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Functional Categories in Second and Third Language Acquisition:

A Cross-linguistic Study of the Acquisition of English and French by Chinese and Vietnamese Speakers

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ABSTRACT

This thesis investigates non-native language acquisition of the verbal and nominal functional domains in second language (L2) English and second/third language (L2/L3) French by Chinese and Vietnamese speakers. Six experimental studies are reported. Two current competing theories in the field of theoretical second language acquisition (L2A), namely, the Failed Features Hypothesis (FFH) and the Full Transfer Full Access (FTFA) model are compared and their applicability to third language acquisition (L3A) evaluated in the light of our data.

A version of the Minimalist Program is assumed in this work. Predictions based on FFH and FTFA are as follows: As far as L2A is concerned, both FFH and FTFA predict full transfer of L1 in the L2 initial state. With respect to L3A, FFH predicts the initial state to be L1 while FTFA predicts either L1 or L2. The two models diverge regarding their predictions on the L2/L3 transitional and steady states. In particular, FFH hypothesizes permanent "failure" and persistent L1 influence in L2/L3 interlanguage while FTFA hypothesizes full access and acquirability of target structures.

Three L2/L3 experimental studies on the verbal functional domain (i.e. tense and agreement) and another three on the nominal functional domain (i.e. the Determiner Phrase) were conducted. Subjects include Chinese monolingual learners of English, Vietnamese monolingual learners of French as well as Chinese-English bilingual learners of French. A variety of tasks were used to test the predictions made by the two models. Results demonstrate partial transfer of L1 in the L2 initial state and of L2 in the L3 initial state, and point towards full access in the L2/L3 steady states. These findings do not seem to be consistent with FFH. It appears that FTFA is a more viable theory for non-native language acquisition. We also contend that L3A is not simply another case of L2A.

RÉSUMÉ

Cette thèse examine l'acquisition des domaines fonctionnels verbal et nominal en anglais langue seconde (L2) et en français deuxième/troisième langue (L2/L3) par des locuteurs Chinois et Vietnamiens. Six études expérimentales sont présentées. Deux théories concurrantes dans le domaine de l'acquisition d'une langue seconde (AL2), c'est-à-dire l'Hypothèse des Traits Non-Acquis (HTNA) et le modèle du Transfert Total/Accès Total (TTAT) sont comparés et leur applicabilité à l'acquisition d'une troisième langue (AL3) est évaluée à la lumière de nos données.

Une version du Programme Minimaliste est adoptée dans ce travail. Les prédictions basées sur l'HTNA et le TTAT sont les suivantes: En ce qui concerne l'AL2, l'HTNA et le TTAT prédisent tous deux le transfert total de la langue maternelle (L1) à l'état initial de la L2. Quant à l'AL3, l'HTNA prédit que l'état initial est la L1 tandis que le TTAT prédit que l'état initial est soit la L1, soit la L2. Les deux modèles divergent concernant leurs prédictions sur l'état transitionnel et l'état final de la L2 et de la L3. En particulier, l'HTNA prédit l'"échec" permanent et l'influence persistante de la L1 dans l'interlangue de L2/L3 alors que le TTAT prédit l'accès total et l'acquièrabilité des structures visées.

Trois études expérimentales concernant le domaine fonctionnel verbal (c-à-d. le temps et l'accord) de L2/L3 et trois autres concernant le domaine fonctionnel nominal (c-à-d. le syntagme determinant) ont été menées. Les participants sont des Chinois unilingues qui apprennent l'anglais L2, des Vietnamiens unilingues qui apprennent le français L2 ainsi que des bilingues chinois-anglais qui apprennent le français L3. Une variété de tâches ont été employées. Les résultats démontrent un transfert partiel de la L1 dans l'état initial de la L2 et de la L2 dans l'état intial de la L3; ils indiquent aussi un accès total dans l'état final de la L2 et de la L3. Ces constatations sont en contradiction avec l'HTNA. Il apparaît que le TTAT est une théorie plus viable pour expliquer l'acquisition d'une langue non-maternelle. Il est également avancé que l'AL3 n'est pas simplement un autre cas de l'AL2.

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CHAPTER ONE

A Generative Approach to Second and Third Language Acquisition

1.0 Introduction

This thesis investigates the verbal and the nominal functional domains in adult non-native language acquisition. The acquisition of functional categories has been a widely-researched topic in the generative first and second language literatures within the past decade. In the fields of first language acquisition (L1A) as well as child second language acquisition (child L2A), a number of studies have looked at both verbal and nominal morphosyntactic development (e.g. Radford 1990; Guilfoyle & Noonan 1992; Hyams 1996; Grondin & White 1996; Paradis & Genesee 1997). In the field of adult second language acquisition (henceforth L2A), on the other hand, although a significant amount of research has been carried out on the verbal functional domain (e.g. Schwartz & Sprouse 1994, 1996; Vainikka & Young-Scholten 1994, 1996; Eubank 1993/1994, 1994, 1996; Herschensohn 1998, 2001; Lardiere 1998a, 1998b; Prévost & White 2000a, 2000b) and a few separate studies have investigated the nominal functional domain (e.g. Parodi, Schwartz & Clahsen 1997; Hawkins 1998; White, Valenzuela, Kozlowska-Macgregor, Leung & Ben Ayed 2001; Bruhn de Garavito & White 2002; White, Valenzuela, Kozlowska-Macgregor & Leung in submission), no comprehensive work is available so far that has pursued the (potential) parallelisms between the two functional domains. This work represents a modest attempt to contribute to the field by looking at both the verbal and nominal functional categories in post-critical period non-native interlanguage. In addition, the literature on theoretical L2A to date has been predominantly concerned with the acquisition of *second* languages; very little research has been situated within the context of a third language (L3).[1] Thus, more importantly, the present work seeks to explore adult third language acquisition (henceforth L3A) from the generative

[1] As far as the author is aware, only three L3 studies, aside from the present work, are strictly couched in the Chomskyan generative or Universal Grammar (UG) framework, namely, Klein (1995), Lozano (2002) as well as Vinnitskaya, Flynn & Foley (2002). A paper by Zobl (1992) on multilingual acquisition and the work of Liceras (e.g. Liceras, Díaz & Maxwell 1999; Liceras, Valenzuela & Díaz 1999) are also indirectly relevant. None of these studies, however, directly addresses the question of what constitutes the L3 initial state, which is the core of the present work (see Section 1.2 below).

perspective, in particular, the role of prior linguistic knowledge or cross-linguistic influence ("transfer") in the acquisition of non-native languages beyond the second.

The present work examines functional categories and their related formal features and feature strength from the initial state to the steady state in adult non-native language acquisition. Six experimental studies on the verbal and nominal functional domains in L2/L3 acquisition will be reported. The specific cases involve Cantonese monolingual learners of English, Vietnamese monolingual learners of French as well as Cantonese-English bilingual learners of French. We investigate the verbal functional category of T(ense), the formal features of [±finite], agreement and [±past] and the feature strength of T as well as the nominal functional category of Determiner Phrase (DP) and its associated properties such as Num(ber), the feature of [±definite] and the feature strength of Num of our subjects' L2/L3 interlingual systems.

In the following parts of this chapter, we will take a brief look at the linguistic approach that will be adopted throughout this work, that is, a version of Chomsky's Minimalist Program (Section 1.1). We will also review two competing theories in the L2 field, namely, the Failed Features Hypothesis and the Full Transfer Full Access model, and examine their possible extension to the study of an L3 (Section 1.2). We then set out the goals and objectives of the present thesis (Section 1.3) and outline the overall organization of this work (Section 1.4).

1.1 Theoretical background: Functional categories, formal features and the Minimalist Program

1.1.1 Brief review of the Minimalist Program

The present thesis adopts a current framework of the generative paradigm, namely, the Minimalist Program (MP, or Minimalism). We assume an earlier version of Minimalism as in Chomsky (1993/1995a, 1994/1995b, 1995c). The essence of the Minimalist Program (as against the Government Binding (GB) or Principles and Parameters (P&P) approach) lies in the elimination of D-structure and S-structure as levels of representation (leaving only two interface levels *viz.* Logical Form (LF) and Phonetic Form (PF) as

minimal machinery) and the proposal of formal features in the lexicon with a central role in language acquisition. Under the Minimalist Program, language parameterization or cross-linguistic variation is strictly reduced to the morpholexical level (i.e. the morphological component or the lexicon[2], or the functional module); the task of language acquisition (native or non-native) reduces to the learning of formal features and abstract morphological properties associated with lexical items (Herschensohn 2000, Munn 1997).

It may thus be appropriate to elaborate on the nature of "formal features" at this point. By "formal features", Chomsky (1993/1995a, 1995c) meant those morphological features (as opposed to semantic features) that are encoded in each lexical item and functional head in the lexicon. They include categorial features (e.g. [±N], [±V]), ϕ-features, Case features) and strong (categorial) feature strength. These formal features can be distinguished as being intrinsic or optional. Intrinsic features are either "listed in the lexical item...or determined by listed features" and optional features are "added arbitrarily as [the lexical item] enters the numeration" (Chomsky 1995c, p.277). The general understanding is that intrinsic features are obligatory or universal while optional features are parameterized or language-specific (i.e. a language can choose not to select those features that are designated as optional – see for instance Hawkins 1998).

