem] parameter is so pervasive that even amongst severe Spanish and Italian aphasics, inflection is never omitted. Rather, when errors do occur, they involve the use of the wrong inflection morpheme (e.g., person or number of subject). (This is apparently what one finds in the first language acquisition research of pro-drop languages). Consequently, what we have is a reduced verbal paradigm (1-3Person Sing Present) that looks something like (10) below:

(10) Verbal Paradigm of Spanish-to-English with L1 Interference*

L2-English		Spanish		L1-English
Speak		*Hablar*		*Speak*
a. /ay/-I speak (1,2,3per)	=>	habl-/o/, /as/, /a/	=>	speak-ø,ø,s
b. /yu/-you speak (2per)	=>	habl-/as/	=>	speak
c. /hi/-he speak (3per)	=>	habl-/a/	=>	speak-s

* The paradigm as it stands is imperfect in the Spanish mind. The fact that our Spanish subjects mix inflections—e.g., *You i-like tripa* (7b') whereas the seemingly first person 'I' Inflection clashes with the second person pronoun 'You'—may simply be a residual effect of the overall complexity of Inflection in grammar. This would be similarly true in the case of an English subject erroneously saying *e.g., Yo habl-as* (I you speak). An alternative account would be that /ay/ + [verb stem] holds a default status for 1-3 pers.

One further implication to this analysis may give an alternative account to the status of pro-drop here. It has recently been suggested in the literature (Sano 1995) that the stem-parameter may somehow even be implicated in the pro-drop-parameter itself. In very general terms, Sano suggests that [-bare stem] languages (e.g. Spanish, Italian) depend on their inflectional morphology to license overt subjects, (cf. licensing conditions based on morphological uniformity; Hyams: 1987), while [+bare-stem] languages (e.g. English, French) license overt subjects independent of their inflectional morphology. If this is the case, there is every reason to believe that the Spanish speaker is mapping the English input onto a Spanish paradigm and, thus, as a result of the speaker's hypothesizing, English is viewed as opting for pro-drop. Hence in the very beginning stages (=Stage-1), where Spanish-L1 transfer is at its highest, native Spanish learners assume the following incorrect parameterizations:

(11) Incorrect Hypothesis for L2 English: 'Pro-drop Parameter'
English => { [+pro-drop], [-bare-stem] }

Once the L2 students perceive enough English input to falsify the erroneous parameter settings (defined as our Stage-2), other means of hypotheses testing follow which eventually lead toward a correct setting. However, and what is crucial to our discussion here, the means by which the L2 speaker actually comes to know the correct English setting do not naturally follow from an L2 parameter 'Re-setting' *per se*, as potentially envisaged from a parameter adjustment of (11); rather, the L1 parameters as instantiated in (11) infiltrate down into a more cognitive general problem solving mode of learning. In this sense, the equation in (11) does not in any way get 'Re-set' in an opposed setting of English=>{ [-pro-drop], [+bare stem] } in terms of parameters made available from UG. Rather, the following course of action seems to apply:

(12) Correct Hypothesis for L2 English: 'Pro-drop Parameter': Stage-2
English=>[=UG, ≠Spanish Pro-drop Parameter]=> general problem solving=> L2

The fact that the L2 learner eventually learns the L2 grammar is a credit not to parameter re-settings (as potentially argued for in (11)), but to general problem solving skills made available in other cognitive modules in the brain as contrastive measures take hold in face of contrary L2 information. It is viewed here that L1 serves as a springboard to measure such contrasting information relevant to parameter differentiations. Hence, there is a real notion here that an Indirect Access Model described herein does indeed inherently contain aspects of *L1-to-L2 transfer*. The L2 learners do not simply have access to default or non-L1 values, but seem to rely heavily on a 'springboard analysis' of their native L1 in order *(i)* to make salient the nature of the parameter itself, and then *(ii)* to make inroads into accessing and handling the parameter in the form of general problem solving skills. One interesting side issue which could arise from this position involves more Cognitive based models of L2 learning. For instance, language learning under cognitive models states that there are real psychological distinctions (e.g., in terms of mental processes and memory, etc.) between notions of *Declarative* knowledge (arguably innate L1 knowledge as made available via UG) *vs. Procedural* knowledge (arguably empirical L2 knowledge as made available via general problem solving skills) (cf. O'malley and Chamot 1990:16-25). Such an analysis jibs with Krashian's general claim that native L1 acquisition is in fact a special sort of learning which becomes lost to all native speakers (with the onset of filters) after a critical period, never to be recalled again for L2 learning or otherwise. Following suit, a similar tact could be positioned to the effect that L2 learning can only come about through Procedural knowledge, a knowledge that bares little resemblance to parameter (re)setting.

