

The syntax-semantics interface: the case of *easy-to-please* constructions in L1 Greek / L2 English

1. Aims of the study

- To examine the syntax-semantics interface in L2A in a phase-based model of language description (Chomsky, 2001; 2005), focusing on the acquisition of tough (*easy-to-please*) constructions (henceforth, TC).
- To provide an account of the variability attested in L2 development, based on the feature interpretability divide and the hypothesis about the vulnerability of syntax.

2. Theories of L2 Acquisition

- Accounts such as the FT/FA (Schwartz & Sprouse, 1996) and the Missing Surface Inflation Hypothesis (Haznedar & Schwartz, 1998; Lardiere, 1998; Prévost & White 2000) attribute non-native deviation from target performance to L1 initial interference (cf. FT/FA) or the vulnerability of the syntax-morphology interface (cf. MSIH). Both predict ultimate attainment based on the assumption that syntax is intact in L2.
- In contrast, the Failed Functional Features hypothesis (Hawkins & Chan, 1997) and the Interpretability Hypothesis (IH of Tsimplici 2003; Tsimplici & Mastropavlou, to appear) argue for a syntactic deficit and attribute L2 optionality/variability to the unacquirability status of formal (LF-uninterpretable) features, which are subject to maturational constraints (cf. CPH of Johnson & Newport 1991; Smith & Tsimplici, 1995).
- However, the IH (Tsimplici, *ibid*) predicts that semantic (LF-interpretable) features such as animacy, Q, etc are unproblematic for L2 learners. Moreover, it holds that universal principles (e.g. Full Interpretation) and operations (e.g. syntactic computations such as AGREE, MERGE) are available in L2A as well.

3. Syntactic background

Some basic assumptions

- All formal uninterpretable features need to be valued at the relevant phase (e.g. object agreement and ACC Case at the vP phase, subject agreement, NOM Case and Op features at the CP phase).
- No uninterpretable features can remain unvalued at the C-I interface.
- Association of EPP/D with argument lexicalisation, following Manzini & Roussou (2000). No EPP or Agr in English non-finite TP. Rather, the thematic features licensed in the vP domain but not associated with an argument position are attracted by an antecedent (respecting MLC).
- Subject agreement on verb and object clitics in Greek are the morphophonological spell-out of nominal (uninterpretable) features on a verbal

head, hence their resumptive uses (Tsimplici, 2003). Clitics (deficient elements in the sense of Cardinaletti & Starke, 1999) can be part of A'-dependencies with a specific reading (as in d-linked chains).

- +Finite specification on T in Greek (when selected by both Indicative and Subjunctive Mood) due to the presence of Agr (argued to have semantic content by Alexiadou & Anagnostopoulou, 1998; Roussou, 1998) since it is needed for the identification of the subject. As a result, a CP that is +Agr (in other words, with ϕ -features, which it passes on to the selected T) constitutes a strong phase even when there is [-] tense specification on T →subjunctive clauses: strong CP phase.
- Greek pronouns have a tripartite grammatical gender distinction. In contrast, English pronouns are specified as +/- animate (a semantic feature).

Tough Constructions in English

- Selectional property of certain adjectives (of the *easy/pretty*-type): subcategorisation for a [+pred] CP (Yeo, 1997) responsible for attracting a type of phrase to its spec. → predicate modification construal.
- Dependency between the object gap in CP and the matrix DP, which receives a property reading, extensively argued to result via a (non-quantificational) null operator (Chomsky, 1981; Lasnik & Stowell, 1991; Contreras, 1993, a.o.)

(1) This book_i is easy [CP Op_i [IP PRO to read *t*_i]]

- Recent accounts (Hornstein, 2001; Hicks, 2003; Sportiche, 2006) dispense with the null operator analysis and argue in favour of NP movement (triggered by a type of *wh* feature which is non-quantificational) along the lines of the promotion analysis of relative clauses. (Note that Hornstein's analysis hinges on Nunes' sideward movement (2001) and assigns an adjunct status to the embedded CP).
- Sportiche's NP raising analysis (adopted in this paper) is based on partial reconstruction facts (e.g. binding of anaphors by the infinitival subject but unavailability of narrow scope reading of quantifiers in matrix DP). The derivation of a TC would roughly look like in (2):

(2) This book is easy [CP [DP *wh*- [NP book]] [TP to [vP *wh*-book [VP read *wh*-book]]

- Unavailability of subject extraction from TCs with a passive infinitive (see ex. 3) due to lack of EPP feature in -T that would license an argument position (also see Rizzi & Shlonsky's (2005) account of freezing effects).