Chomsky also makes a differentiation between [±interpretable] features (i.e. interpretability at LF), which according to him "relates only loosely to the intrinsic-optional distinction" (p.278). [+Interpretable] features are those that have semantic content and play a role of interpretation of meaning at LF while [-interpretable] features do not and must be checked and eliminated for convergence. Interpretability at LF is

[2] The exact place of morphology in current generative linguistic theory is controversial. Munn (1997) for instance assumes that morphology is post-syntactic (equivalent to the Phonetic Form (PF) component). Another view (as per the earlier version of MP that we are adopting) posits that morphology is pre-syntactic (equivalent to the lexicon). Yet a third approach (along the lines of Halle & Marantz 1993) argues that morphology is distributed across all components of grammar. See Franceschina (2001) for an interesting discussion on these various morphological accounts and their implications for L2A. In this work, we take morphology to be pre-syntactic. Also, according to MP (at least the version that we adopt), all verbs are fully inflected in the lexicon, and morphology (or features) is not distributed.

closely linked to the issues of feature strength, feature checking and syntactic movement (raising). In particular, functional categories may have [-interpretable] features of either strong or weak feature strength. Strong [-interpretable] features are visible at PF and thus must be checked, deleted and erased overtly (i.e. before Spellout), otherwise a syntactic derivation will crash; weak [-interpretable] features are invisible at PF and their checking, deletion and erasure can procrastinate until after Spellout by covert movement. Lexical items, on the other hand, are morphophonological reflexes of the formal features of the functional categories. As far as the checking mechanism is concerned, strong [-interpretable] features of functional categories attract the corresponding features carried by the relevant lexical items and force their raising (an agreement-like checking relation is present); the strong [-interpretable] features of the functional categories are then checked off and erased before Spellout, preserving the syntactic derivation. Weak [-interpretable] features of functional categories, on the other hand, attract movement of the like features of lexical items covertly, and checking and erasure is done after Spellout.[3] Under Minimalism, feature strength of [-interpretable] features of functional categories thus accounts for word order variations cross-linguistically.

This brief exposition suffices for now. In Chapter Two, we will examine from the Minimalist perspective the theoretical details of the verbal and the nominal functional domains in French, English, Chinese and Vietnamese that are relevant to this work.

1.1.2 Further theoretical assumptions

1.1.2.1 Languages differ underlyingly

An important theoretical assumption we make in this thesis is that languages vary on the abstract (morpho-)syntactic level. In other words, not all functional categories and features are available or instantiated universally. Our position is not inconsistent with Thráinsson (1996)'s "Limited Diversity Hypothesis", which states that although the set or

[3] We will not go into the more technical and complicated issues such as the asymmetrical checking relation between the "checker" and the "checked", the precise nature of categorial and non-categorial features and their role in argument movement, etc. See Bobaljik (1995), Lasnik (1999) and Ndayiragjie (1999) for further discussion, interpretation and extensions of the checking theory. See also Panaglotidis (2001) and Legate & Smallwood (1996) for some interesting views on the status of categorial and non-categorial features and the related issues of feature strength and LF interpretability.

"inventory" of functional categories is universally defined by UG, different languages "select" from this UG-defined set, and not all of the functional categories are instantiated in every single language (p.257). Languages thus vary as to which functional categories they "select" and project. Fukui & Speas (1986) also argue that phrase structures are not the same across all natural languages with respect to the functional categories they instantiate. Re-interpreting this under Minimalism, languages differ as to which formal features are present or instantiated. Whether in terms of functional categories or formal features, we take it that the different surface linguistic facts found across languages are direct reflections of different underlying representations Indeed, as Thraínsson (1996) points out, to put forward the "Limited Diversity Hypothesis" is to contend for a more direct link between overt morphology and abstract syntax (based on how children acquire syntactic structures by making use of overt morphological evidence). Applying this to the present work, as we will discuss in more detail in Chapter Two, we subscribe to a view that the formal features [±finite] and [±past], for instance, which are present in English- and French-type languages are absent in Chinese largely because Chinese lacks overt instantiations of finiteness and past tense morphology. The claim that languages differ on the abstract underlying level is therefore closely tied to a particular stance on the relationship between morphology and syntax (i.e. what White 2003 terms the "morphology-before-syntax" approach), which will be discussed in Section 1.1.2.2.

As regards the term "functional categories", it must be pointed out that the phrase structure labels themselves are arbitrary. What concerns us is in fact the featural content of each functional node. For instance, it will be assumed in this thesis that Asp(ect)P but not T(ense)P is projected in Chinese languages. We do not mean to take Asp as simply another label for T. What we would like to suggest instead is that only aspectual but not temporal features are instantiated in Chinese. The focus of the present thesis is the status of formal features in interlanguage grammars. Functional categories and their labels are cover terms for the morphosyntactic properties associated with the functional module that are of concern to us.

1.1.2.2 Morphology drives syntax

This work deals primarily with functional morphology; it is thus important for the interpretation of experimental results to clarify our position with respect to the relationship between morphology and syntax in natural languages and interlanguages. As mentioned in Section 1.1.2.1, we adopt the "morphology-before-syntax" approach (see White 2003 Ch.6 for a detailed review), the essence of which is that surface morphology drives or triggers abstract syntax in language acquisition. There are a number of researchers working on theoretical syntax and/or language acquisition (native or non-native) who contend that there is a close link between overt morphology and abstract syntax, and suggest that the instantiation of functional categories, formal features and feature strength is triggered and/or motivated by the acquisition of relevant surface morphemes and morphological paradigms (e.g. Rohrbacher 1994; Clahsen, Penke & Parodi 1993/1994; Vainikka & Young-Scholten 1994, 1996; Eubank 1993/1994, 1994, 1996). The claim that these researchers make is that the presence or absence of overt morphology implicates the presence or absence of corresponding abstract structures in underlying (interlanguage) grammars. This idea is crucial for the present work. As will be discussed in Chapter Five, we will argue that language learners' native-like performance on surface morphology implicates the presence of formal features in L2/L3 interlanguage representation. In Chapter Five, we will return to the issue of morphology vs. syntax in non-native language acquisition and discuss the implications of the morphology-before-syntax approach for the two acquisition theories examined in this work.

1.2 Acquisition beyond the second language: Failed Features vs. Full Transfer Full Access

1.2.1 From L2 initial state to L3/Ln initial state

The growing interest in the "initial state" in generative L2A research is quite recent (Schwartz & Eubank 1996), and is often tied to the investigation of the functional domain of interlanguage grammar (i.e. the emergence of functional categories, the operation of features and feature strength). The term "initial state" loosely refers to the grammar at the outset of language acquisition. There is no precise definition or objective criterion to determine, for instance, its duration. However, what is considered more important and

more interesting is its characterization – when a learner first starts learning a language *L*, what does this particular system *L* look like? What constitutes the content of the grammar of *L* in the very beginning within the learner's mind?

Under the generative paradigm, the L1 initial state is Universal Grammar (UG), which is the "blueprint" or set of principles/constraints that guide the process of language acquisition universally (Chomsky 1981, 1986, 1995c).[4] In L2A, however, owing to the existence of an additional variable, i.e. the L1 (end-state) grammar, the issue of the initial state becomes more complicated. Generative L2A researchers (those who adopt a "separatist" view that UG remains separate from the L1 end-state grammar upon completion of the acquisition process) are divided as to whether UG still constitutes the L2 initial state, or whether the L1 grammar instead (and if so, to what extent) forms the L2 initial state. See White (2003) for a detailed review. The core of our investigation in this work goes one step further. We ask the following question: what constitutes the L3 initial state? As we will explain below, the answer hinges crucially on our position regarding the L2 steady state. We will therefore compare two competing L2 theories in the field, namely the Failed Features Hypothesis (FFH) and the Full Transfer Full Access (FTFA) model that make different predictions on the L2 steady state/L3 initial state. We review these in the following two sections:[5]

1.2.2 Failed Features Hypothesis (FFH)

The original version of the Failed (Functional) Features Hypothesis (FFH) was proposed by Hawkins (1998, 2000) and Hawkins & Chan (1997). Assuming full transfer from L1

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[4] We will not address the problem of "representational realism" (Carroll 2001) here, that is whether UG is a set of abstract linguistic constraints to be imposed on language acquisition or whether UG is a dynamic acquisition mechanism to be "accessed" to in the construction of (inter)language mental representation. See Carroll for a detailed discussion. See also White (2000a) on the role of UG in interlanguage representation.