In sum, we accept Krashen's distinction between Acquisition and Knowledge—and his general claim that learning doesn't lead to acquisition. However, we accept this only insofar as it is made apparent in light of the Fundamental Difference Hypothesis (FDH). Where we believe he errs is in his analysis that L1 equals L2 (that is, that there is a 'clean-slated' UG always made available to the L2 learner). We believe he errs in his belief that any form of learning via overt strategies will make little or no contribution to the L2. Unlike Krashen, we believe that such learning via overt strategies is the only possible means available to learning an L2.

3.2 Remarks on Plural Inflection Overgeneralization

A second noted overgeneralization pattern has to do with the Plural Inflection *'s'*. This phenomenon has been well documented in ESL classrooms ever since the 1960s, and entails a much more simplistic analysis. Instances of Spanish-type English constructs such as e.g., *I have two* ****reds cars*** (*carros rojos* (=cars red)), etc. typify how inflection, an abstract functional category which is prone to language specific parameterized interference, often gets mis-spelled in the transfer to a second language. What exactly is going on here is a very simple process by which the Spanish L2 speaker takes the Spanish plural marker *'s'*, which marks for plural number on both the N(oun) and Adj(ective), and incorrectly maps it onto the English N+Adj counterparts. I believe such overgeneralization adds support (albeit simplistic in nature) to the Fundamental Difference Hypothesis (FDH) as stated above in the sense that such errors portray the L2 learner as creating L1-based strategies for dealing with the L2 input. If Krashen's model

(in its strongest form) is correct, and UG is actually given as a 'clean-slate' to the L2 learner, one would be hard pressed to account for such seemingly highly 'language-specific' overgeneralizations. Although children in the course of L1 acquisition do make similar overgeneralization errors—such as with irregular verbs and modals (respectively), e.g., **go-ed, *swim-ed, *should-ed*, such errors are however motivated by internal factors and are seen as being part of the child's overall innate (*hard wired)* capacity to formulate fundamental 'rule-based' paradigms in an attempt to *(i)* sort through the data, and *(ii)* test hypotheses. The overgeneralization of the regular past tense rule [+ed] is now well understood by developmental linguists: such overgeneralizations have single handedly bolstered the case made against proponents of non-ruled based connectionists models of language learning. (See Clahsen *et al*. 1992, Marcus *et al.* 1993, and Pinker 1999: 117-119).

Along with Bley-Vroman (FDH), we believe that such errors in effect get caught-up in the sifting of L2 input. T*he native language must be sifted: That which is likely to be universal must be separated from that which is an accidental property of the native language* (1989: 52). In one respect, L2 learners are a lot like children—namely, they are economical with their learning. L2 learners certainly know that the arbitrary form-meaning relationship will no longer hold (morpho-lexical level), they nonetheless assume that the grammar is the one form of language that should have little change. In one sense, they are exactly right. In fact, Chomsky's (1995) current theory, to a certain extent, is precisely devised to show just that—viz., while there can be a universal grammar (UG), no one would ever dream of a universal morphology. That is, they assume as the default that the language specifics of their L1 is similar to the L2. In the absence of contradictory information, this default setting holds. This makes for a very broad claim and more empirical studies need to be completed. However, preliminary research into L2, thus far, does seem to suggest some form of L1 transfers (in a default mode) onto the L2. Very often this transfer strategy works without any need for change—as in the case that most Spanish speakers correctly assume English SVO word order as the default. However, when the default is incorrect, as witnessed above (§3.1) regarding pro-drop, it may take time and additional effort to formulate hypotheses and build-up workable paradigms. As claimed from the outset of this paper, such L1 interferences seem to come on the heels of L2 input-overload and tend to precede a second more advanced stage where the L2 input begins to be properly assimilated. There is no doubt that better heuristic methods are needed for dealing with the subtle nature of L2 transfer.