(3) *This book is hard to be read (passive complementation)

- Unavailability of subject control into a transitive construction (see ex. 4) due to selection of a +pred complement.

(4) *The King was hard to draw a portrait of himself (SR: subject reading)

Tough Constructions in Greek

- TCs in Greek are available with adjectives of the *omorfos* ‘pretty’ type, are in subjunctive Mood and have been argued to be of adjunct status (Tsimpli 1999).

(5) H Sofia ine omorfi na tin kitas

The_{-fem.nom.sg} Sofia_i is pretty_{-fem.nom.sg} na_{-subjunctive} her_i -look-2s at

- A clitic object pronoun co-indexed with the matrix subject is obligatory and, according to Tsimpli (1999), it is used resumptively as it is part of a dependency with a null operator responsible for the predication relation with the matrix DP. Recently it has been argued (Spathas, 2006) that the clitic itself acts as an operator since it encodes λ -abstraction. (cf. Adger & Ramchand (2002) for arguments that resumption is semantic binding).
- TCs with the *easy*-type of adjectives are not frequent in Greek as for the embedded object to be interpreted as the subject of predication there is an alternative route: impersonal construction with the object (marked for ACC) at the spec of a TopicP in the matrix clause, as in (6):

(6) Tin camera afti ine efkolo na tin xiristis

The_{-fem.acc.sg} camera_{i-fem.acc} this_{-fem.acc.sg} is easy na_{-subjunctive} her_i-operate-2s

3. Previous L1 and L2 studies into English TCs

- Chomsky (1969) → assignment of non-adult subject control readings of English TCs by children under 8.
- Anderson (2001) → availability of both readings (subject/object) by children at the intermediate stage of L1 English acquisition.
- Parodi & Tsimpli (2005) → optionality in the acceptability of pronouns and gaps in TCs in L1 Greek / L2 English, and in lower proficiency L1 Spanish / L2 English in +TCs with an overt complementiser (‘for’).

4. Predictions

Based (i) on the hypothesis about the aquirability of semantic features and of the inability of parameter resetting in L2A (also see Tsimpli & Roussou, 1991), (ii) the syntactic differences between English and Greek, and (iii) the findings of previous research, the predictions for the present study were the following:

- (a) Tolerance of resumptive pronouns in non-quantificational dependencies (TCs) if treated as clusters of uninterpretable object agreement features.
- (b) Regulation of the resumptive strategy by the semantic features of animacy, the effect expected to be stronger at more advanced stages of L2, due to higher sensitivity to L2 input.

- (c) Misanalysis of non-finite T as +Agr, → non-finite CP: a strong phase. Hence, higher tolerance of pronouns in the presence of overt material in C (for +DP) and acceptability of subject control structures.

5. The L2 data

Participants

98 participants divided in 3 groups: (i) (INT) group (n=35) of lower proficiency, (ADV) group (n=39) of higher proficiency, and (iii) 24 native speakers (NS). INT and ADV have received formal tuition in English since the age of 10+ and were assigned to two groups on the basis of their score in OPT (Allan, 1992)

Table 1. Information on the participants.

<i>Groups</i>	<i>Number</i>	<i>Mean Age</i>	<i>OPT Mean Score</i>
INT	35	15.7 (12-19)	143 (135-150)
ADV	39	17.6 (13-23)	169.3 (165-180)
NS	24	33.5 (20-50)	-

Methodology

- Bi-modal paced acceptability task (PAT), containing 24 critical items and 30 distractors.
 - Five-point scale ranging from -2 (good English) to +2 (bad English), while 0 encoded the 'not sure' response (White et al., 1998).
 - Variables tested through 16 TC: i) pronoun vs gap, ii) null vs overt complementiser, iii) +/-animate pronouns (see examples below).
- (7) a. We believe this star is impossible to interview this month. (*gap-null comp-animate DP*)
b. *A sponge cake is easy to make it in just a few minutes. (*pronoun-null comp-inanimate DP*)
c. *Our new neighbour is impossible for us to stand him anymore. (*pronoun-overt comp-animate DP*)
d. Ballads have always been easy for me to play on the guitar. (*gap-overt comp-inanimate*)

Plus, 8 (ungrammatical) subject control sentences:

- (8) a. *When she is angry, Susan is hard to be calmed down. (*passCP*)
b. *People are difficult to accept changes in the political system (*SR*)

Table 2. % target performance in TCs (0 responses excluded).