[5] It should be pointed out that another L2 model might also be relevant in the discussion of the L3/L*n* initial state, namely, Full Access (FA) (Epstein, Flynn & Martohardjono 1996). Note that FA rejects the possibility of L1 representation in L2A and it would predict the initial state of L3/L*n* to be invariably UG. We believe, however, that transfer plays a crucial role in non-native language acquisition (and indeed this fact is well-documented in the literature, independent of theoretical framework – see the papers in Gass & Selinker 1983 & 1992, for instance). We are thus most interested in the potential transfer effects in L3/L*n* interlanguage representation, particularly at the starting point of acquisition. For this reason, we will not consider the FA model in this work.

(cf. Schwartz & Sprouse 1994, 1996)[6], FFH denies the availability of those parameterized UG properties not instantiated in the L1 grammar. The original thesis of the FFH is that optional (i.e. parameterized) [-interpretable] formal features will "fail" (i.e. be absent) in L2A. Hawkins & Chan (1997) investigated the acquisition of English restrictive relative clauses by Chinese and French native speakers. They assumed that the [wh] feature which is present in English and French for motivating *wh*-operator movement is absent from the predicative C(omplementizer) in Chinese. It was found that across proficiency levels French speakers performed significantly better than Chinese speakers in judging a variety of English restrictive relative clauses. This served as evidence for "failed" parameterized functional features in L2A. Hawkins & Chan (1997) contended that "UG is available 'in some attenuated form' to adult L2 learners" (p.200); "features of the functional categories, and only those features, are subject to a critical period" (p.188).

Further evidence for "failed" features in L2 interlanguage grammars came from Hawkins (1998, also reported in Hawkins 2001) who looked at gender in the Determiner Phrase (DP). Hawkins examined elicited oral production data of 20 anglophone advanced L2 French learners and found a persistent problem related to gender in their French interlanguage. Specifically, his subjects adopted a "default" gender on articles (either masculine or feminine, depending on individual learners) which became the overgeneralized form; in addition, subjects were also more accurate with the definite article than the indefinite article. (However, all subjects were native-like with respect to adjective-noun order in French, which may suggest that feature strength of functional categories is not subject to "failure" – see below). Hawkins argued that the learners have not acquired the abstract feature of gender in French because it is absent in their native

[6] See however Hawkins (2001) for a subtle divergence between "full transfer" of FFH and that of Full Transfer Full Access (Schwartz & Sprouse 1994, 1996). Hawkins argues for a theory of "modulated structure building" according to which L1 transfer of functional projections occurs later than that of lexical projections. If we take FFH to be a version (if not the exact equivalent) of this "modulated structure building" theory, then the "full transfer" part of FFH which draws on both the Minimal Trees Hypothesis (Vainikka & Young-Scholten 1994, 1996) and the Full Transfer Full Access model is not identical to Schwartz & Sprouse (1994, 1996)'s original idea of transfer. Nonetheless, as far as we understand, except that it might predict no functional categories in L3 initial state, this difference is immaterial to the claims we will make in this work.

language of English. This again provided support for persistent "failure" of features in L2 interlanguage grammar which have not already been instantiated in L1.

Both Hawkins & Chan (1997) and Hawkins (1998) claimed that parameter values associated with features of functional categories not fixed or set in L1 will not be acquired in post-puberty L2A (it appears that functional categories *per se* are universal on their view). Parametric differences under minimalist accounts are strictly determined by different choices of formal features that different languages make in the selection from the universal set of features (Hawkins 2000). FFH, which advocates that there is a critical period for configuring the so-called parameterized domains of the language faculty, therefore predicts that adult or post-puberty L2 learners will be permanently "stuck" with their L1 features, and will never be able to acquire those features that have not been exemplified in their L1.

An earlier related proposal made by Tsimpli & Roussou (1991) posits that in the absence of (categorial) features, the corresponding functional category does not project (p.161). Moreover, Smith & Tsimpli (1995) contend that the functional sub-module of UG, which contains all the functional categories, is subject to parameterization, and parameterization is in turn subject to maturational constraints. Duffield *et al.* (2002) therefore extended the term FFH to cover "failure" of the whole functional domain (i.e. functional categories, features, feature strength) in L2A. In other words, all those properties in the functional domain which are not exemplified in learners' L1 grammar will be subject to permanent "failure" on such views.

Whether in its original formulation or the extended version, FFH can be seen as a "no parameter resetting" model, incorporating a "full transfer partial access" stance (see White 2000b). Notice that the central claim of FFH (with respect to L2A) is that those parameterized properties (be they categories, features, or feature strength[7]) not

[7] However, Hawkins (1998) may in fact be allowing for parameter resetting in adult L2A with respect to feature strength. See Bruhn de Garavito & White (2002, fn.8). See also Hawkins (2001, p.257) who admits the problem as to why some kinds of parameter values associated with functional categories (i.e. functional features) "fail", while others (i.e. feature strength) do not.

instantiated in learners' L1 grammar will not be acquired ultimately in the L2. Logically then, for L3A, it follows from FFH that those parameterized properties not instantiated in L1 will never be acquired in the L3 either. That is to say, FFH *must* predict L1 transfer in the L3 initial state (in fact it would have to predict that the L*n* initial state is invariably L1). The general prediction of the FFH on L2A/L3A/L*n*A is thus persistent L1 transfer and ultimate "failure" of parameterized (functional) properties throughout the non-native language acquisition process (from the L*n* initial state all through to the L*n* final state).

1.2.3 Full Transfer Full Access (FTFA)

Contrary to the FFH, Full Transfer Full Access (FTFA) (Schwartz & Sprouse 1994, 1996) can be viewed as a modern version of "L2 parameter resetting" (see White 1985, 1989 for earlier relevant work). Schwartz & Sprouse (1994) investigated the development of word order and nominative Case assignment in an adult Turkish speaker's L2 German interlanguage. They examined the longitudinal spontaneous oral production data of the Turkish subject which spanned over 26 months and identified three developmental stages of his L2 German. It was argued that the subject's L2 interlanguage grammar was initially attributable to L1 Turkish and in subsequent stages conforms to UG in response to German input but was never exactly Turkish- nor target German-like. Schwartz & Sprouse (1994) termed their model "Absolute L1 Influence" which they later modified to "Full Transfer Full Access" (Schwartz & Sprouse 1996) to emphasize that the absolute role of L1 transfer occurs only at the outset or earliest stages of L2A. Notice that the FTFA model is applicable to both adult L2A and child L2A. See for instance Haznedar (1997) for child Turkish-English interlanguage data that supports FTFA.

As far as the model itself is concerned, FTFA can be divided into two parts: the "full transfer" part, as mentioned, that applies to the L2 initial state, and the "full access" part that applies to subsequent stages of L2 development (including the final state). Full transfer assumes the transfer of L1 grammar in its entirety (including all abstract properties, both functional and lexical). In terms of Minimalism, all formal features and associated values or feature strength that have been instantiated in the L1 are found in the L2 initial state. Full access, on the other hand, allows for the possibility of UG-based

restructuring in L2 interlanguage development; those parameterized properties not instantiated in the L1 grammar could be ultimately acquirable; the final outcome of L2A is predicted to be a grammar that is fully UG-constrained (although it is not necessarily L2 target-like).

FTFA appears to be neutral as regards the source of transfer in the L3/L*n* initial state. Unlike FFH, transfer from L2 is not excluded in principle under FTFA. This is because the ultimate attainment of L1A and L2A is similar according to FTFA, i.e. a UG-constrained grammar (although the L1 grammar is always target-like). There thus exists no basis (and in fact no need) for the model to make any prediction about which of the two steady states would transfer to the L3 initial state. Notice that the predictions of FFH on L3A are restricted by "failures" that must be attributable to L1. There is no such restriction imposed on FTFA since there are no "failures" involved. In L3A, whether there is transfer from the L1 or the L2 in the initial state, parameterized properties are always in principle attainable. Even parameterized properties not instantiated in either L1 or L2 are in principle acquirable in L3A. Hence, transfer to the initial state of an L3 does not need to be limited to L1 under FTFA. An L3A theory based on FFH is L1/"failure"-driven, while one based on FTFA is not. In sum, according to FTFA, in our interpretation, there is full transfer in the L3/L*n* initial state but the source is *not* necessarily from L1 (see Vinnitskaya, Flynn & Foley 2002 who reach a similar conclusion).

What is not yet clear is whether one can in principle determine whether the L1 or the L2 is more likely to form the L3 initial state. As widely discussed in the psycholinguistic/descriptive L3 literature, there are various factors that determine the exact source of transfer in L3A, for instance, linguistic typology (e.g. Ringbom 1986, 1987; Singleton 1987; Hendriks & Prodeau 2000; Cenoz 2000 and the studies cited therein), psychotypology (Kellerman 1979, 1983), the "Second Language Factor" (i.e. activation of a more recently acquired language than L1 which has been acquired much earlier; see for example Sjögren 2001), etc. It happens that the target L3 case in this work involves L1 Chinese-L2 English-L3 French; the aforementioned factors would therefore converge and point to L2 English transfer in L3 French. However, in order to tease these

factors apart, a greater variety of L1s, L2s and L3s must be investigated, which is beyond the scope of this thesis. We will return to this issue in Chapter Five.