4. Summary and Conclusion

I believe some of the broad ideas expressed in this paper constitute some difficulty for positions in SLA that call for a Natural 'clean-slated' UG for L2 learners. Furthermore, the notion of *L2 interference* seems to correlate with other studies which clearly show that the nature of L2 errors are not just random errors taken from the myriad of possible L1-to-L2 mismatch constructs made available by UG; but rather, such errors indeed tend to be strategically derived by the speaker's native L1 language parameter settings. In sum, our stage-1 (weeks 1-6) characterized Spanish speakers learning English as a Second Language as making highly complex decisions based on their native L1. This resulted in their assuming that English was a [-Bare stem] and [+Pro-drop] language—

thus, enabling them to project Double Pronouns alongside Pro-drop constructs. Our Stage-2 (weeks 7 and onward) show some parallels with the emergence of obligatory overt subject pronouns and the overall decrease in DPSs. Stage-1 could therefore be described as that initial period where the ESL student is trying to work out a cognitive-based learning strategy for recognizing and dealing with otherwise innate psycho-linguistic properties of UG parameters and their settings. Finally, we believe that SLA positions which call for some form of L2 interference (cf. Bley-Vroman's FDH), coupled with L2 cognitive strategies (cf. Clahsen, Clahsen and Muysken), seem to afford the best accounts for this data and data elsewhere in the literature. The fundamentals behind the ideas expressed herein, when taken together with what has thus far been compiled in the L2 literature, suggest that UG does play a role in L2 development, albeit only that specific part of UG which has been instantiated by the native language. In conclusion, we believe the following version of an Indirect UG Access will ultimately be best positioned to handle future increasingly complex SLA data.

(13) An Indirect UG Access Position for L2 Learning

1. UG can be reactivated for L2 learning only via the native first language:
   - L2 doesn't have any access to a 'clean-slated' UG;
   - L2 grammar is conceived by *(i)* UG principles and *(ii)* L1 set parameters;
   - L2 is built upon learning strategies (O'Malley & Chamot, Clahsen).

A. UG principles for possible grammars remain intact; however

B. Procedures which enable a child to arrive at a grammar via pure input is no longer available.

=>UG in its entirety is no longer available to the learner (=Indirect UG Access).

2. L2 learners first assume that the parameter settings of the native first language are appropriate for the second language—unless positive evidence from the input indicates otherwise. Hence, *L2 Transfer* errors occur up until a more advanced cognitive stage of development enables the learner to cognitively manipulate the L2 input and formulate it into an L2 grammar.

EndNotes

[i]. One notion that UG may "broadly" constrain L2--as opposed to "tightly" constrain--has to do with some recent studies which suggest that only those UG principles that are activated within the native L1 may then carry over and function within an L2. (See Schachter 1989: 85).

[ii]. Krashen claims that the learner's knowledge of the first language and greater cognitive development will have no effect on the L2 learning process--neither positively, negatively, via default, or otherwise. In a stronger version of this, Transfer of L1 to L2 is strictly impossible.

[iii]. Lightbrown (1987) among others have reported that *(inter alia)* very high scores were reached early on in the learning stages of functional categories Tense/Agreement (those categories acquired last by L1 learners), and that these explanations were based on the frequency of input. For instance, third person *"s"*, auxiliaries, *ing*-forms, as well as Case (Pronoun Inflections) were all reported to be very close to the Roger brown 90% mastery level at stages 1 and 2 of English L2 learning. Where reports differ, it could be claimed that the frequency and richness of the input was not sufficient to allow for a straightforward learning process in the sake of mapping L1 onto L2.