	<i>OBJECT CONTROL</i>		<i>SUBJECT CONTROL</i>	
	<i>Easy-to-please (ungr.)</i>	<i>Easy-to-please (gr)</i>	<i>Easy-to-please (passCP)</i>	<i>Easy-to-please (SR)</i>
INT	127/239	162/256	35/127	50/124
%	53.1	63.3	27.5	40.3
ADV	214/270	213/280	35/146	70/126
%	76.4	76	24	55.5
NS	169/188	162/177	61/86	93/96
%	90	91.5	71	96.9

- Developmental differences between the two learner groups in all constructions but TCs with a passive complement. (TC/ungr.: $\chi^2 = 20.70$, $p = .000$; TC/gr.: $\chi^2 = 17.59$, $p = .000$; passCP: $\chi^2 = 5.81$, $p = .016$).
- Significant differences between the ADV and NS in most sentence types (TC/gr.: $\chi^2 = 9.15$, $p = .002$; passCP: $\chi^2 = 51.89$, $p = .000$; SR: $\chi^2 = 47.67$, $p = .000$).

Table 3. Effects of animacy and overt complementiser ('for') on pronoun acceptability for the L2 groups.

		+animate	-animate	Sig.dif.
INT	TC -for XP	39.3	51.7	ns
	TC +for XP	30.8	72	$\chi^2 = 20.58$, $p < .01$
ADV	TC -for XP	17.2	15.2	ns
	TC +for XP	20	37.5	$\chi^2 = 5.04$, $p < .05$

Results from Logistic Regression (Wald) tests:

INT: main effect of animacy ($\chi^2 = 5.11$; $p = .024$)

interaction of animacy*complementiser ($\chi^2 = 4.02$; $p = .045$)

ADV: Interaction of animacy*complementiser ($\chi^2 = 10.15$; $p = .018$)

6. Conclusions

- Acceptability of pronouns by advanced learners, although significantly lower than in earlier stages, suggests there is strong requirement for overt material at the foot of the dependency (allowed in IL grammars since it is non-quantificational and not 'read' at the C-I interface).
- Regulation of resumption by animacy suggests that learners are starting to acquire the target language specifications for pronouns, namely +/-animate.
- Still, in the case of the advanced learners this is overridden by the requirement to fill the object position in case of overt material in C, possibly because of an

- ‘opacity effect’ (Parodi & Tsimpli, 2005) created by the +AgrS abstract property of the C-T dependency in L2 English.
- The dramatically high acceptability of subject control into passive complements might be due to the +Agr in TP, which allows for wh-movement through specTP. In this case, the valuation of the nominal features on T by the subject copy allows the derivation to be ‘read’ at the C-I interface.
 - In sum, –finite CPs in L2 grammars may have the properties of +finite CPs and require valuation of formal features before the next phase.
 - As for the high acceptability of SR may be due to an alternative control (-pred) derivation, since this is a possibility allowed by UG (cf. L1 studies reported in section 3 and diachronic evidence for the possibility of subject control from late Middle English to early Modern English (Clark, 1999)) and constrained by the selectional properties of predicates. Alternatively, misanalysis as an impersonal construction. (The highest number of non-target responses (about 80%) involved the adjective ‘impossible’, which might be misanalysed as a raising predicate, and 3sg agreement on the verb, which could have been taken as default).

APPENDIX

Table 4 presents results from a sentence completion task, investigating production of TCs (see ex. 9)

- (9) It is difficult for me to drive this car
This car is difficult for me

Results show massive preference for the passive complementation on the part of lower proficiency learners and optionality between passive complementation and a gap dependency among the advanced group, in line with the results obtained in the PAT. The presence of a complementiser, though, causes production of a significantly higher number of resumptive pronouns.

Table 4. Performance in TCs.

	<i>Distribution of pronouns</i>				
	<i>Passive</i>	<i>Gap</i>	<i>Pronoun</i>	<i>+animate</i>	<i>-animate</i>
-for XP					
Intermediate	80.6	18.5	0.9	100	0
Advanced	51.5	48.5	0		
Controls	0	100	0		
+for XP					
Intermediate	44.2	42.5	13.3	53.3	46.7
Advanced	6	82.6	11.4	50	50
Controls	0	100	0		

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