1.2.4 "Failure" vs. "access": the criterion for "acquisition"

At this point, it might be appropriate to lay down the criterion to be used in this work for defining "failure" and "acquisition". As discussed in Section 1.1.2.2, this thesis assumes that overt morphology motivates and implicates abstract syntax in (interlanguage) grammars. In light of this, the accuracy rate of morpheme suppliance in obligatory contexts will be employed as the yardstick for "acquisition" of the morphosyntactic properties concerned. Specifically, we will take 75% accuracy rate of performance in experimental tasks as the criterion of successful acquisition (averaging the 60% criterion of Vainikka & Young-Scholten 1994, 1996 and the 90% criterion of Brown 1973). We acknowledge that setting any percentage as an acquisition criterion is arbitrary. It further raises the question of exactly how much is enough for a morphological property to be considered to have been acquired. The performance vs. competence issue also comes into play. However, despite all these problems, one must nonetheless admit that some objective (though arbitrary) criterion has to be established in assessing learners' performance, in order to determine whether the properties under investigation have been acquired in interlanguage representations. We consider that 75% is a reasonable percentage to reflect successful acquisition given the theoretical assumptions made in this work.

1.2.5 Summary: FFH vs. FTFA in L2A/L3A

To sum up, FFH predicts the L2/L3 initial state to be the L1 steady state; those parameterized functional properties not instantiated in L1 will permanently "fail" in L2A/L3A. On the other hand, FTFA predicts that the L2 initial state is the L1 steady state while the L3 initial state can be either the L1 or the L2 steady state; parameterized functional properties not instantiated in a previously acquired (inter)language will nonetheless be ultimately acquirable in L2A/L3A. In Chapter Three and Chapter Four, we will apply these general predictions and the acquisition criterion to our six studies on non-native language acquisition of the verbal and nominal functional domains.

1.3 Goals and objectives

As mentioned in the introduction, the primary goal of the present thesis is two-fold: testing the parallelisms between the verbal and nominal functional domains in non-native adult language acquisition and examining the potential differences between L2A and L3A. The two experimental studies on L2 English (Study I and Study IV) contribute some original data on the verbal and nominal domains from the same group of learners, looking at the whole L2 developmental process. A major objective of this work is also to explore and advocate the theoretical study of L3A as an independent field, to argue that L3A is *not* simply another case of L2A. This is exemplified in the two studies on the L2 vs. L3 French initial state (Study II and Study V) which demonstrate some important differences between L2A and L3A. Finally, since FFH and FTFA make different predictions with respect to the steady state of L3A, two further studies are included to investigate the more advanced stages of L3 French development (Study III and Study VI).

1.4 Organization of thesis

The remainder of this thesis is organized as follows: Chapter Two presents the theoretical details of the verbal and nominal functional domains in French, English, Chinese and Vietnamese, the source and target languages concerned. Chapter Three reports three experimental studies (i.e. Studies I, II, III) on L2A/L3A of the verbal functional domain, *viz.* tense and agreement. Chapter Four reports another three experimental studies (i.e. Studies IV, V, VI) on L2A/L3A of the nominal functional domain, *viz.* DPs. Chapter Five summarizes the results of the studies, discusses the implications and concludes this work.

CHAPTER TWO

The Verbal and the Nominal Functional Domains

2.0 Introduction

This chapter presents the theoretical details of the verbal and the nominal functional domains in French, English, Chinese and Vietnamese, which are the four source/target languages in the six experimental studies to be reported in the next two chapters. In the following sections, we first discuss the status of Infl(ection) (i.e. finiteness, tense and agreement) in the languages concerned, and then we will go on to the noun phrase structure and examine how the Determiner Phrase (DP) and related functional properties are treated in current generative framework.

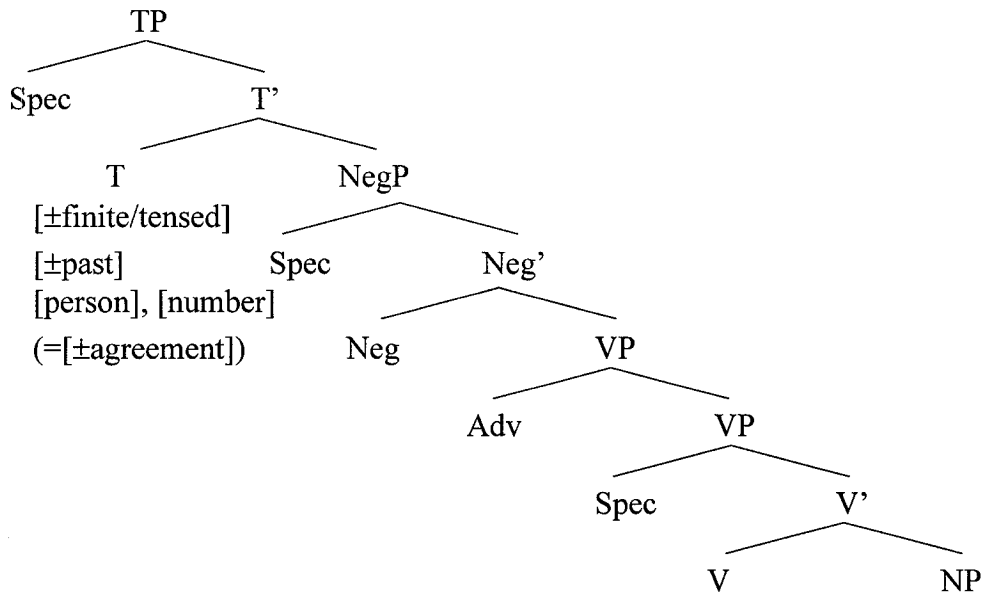
2.1 The verbal functional domain: Status of Infl in French, English, Chinese and Vietnamese

2.1.1 Tense and agreement in English and French

As mentioned in Section 1.1 of Chapter One, we adopt a version of the Minimalist Program (Chomsky 1993/1995a, 1994/1995b, 1995c) in this work. As far as the verbal functional domain is concerned, in earlier generative accounts under the Principles and Parameters or Government Binding approach, the Infl node was first taken to include all verbal inflectional properties, under a single syntactic head that contains two different sets of features [±tense] and [±agreement]. Pollock (1989) proposed the so-called "split-Infl hypothesis", breaking down the structure of the IP into two separate functional categories, namely, T(ense) and Agr(eement), each heading their own maximal projections, TP and AgrP respectively. Recently, however, under the Minimalist Program, Agr as a category has been eliminated. Chomsky (1995c) posited that "for languages of the French-English type, [...], Agr is not in the lexicon" (p.351). According to Chomsky, Agr only consists of strong features that induce overt movement. Since no such overt movement operations are induced by Agr in the French-English type of languages, there is barely any motivation to postulate the existence of Agr in these languages.

Although Agr as a category is no longer postulated for English or French, we take it that agreement features such as person and number are present in the lexicon of these languages. What concerns us in this work is the presence or absence, or the acquirability, of formal or morphosyntactic features in interlanguage grammar that are primarily responsible for certain morphological and syntactic properties, rather than the projection of a particular syntactic position *per se*. For instance, correct agreement marking in L2 English or French is direct evidence of the presence of agreement (i.e. person and number) features in interlanguage grammar; the assumption that Agr as a category no longer exists or projects would not affect our interpretation. In other words, we follow Chomsky (1995c) in assuming only one inflectional node in the verbal phrase structure of both English and French, namely, TP. This category is a matrix of verbal functional features, including [±finite] (or [±tensed]), the agreement or *phi*-features of person and number, as well as [±past]. The verbal phrase structure of English and French that we assume in this chapter is thus as follows:

(1)



At this point, it may be relevant to elaborate on the notion of finiteness in English and French. We take [±finite] to be the same as [±tensed] (cf. Meisel 1994, p.111-2) and treat it as the categorial feature of the T projection (i.e. the formal feature that contributes

to the categorial status of T is [±finite/tensed]). [+Tensed] forms are [+finite]; these include [+past] (i.e. past tense) and [-past] (i.e. present tense and future tense). [-Tensed] forms include infinitives, participles and gerunds, all of which are [-finite]. In French, the infinitival form is distinct from the root form of inflected non-past verbs (present tense), as shown in (2a)-(2b), whereas in English, the infinitive and the root form is the same in non-past (present) tense. Hence, except for third person singular, it is in fact ambiguous in English as to whether a particular verb used is the correct [+finite], [+agreement] target form as in (3b), or whether it is merely the non-inflected/infinitival [-finite], [-agreement] form, as in (3d).