[iv]. The Adjacency Parameter as detailed in White (1989: 140) has been characterized as [-strict adjacency] or [+strict adjacency]. Differences were shown to the affect that French speakers--French being a language which doesn't observe strict adjacency given that material can intervene between verb and object--allowed

the transfer of their L1 adjacency parameter to influence L2 English grammaticality.
E.g. (1) *Mary ate her dinner quickly* vs (ii) **Mary ate quickly her dinner* were both judged to be correct. Subjacency violations in L2 acquisition are complicated by the fact that native speakers of Subjacency languages such a Indonesian (which have Wh-movement) and Chinese could not clearly recognize subjacency factors in when presented in English. Again the complexity of the structures certainly play a role in such errors--be it negative or positive transfer errors. (See also note 7).

[v]. Data taken from Radford & Galasso (1998):

(i) Occurrence in Obligatory Contexts:

Age	3sgPres "s"	Poss "s"
2;3-3;1	0/69 (0%)	0/118 (0%)
3;2-3;6	72/168 (43%)	14/60 (23%)

(ii) Frequency of occurrence of first person sing. Poss

Age	Object Me	Gen My/Mine	Nom I
2;6-2;8	53/55 (96%)	2/55 (4%)	0/55
2;9	11/24 (44%)	14/25 (56%)	0/25
2;10	4/14 (29%)	10/14 (71%)	0/14
2;11	5/24 (21%)	19/24 (79%)	0/24
3;0	4/54 (7%)	50/54 (93%)	0/54

[vi] *Caveat:* Although the data presented herein is scant at best, our motive behind the study is merely to spawn further theoretical discussion. The fact that such data today is all too often dismissed as "insignificant utterance-types" (which should be relegated to the proverbial waste-paper bin of insignificant mistakes), I think, unfortunately speaks volumes about where the direction of empirical investigations is headed. I fear that such laboriously detailed studies which fashionably back up claims by clever manipulation of figures, surrendering all to "significance-counts" at the expense of the "nature-of-the-anomalies" themselves, forever risk relinquishing some insight into the highly complicated and minutely detailed chronicles that language development has to offer. Unlike the pioneering days of L1 acquisition research--when a child's early grammar was considered as some "imperfect version" of the adult's target grammar--we today rightly recognize that the child's grammar is a legitimate grammar onto itself. This goes for SLA research as well. Only by first considering the entire range of L2 output can we ever come to fully understand the grammars of interlanguage. Regarding the over reliance in "counting", let me just say that I adhere to a linguistic adage, I think first coined by A. Radford and levelled against K. Wexler, cited below:

"Every example counts!"--as opposed to--*"Count every example!"*.

[vii]. One additional aspect of the study was to see whether or not a Sheltered Language Learning environment would promote faster acquisition (see Bar-Lev for his Sheltered Initiation Language Learning). Due to this approach, we restricted the range of vocabulary and grammar to only a handful of verbs of necessity such as *like, need, want* and slowly began to add verbs as we went along. The entire six months of study was restricted to the use of the following specific grammars: 1,2,3 Per Sing Nom Case, Present Tense, Finite verb + Infinitive verb constructs (e.g. I like to go, etc.). The verbs *like, want,* and *need*, shown in (7), make-up part of the first twelve verbs of the first six weeks of study, and are the verbs found to contain the most DSPs. After week six, and with the increase of the number and semantic range of verbs (from 12-24 in number, and from verbs of necessity to causative verbs), the rate of DSPs dropped to zero. I classify this as stage-2: viz. students realize English is [-pro-drop] with little verb morphology. The mis-analyses of the Subject Pronoun as a possible Head of an IP (AgrP) is no longer an option.

[viii] (i) Stowell (1981) argues in the case of Double Object Constructions in order to save Adjacency conditions placed on the verb and the object (for reasons of case assignment), the verb and the indirect object together form a complex verb, which is adjacent to the direct object and gives it case:

E.g. John gave Mary a book. The verb and I.O form a complex verb *gave-Mary* (+ D.O.) *a book.*

(ii) Possible reanalyses of Subject Pronouns as Heads of an AgrP are likewise permitted in Greek. (Tsimpli and Roussou (1990). (See also note 4 on Adjacency).

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