(2)	a.	Manger (infinitive)	[-finite]
	b.	Nous mangeons	[+finite], [+agreement] (correct agreement)
	c.	*Nous mange	[+finite], [+agreement] (wrong agreement)
	d.	*Nous manger	[-finite], [-agreement] (no agreement)

(3)	a.	Eat (infinitive)	[-finite]
	b.	We $eat_{3rd\ pl.}$	[+finite], [+agreement] (correct agreement)
	c.	*We eats	[+finite], [+agreement] (wrong agreement)
	d.	*We $eat_{inf.}$	[-finite], [-agreement] (no agreement)

Generally, [+finite/tensed] forms are also verbs inflected with [+agreement] features (i.e. correct or incorrect agreement); [-finite/tensed] forms are [-agreement] (i.e. no agreement). Therefore, some linguists actually proposed that for English-type languages, T and Agr should be "fused" (or unsplit) (e.g. Halle & Marantz 1993).[1] Irrespective of

[1] See Giorgi & Pianesi (1997) for a similar treatment of agreement and tense in English (p.69-71). Giorgi & Pianesi proposed that Agr and T form a single "hybrid" functional category in English, "Agr/T", with Agr and T features belonging to the same bundle in the initial array (in the lexicon). The category is "hybrid" is the sense that the value of one of the features (i.e. Agr) affects the value of the other one (i.e. T). Specifically, [±3rd person] of the Agr features implies the unmarked value of the T feature (i.e. [-past]). The same treatment applies to tense and modality, i.e. there exists in English a "hybrid" category "Mod/T" with modality features implying [-past]. Notice that as far as Agr and T are concerned, Giorgi & Pianesi's "hybrid Agr/T" echoes Halle & Marantz (1993)'s "fused I(nfl) node" for English (i.e. Agr morpheme being fused with the I ([-participle]) node at Morphological Structure), with the "fused" I node accommodating [+participle] (=[+past] and [-past]) as well as [-participle] (=six agreement/person and number) feature bundles.

the theoretical status of Agr as a category, in this work, we are interested in whether L2/L3 learners of English and/or French with Chinese/Vietnamese background can acquire the distinction of [±finite], [±past] as well as *correct* agreement features (i.e. correct [person] and [number]) in finite clauses (i.e. [+finite/tensed] and [+agreement]).

A syntactic property related to the feature [±finite] is nominative Case assignment to subject position in finite clauses. It has been proposed that nominative Case assignment is licensed via spec(ifier)-head agreement relations between subject NP and Infl within IP (in the Principles and Parameters approach, see for instance Haegeman 1994, p.165), or that the nominative Case feature on subject NP is checked within the domain of TP with the specified feature value of [+finite] on T (in the Minimalist Program, see for instance Chomsky 1995c). A number of L1 studies have looked at the correlation between overt/null subjects and finiteness in various languages (e.g. Wexler 1994, 1998; Stenzel 1994; Hyams 1996). Lardiere (1998a, 1998b, in prep) has also linked correct nominative Case marking on subjects to the acquisition of finiteness in TP in her case study of an end state L2 English speaker. Our three studies on the verbal functional domain in this work will also examine the relation between nominative Case and finiteness on T(ense) in L2 and L3 acquisition.

In this work, we are also concerned with another Infl-related syntactic property, namely, adverb placement in English and in French. As far as surface differences between the two languages are concerned, in English, an adverb can appear before the verb (i.e. SAV) but cannot go after the verb (*SVAO), while in French, an adverb can appear after the verb and before the direct object (i.e. SVAO), but it cannot go before the verb (i.e. *SAV). The following are some examples to illustrate the contrast in the two languages:

(4) a. Martin always eats apples. (English SAV)

b. *Martin eats always apples. (English *SVAO)

(5) a. Martin mange toujours des pommes. (French SVAO)

b. *Martin toujours mange des pommes. (French *SAV)

These differences between English and French adverb placement facts are believed to be related to the nature of Infl in these two languages. Pollock (1989) postulated the verb movement parameter to account for these differences. More precisely, he suggested that verb movement which requires all finite verbs to raise to Infl is allowed in French but not in English. According to Pollock, whether verb movement is allowed in a language or not depends upon whether the language has an opaque or transparent Agr for the verb to move through and for the creation of a variable to bind with the [+finite] T operator. More recently, under the Minimalist Program, the adverb placement contrast (or overt versus covert (LF) movement) in English and French is captured under the notion of feature strength and the mechanism of feature checking. As mentioned in Section 1.1 of Chapter One, Chomsky (1995c) made a distinction between [±interpretable] features (i.e. interpretability at LF). [+Interpretable] features are those that have semantic content and play a role of interpretation of meaning at LF; [-interpretable] features, on the other hand, do not have semantic content, and must be erased before LF, otherwise the derivation will crash. Strong [-interpretable] features induce (overt) movement in order that feature checking operates, i.e. checking off and erasing features before LF, whereas weak [-interpretable] features allow and thereby force movement (and feature checking) to procrastinate until LF (i.e. covert movement). In English, T features are weak, hence, verb movement operates at LF, while in French, T features are strong, thus inducing overt verb raising, resulting in the variation we saw above in (2) and (3) regarding the relative position of adverbs and verbs in the two languages. In the three studies to be reported in Chapter Three, we will test this strong versus weak feature strength of T in L2 English and L2/L3 French, as well as the presence/absence of the morphosyntactic features related to T *per se*.

2.1.2 Finiteness in Chinese[2]

Consider the following Chinese (Mandarin) examples:

(6) a. Ta **chi** fan.
He eat rice
"He eats"

b. Ta meitian dou **chi** fan.
He every day also eat rice
"He eats everyday"

c. Ta zuotian gen Zhangsan **chi** fan.
He yesterday with Zhangsan eat rice
"He ate with Zhangsan yesterday"

Does Chinese have the functional category Infl? Is there a finite/non-finite distinction in Chinese? These questions have been hotly debated for more than two decades. It is a well-known fact that Chinese does not have overt tense or agreement marking (see (6) above), and it is generally assumed that agreement features (i.e. person and number) are absent (see C.-T. J. Huang 1982; see also the references cited below). The picture regarding finiteness, however, is much less clear. A number of linguists have claimed that there is indeed a finite/non-finite distinction in Chinese. For instance, Ernst (1994) postulated a universal Infl (which he equated as "Finite") with the (categorial) feature [±finite]. Thus, although Chinese is a morphologically impoverished language, according to Ernst, it does have an Infl (Finite) node which is required by Universal Grammar (UG). Gu (1994) contended that aspect markers in Chinese are not Infl morphemes (i.e. they are lexical rather than morphological elements in the functional category Asp(ect)), but nonetheless admitted the need for TP (which contains the feature [±finite]) to dominate AspP for the purpose of Nominative Case assignment (p.78 fn.18). Lardiere (in

[2] Chinese languages (Mandarin, Cantonese and other Chinese "dialects") share similar facts as far as finiteness and other verbal morphological properties relevant to this chapter are concerned.

prep) follows C.-T. J. Huang (1984) and Y.-h. A. Li (1990), arguing (along the lines of Ernst) that there exists a finite/non-finite distinction in Chinese which is severely underdetermined by the input data, and that finiteness and its Case-licensing role are part of UG, irrespective of language-specific morphological variation.

On the other hand, there are also researchers who maintain that neither an Infl category nor a finite/non-finite distinction exists in Chinese. Cheng (1997) assumes no Infl node for (Mandarin) Chinese since "there is no inflection in the language" (p.6). To Cheng, Asp(ect), which heads an independent projection, is not a substitute for Infl. However, she provides no further exposition on the issue. Recently, Hu, Pan & Xu (2001) re-examine the criteria that have been used in the literature to date to test the finite/non-finite distinction in Chinese and conclude that the evidence put forward by those who argued for such a distinction (e.g. C.-T. J. Huang 1982, 1984, Y.-h. A. Li 1990, C.-C. J. Tang 1990, T.-C. C. Tang 2000 and others) is problematic. Let us now review some of these criteria and the counter-examples provided by Hu *et al.*

First, C.-T. J. Huang (1984) argued that Chinese uses Aux(iliary) (i.e. modal and aspectual elements) to encode finiteness, and Aux systematically licenses lexical subjects in the language. He divided Chinese verbs taking verbal complements into two main types: the *tell*-type which can be followed by finite clauses, and the *persuade* (or "control")-type which can only be followed by non-finite clauses. C.-T. J. Huang claimed that lexical subjects are only allowed in finite clauses (see the discussion of subject Case below), that non-finite clauses cannot take certain modals such as *hui* ("will") which expresses futurity, and that the perfective aspectual marker *you* ("have") cannot co-occur with a non-finite predicate. Hu *et al.*, however, argue that it is semantic incompatibility rather than the non-finite status of the embedded, "control"-type of clauses that contributes to the ungrammaticality of some of the examples given by C.-T. J. Huang. For instance, the use of the verb *zhunbei* ("prepare") (denoting a planned event) with the epistemic modal *hui* ("will") which not only denotes futurity but also possibility and uncertainty as in (7) below results in a semantic clash (between the modality of uncertain possibility and a planned event); the verb *quan* "persuade" with the perfective marker *you*

"have" as in (8) below also leads to some sort of contradiction in the interpretation of the sentence (i.e. one cannot persuade someone not to have done an action in the past). (Both examples from Hu *et al.* (p.1122) citing C.-T. J. Huang; emphasis added). The issue at hand therefore appears to be more semantic than syntactic.

(7) *wo **zhunbei** [PRO mingtian **hui** lai]
I prepare PRO tomorrow will come
*"I plan to possibly come tomorrow."

(8) *wo **quan** Zhangsan [PRO mei **you** mai zheben shu]
I persuade Zhangsan PRO not ASP buy this book
*"I persuade Zhangsan not to have bought this book."

In addition, contrary to C.-T. J. Huang's claim, Hu *et al.* reported that some Aux's can in fact occur in the embedded clauses of the "control verbs" as observed in Y. Li (1985), two examples from which are cited in Hu *et al.* (p.1122) and repeated below as (9) (emphasis added):

(9) a. wo **zhunbei** mingtian **yao** canjia yige hui
I plan tomorrow will attend a meeting
"I plan to attend a meeting tomorrow."

b. wo **quan** ta chi **le** zhe wan fan
I persuade he eat ASP this bowl rice
"I persuade him to finish eating this bowl of rice."

Y.-h. A. Li (1990) proposed another criterion for a finiteness distinction in Chinese, namely, the co-occurrence relationship between certain temporal adverbials and aspectual markers. Y.-h. A. Li contended that it is obligatory, for instance, for the adverbial *congqian* ("before") to co-occur (i.e. in the same clause) with and be licensed by the aspect marker *guo* (cf. (10a) below); however, only finite but not non-finite

clauses (as defined by the presence vs. absence of a lexical subject) constitute barriers to the association between *congqian* and *guo* (compare (10b) and (10c) below). (Examples originally from Li 1990, cited in Hu *et al.* (p.1125), emphasis added).

(10) a. wo **congqian** gaosu **guo** ta [ni lai zher]
I before tell ASP he you come here
"I told him before that you came here."

b. *wo **congqian** gaosu ta [ni lai **guo** zher]
I before tell he you come ASP here

c. wo **congqian** qing ta [chi **guo** fan]
I before invite him eat ASP meal
"I invited him to eat before."

Y.-h. A. Li posited that the aspect marker *guo* as in (10c) has been lowered from the matrix verb to the embedded clause but nonetheless should be interpreted as associated with the matrix verb. Hu *et al.* noted a few problems with Y.-h. A. Li's analysis. First, according to native speakers, the position of *guo* in matrix vs. embedded clauses can induce different meanings of a sentence, as the following examples (Xu 1985/1986, cited in Hu *et al.*, p.1126; emphasis added) illustrate:

(11) a. wo qing **guo** ta [chi fan]
I invite ASP him eat meal

b. wo qing **guo** ta [chi fan], keshi ta mei lai
I invite APS him eat meal, but he not come
"I invited him to have dinner, but he did not come."

(12) a. wo qing ta [chi **guo** fan]
I invite him eat ASP meal

b. *wo qing ta [chi **guo** fan], keshi ta mei lai
I invite him eat ASP meal but he not come

Moreover, as Y. Huang (1995) showed, both the matrix and the embedded clauses can in fact take an aspectual marker, as in (13) below (example cited in Hu *et al.*, p.1126; emphasis added):

(13) Dajie jiao **guo** Xiaoming tan **guo** ganqin.
Elder-sister teach ASP Xiaoming play ASP piano
"Elder sister taught Xiaoming to play piano."

These facts argued against Y.-h. A. Li's aspect-lowering analysis. In addition, Hu *et al.* pointed out that the co-occurrence constraint which requires that the temporal adverbial and the aspectual marker occur in the same clause itself is not a reliable test. They provided the following counter-examples (p.1126; emphasis added):

(14) a. women **congqian** dou renwei [Zhangsan gan **guo** xuduo huai shi]
we before all think Zhangsan do ASP many bad thing
"We used to think before that Zhangsan had done many bad things."

b. tamen **conqian** dou shuo [Zhangsan zuo **guo** lao]
they before all say Zhangsan be ASP prison
"They all said before that Zhangsan had been jailed."

A further difference between finite and non-finite clauses in Chinese that Hu *et al.* object to is arguments concerning Case in subject position as noted by C.-T. J. Huang (1984), Y.-h. A. Li (1990), C.-C. J. Tang (1990), Ernst (1994) and T.-C. C. Tang (2000). These linguists maintained that in the absence of Case assigners, no lexical subjects can occupy the subject position of non-finite sentences in Chinese. Thus, the subject position of the *persuade*-type (supposedly non-finite) clauses is obligatorily null (i.e. a PRO, an

ungoverned position) whereas that of the *tell*-type (supposedly finite) clauses is lexically filled. Based on the PRO theorem, therefore, there exists a theory-internal requirement for a finiteness distinction in Chinese. Nonetheless, Hu *et al.* suggest that the null subject positions of the so-called non-finite "control"-type clauses could in fact be lexicalized with the insertion of, for instance, adverbial phrases between the matrix and embedded clauses, an example being (15a)-(15b) (cited and modified from Huang in Hu *et al.* p.1130-1). The syntactic constraint on Chinese "control" (or so-called non-finite) clauses to disallow lexical subjects is arguably not a valid one. Hu *et al.* posit that "the obligatory nullness of the subject of the embedded clause subcategorized by the *persuade*-type verbs [in Chinese] is lexico-semantically motivated" (p.1133). Hence, once again, the problem appears to be (lexico-)semantic in nature and not a real syntactic one.[3]

(15) a. *wo zhunbei [wo mingtian lai]
I prepare I tomorrow come
*"I am prepared I to come tomorrow."

b. wo zhunbei [mingtian xia wu tian hei yi hou wo yi ge ren lai]
I prepare tomorrow afternoon sky dark after I one CL man come
"I plan to come alone tomorrow afternoon after it gets dark."

Other finiteness criteria challenged in Hu *et al.* (2001) include long-distance passivization (Huang forthcoming), the interpretation of *wh*-words, the V-not-V question test, the cleft sentence test, embedded topicalization (all from C.-C. J. Tang 1990), etc., the details of which will not be discussed here. The essence of Hu *et al.*'s critique is that a finite/non-finite distinction in Chinese is only apparent; not all of the earlier examples and intuitions are correct, and the tools by which a conclusion in favour of a finiteness distinction was arrived at are not totally reliable and valid.

[3] Nigel Duffield (personal communication) pointed out that the possibility of having a non-null subject in (15b) seems to have more to do with parsing considerations rather than lexico-semantics. In any case, what is crucial here is that the contrast between (15a) and (15b) is not due to a syntactic finite/non-finite distinction.

We follow Hu *et al.* in assuming that there does not exist an abstract finite/non-finite distinction in Chinese, bearing in mind as well the very fact that finiteness, tense and agreement morphology is actually lacking in the language. It thus appears that finiteness in Chinese is neither a matter of morphology nor a matter of syntax. We have observed from the review above that a finiteness distinction in Chinese seems to be semantic and/or pragmatic; instead of being syntactically constrained, finiteness in Chinese is arguably subject to a variety of contextual factors; if there is indeed such a distinction, it appears that it would be a context-dependent, discourse-oriented phenomenon, rather than a real syntactic issue. We would also like to point out that the arguments put forward by people in favour of a finiteness distinction in Chinese appear to have failed to justify the existence a *formal* feature [±finite]. We nonetheless acknowledge that the presence vs. absence of a true finite/non-finite distinction in Chinese is highly controversial.

Following Hu *et al.*, in this work, we treat the formal feature [±finite/tensed] to be absent in Chinese. T is thus not a projected category in the language (since the categorial feature required to project a T, i.e. [±finite], is absent), and consequently [±past] is not present either. We further assume, following most researchers on Chinese linguistics (such as those cited above), that there are no agreement features found in the Chinese lexicon. In addition, since T is absent, the issue of the feature strength of T is irrelevant in Chinese, although Chinese shares similar adverb placement facts with English in not permitting the surface order SVAO, which may be accounted for by postulating weak feature strength of Asp(ect) (see below). The following Mandarin examples are from Cheng (1997, p.6, original italics):

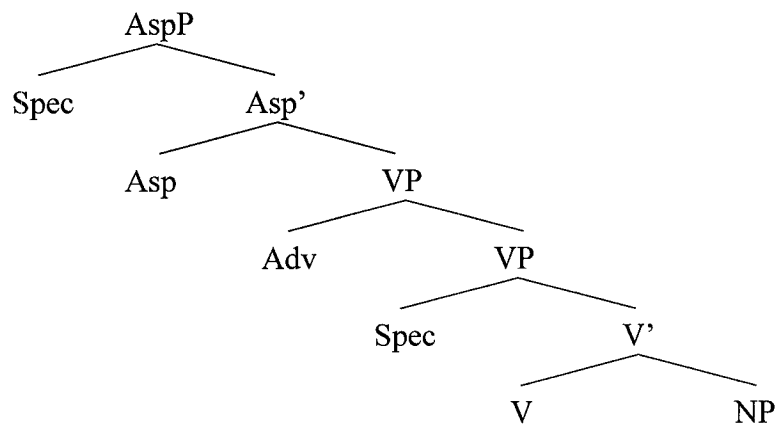
(16) a. Guojing *manmande* xie-le yi-feng xin.
Guojing slowly write-ASP one-CL letter
"Guojing slowly wrote a letter"

b. *Guojing xie-le *manmande* yi-feng xin.
Guojing write-ASP slowly one-CL letter

Implications of this on adverb placement in L2/L3 interlanguage grammar will be addressed in the Chapter Three.

We now turn to the structure of Chinese verb phrases. Following Cheng (1997), amongst others, Chinese sentences are assumed to be Asp(ect)Ps. There is no (overt) verb raising in Chinese, i.e. the verb does not raise to Asp in syntax; instead, aspectual markers that are morphological affixes lower to the verb (see Gu 1994).[4] At LF, the complex [V+Asp] raises back to Asp to satisfy the proper chain condition. Although Cheng and others did not explicitly discuss this, in terms of Minimalism, the feature strength of Asp can be considered weak in Chinese. Adverbials are adjoined to VPs; with the weak feature strength of Asp, this gives the canonical SAV surface order in Chinese as in (16a) above. It is assumed that nominative Case is checked or assigned in the domain of AspP via a spec-head relationship. The VP-internal subject raises to [Spec AspP] for nominative Case assignment. Together with the assumptions we have made above, the following is the verbal structure assumed for Chinese for the purpose of this work:

(17)



2.1.3 Null T and optional [±past] in Vietnamese

Finally, let us take a look at Vietnamese, a language very similar to Chinese in many ways, particularly as far as surface facts are concerned. Vietnamese belongs to the Mon-

[4] Note that in Mandarin, but not Cantonese, the progressive aspectual marker *zai* is not considered a morphological affix and does not lower to V (see Cheng 1997, p.7).

Khmer branch of the Austroasiatic language family (hence distantly related to Chinese/the Sinitic languages which are grouped under the Sino-Tibetan family). Vietnamese is also a morphologically-impoverished language. The following are some examples illustrating the total lack of agreement morphology in the language (in spite of its rather rich personal pronoun system; see L. Thompson 1965/1987, p.248-252; X. T. Nguyen 1996, p.14 for a full list of personal pronouns and related discussion):

(18) a. Tôi **ăn** cơm.
I eat rice
"I eat"

b. Chúng-tôi **ăn** cơm.
We eat rice
"We eat"

c. Anh **ăn** cơm.
You eat rice
"You eat"

d. Các-anh **ăn** cơm.
You (pl.) eat rice
"You eat"

e. Anh-ấy **ăn** cơm.
He eat rice
"He eats"

f. Các-anh-ấy **ăn** cơm.
They (masc.) eat rice
"They eat"

g. Cô-ấy **ăn** cơm.
She eat rice
"She eats"

h. Các-cô-ấy **ăn** cơm.
They (fem.) eat rice
"They eat"

However, in contrast with Chinese, Vietnamese does have tense marking. There are two tense markers – *sẽ* (future) and *đã* (past/completive aspect), as well as a progressive aspect marker *dang* in the language. For example:

(19) a. Cô-ấy **sẽ** ăn cơm.
She FUT eat rice
"She will eat"

b. Cô-ấy **đã** ăn cơm.
She PAST eat rice
"She ate"

c. Cô-ấy **đang** ăn cơm.
She PROG eat rice
"She is eating"

Duffield (1998, 1999, 2000) has postulated a TP for Vietnamese clauses. He argues that the most direct kind of evidence for such a functional category comes from the presence of tense morphemes (see (19) above) as well as their distribution in relation to other morphemes such as topic markers and assertion markers. The head of a Vietnamese clause is, however, A(ssertion), rather than either of the two higher functional categories including T. The reason for this treatment is that tense morphemes are optional in the language. Duffield (2000) observes that the optional tense markers *sẽ*

and *đã* are almost always left out in spoken Vietnamese. There exists instead an A(ssertion) marker *co* whose default interpretation is that of past, and it is treated as the head of an A(ssertion)P in Vietnamese clause structure. Duffield (2000) also proposes the feature [±A(sserted)] as part of the feature-set of A. This [±A], according to him, can be regarded as a similar entity to finiteness. While the functional projections T and A are syntactically conflated into T (or Infl) and tense and assertion are also semantically conflated into the notion finiteness in English-type languages, Duffield (2000) contends that in Vietnamese, there is no single syntactic position of T nor a semantic notion of finiteness.

In this work, we take an approach slightly different from that of Duffield's. We posit two features on the T head in Vietnamese – [±finite/tensed] and [±past] which are relevant to the issues investigated in this work. The feature [±finite/tensed] gives the categorial status of T, while [±past] characterizes the two tense morphemes *sẽ* ([-past]) and *đã* ([+past]).[5] The projection of T, be it null or filled, requires the presence of the categorial feature of [±finite] in our view. As for [±past], as pointed out in Section 1.1.2.2 in Chapter One, we assume the "morphology-before-syntax" approach and our position with respect to Vietnamese is that the existence of overt tense markers in the language entails the presence of the corresponding underlying tense feature (and by the same token, the absence of agreement morphology entails the absence of agreement features in the language). In this work, we thus adopt the following structure for Vietnamese which is a slightly simplified/modified version of the functional architecture proposed in Duffield (2000):

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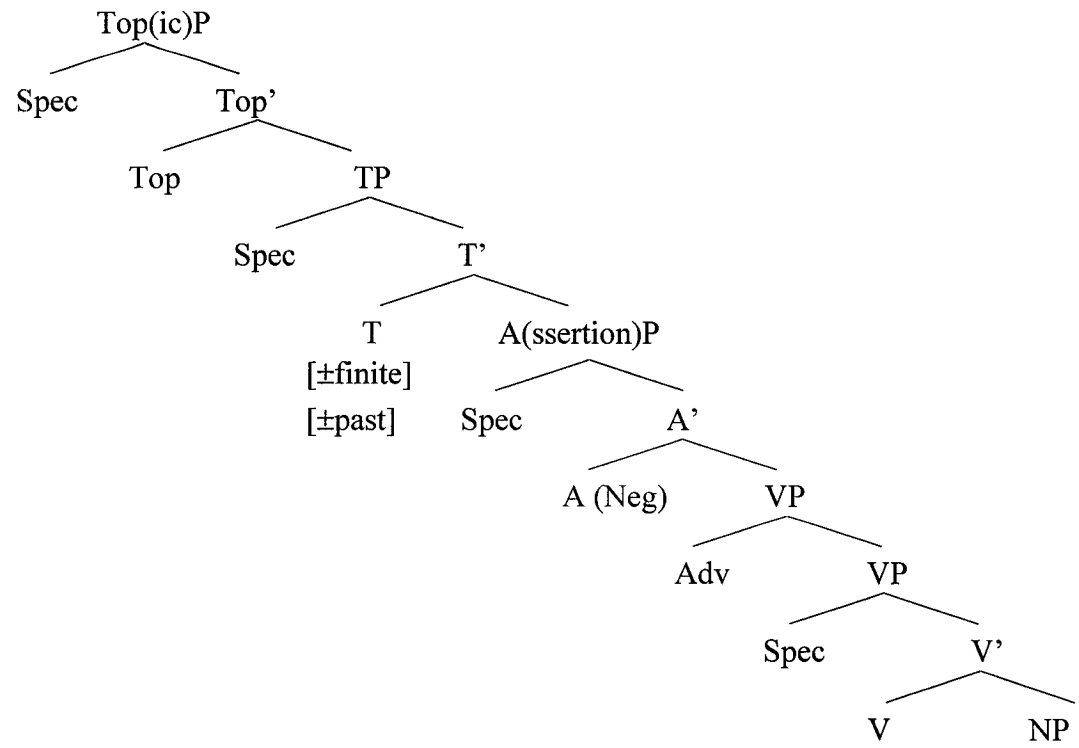
[5] We assume the following feature geometry for [±past]: [+past] indicates past tense, [-past] is further divided into [present] and [future] (note that in English, [future] as a Tense feature does not exist). Indeed, some researchers associate [future] with mood/modality rather than tense (see Oltra-Massuet 1999). Hence for Vietnamese, it may be possible to treat *sẽ* as a feature on Modal as well (if such a category is postulated for the language; the same has in fact been posited for Chinese – see for instance Lee 1994, where the so-called future marker of *wui3* ("will") in Cantonese is treated as a modal auxiliary). In addition, Nigel Duffield (personal communication, in prep) pointed out that *đã* appears to be a marker of anteriority rather than [+past] owing to its licit occurrence in future perfect contexts. In such cases then, *đã* would be a perfective or completive marker on Aspect rather than [+past] on Tense. We take the default *da* as [+past] for the purpose of this work. Moreover, since we are only concerned with the opposing features [+past] and [present] (but not [future] nor perfectivity) in L2/L3 English and French, we will not deal with the theoretical details of the syntactic categories of Aspect and Mood/Modality in any of the four languages concerned.

(20)



To sum up, although the functional category TP is present in Vietnamese, it appears that the head is nearly always (lexically) null. In other words, T in Vietnamese is projected but underspecified for agreement and in most cases [±past] as well. This absence of agreement features, the optionality of the [±past] feature and underspecification of the T head might have very interesting consequences for Vietnamese speakers' acquisition of a second language which has a fully-specified T category with finiteness, agreement and past tense features. We will explore the issue in Study II of Chapter Three.

Turning to the issue of adverb placement, Duffield (1998, 1999) has posited that there is overt raising of Vietnamese subject arguments to [Spec TP] (presumably to check nominative Case) but there is no overt raising of main verbs in the language. In other words, Vietnamese main verbs stay in the maximal VP, and do not raise overtly out of it. Translating this into the issue of feature strength, we may postulate that the feature strength of T in Vietnamese is weak, and that the Vietnamese main verb moves out of the VP to T only covertly, at LF. The effect of this on adverb placement is that the adverb

typically precedes the verb as in (21a), and like English and Chinese, the order SVAO is disallowed as in (21b). Furthermore, some manner adverbs go in between the tense marker and the main verb in a finite clause (cf. (22a)-(22b)), which is, according to Duffield (in prep), "*prima facie* evidence that the verb has not raised as high as T" (p.2). The following examples are drawn from Duffield (in prep, p.1-3):

(21) a. Tôi **cẩn thận** viết lá thơ này.
I carefully write letter this
"I wrote this letter carefully"

b. *Tôi viết **cẩn thận** lá thơ này.
I write carefully letter this

(22) a. Tôi sẽ **cẩn thận** viết lá thơ này.
I FUT carefully write letter this
"I will carefully write this letter"

b. *Tôi **cẩn thận** sẽ viết lá thơ này.
I carefully FUT write letter this

In Study II of Chapter Three on the morphosyntactic properties of T, finiteness, Case, agreement and [±past] in interlanguage French, we will also pursue the effect of the weak feature strength of T in Vietnamese on adverb placement in L2 French.

2.1.4 Summary of cross-linguistic facts on the verbal functional domain

We now summarize the morphosyntactic verbal contrasts across English, French, Chinese and Vietnamese discussed in the above sections:

	Case	T	[±finite]	Agreement [person], [number]	[±past]	Feature strength of T
English	✓	✓	✓	✓	✓	Weak
French	✓	✓	✓	✓	✓	Strong
Chinese	(✓)*	✗	✗	✗	✗	(weak)†
Vietnamese	✓	✓ null	✓	✗	✓ optional	Weak

Table 2.1

Summary of cross-linguistic morphosyntactic verbal contrasts

in English, French, Chinese and Vietnamese

Note: * checked in [Spec AspP]; † related to the feature strength of Asp instead;

✓ present in the language; ✗ absent in the language

As we see from Table 2.1, English and French share most of the morphosyntactic verbal properties except for the feature strength of T. The relevant category and/or features are all present in both languages. This is contrary to Chinese, in which none of the features concerned are assumed to be present; nominative Case is posited to be checked in the domain of [Spec AspP] in Chinese instead of [Spec TP] which is true of the other three "tensed" languages. Vietnamese is similar to Chinese in not having agreement features; however, unlike Chinese, the T category is assumed to be present in Vietnamese with the obligatory [±finite] feature (as in English and French) as well as the optional [±past] feature, and the feature strength of T is taken to be weak in the language. We will apply these verbal contrasts to our three acquisition studies reported in Chapter Three.

2.2 The nominal functional domain: Syntax of French, English, Chinese and Vietnamese noun phrases

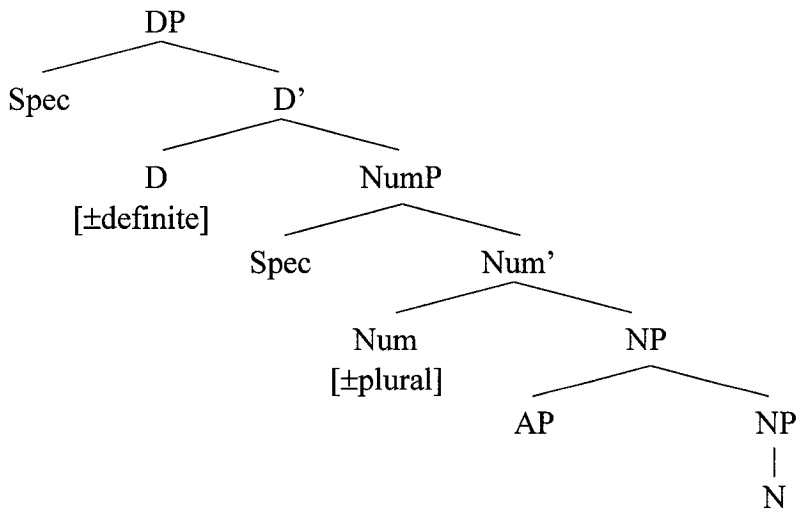
In this thesis, we are also interested in parametric variation associated with the nominal functional projection DP. Our main concern is the L2 and L3 acquisition of articles (an instantiation of the D head), the formal feature of definiteness (represented as [±definite] on D) and other related syntactic properties (i.e. the functional category of Number and the relative ordering of nouns and adjectives). As far as the semantic notions of (in)definiteness and (non-)specificity are concerned, we shall focus on: (i) (specific)

definites (i.e. singular definite article with specific reading); (ii) specific indefinites (i.e. singular indefinite article with specific reading); (iii) non-specific indefinites (i.e. singular indefinite article with non-specific reading).[6] The difference between definiteness and specificity is discussed below. The following sections present some cross-linguistic facts regarding the nominal phrase structures of French, English, Chinese and Vietnamese:

2.2.1 French and English DPs

Following Abney (1987) and Valois (1991), amongst others, we treat French and English nominals as DPs. The internal structure of French and English noun phrases under the DP Hypothesis is shown below:[7]

(23)



As we see in (23), according to the DP Hypothesis, nominals in French and English are D-projections. We assume the semantic notion of (in)definiteness to be formally represented as a feature [±definite] on the D head (see below). There is an

[6] Besides the singular definite vs. singular indefinite articles, (in)definiteness / (non-)specificity and the D(eterminer)-system are also linked, in the theoretical literature, to an additional number of syntactic and semantic issues, such as bare plurals, the distinction of mass/count nouns, the partitive construction, etc. Given the scope of the present work, we shall have nothing to say about these.

[7] There are various theories in the literature on the internal structure of DP, the hosting of the definiteness feature as well as the status of Number. See for instance, Gil (1989) and Lyons (1999) for two alternative views.

additional category Num(ber)P between DP and NP; its head Num, which signifies the singular-plural distinction, hosts the formal feature [±plural] and is considered a landing site for noun movement in Romance languages.[8] Specifically, in French, Num features are assumed to be strong, and attract the noun to move up for feature checking purposes, hence deriving noun-adjective order; in English, on the other hand, Num features are assumed to be weak; as a result, there is no overt noun raising in the language, and the adjective remains pre-nominal (for details of N-to-Num movement and related feature checking mechanisms in Romance, see Valois 1991, Bernstein 1993). Examples of the relative ordering of nouns and adjectives in French and in English are given below:[9]

(24) a. une table ronde
a table round

b. a round table

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[8] Here we are not concerned with the notion of "gender" or its syntactic representation—whether it is a feature on Num or whether it hosts a separate functional projection e.g. GenP. For relevant discussion, see for instance Ritter (1991, 1993), Bernstein (1993).

[9] Notice that in French, there are a number of obligatorily pre-nominal adjectives such as those in (i), as well as adjectives that can be both pre-nominal and post-nominal, as in example (ii):

(i) a. un bon homme
a good man

b. une jolie fille
a pretty girl

(ii) a. un petit garçon
a small boy
("a very young boy", "an infant")

b. un garçon petit
a boy small
("a boy who is small in size")

Radford (1993) accounts for this by postulating two adjectival positions in languages in general: pre-nominal adjectives are heads (hosting a separate AP projection between DP and NumP) and post-nominal adjectives as adjuncts to NP. We are only concerned with post-nominal French adjectives in this chapter.

(25) a. un sac noir
a bag black

b. a black bag

(26) a. la pomme fraîche
the apple fresh

b. the fresh apple

(27) a. le climat froid
the climate cold

b. the cold climate

Turning to the notion of (in)definiteness, [±definite] is assumed to be a formal feature hosted on D. However, whether it is intrinsic (i.e. universal) or optional is subject to debate; we treat it as optional – not all of the world's languages have this feature listed in the grammar. Lyons (1999) posits that (syntactic) definiteness is the grammaticalization of "semantic/pragmatic definiteness" or identifiability; definiteness as a grammatical category is *not* universal but is only present in those languages "which show overt definiteness marking, a definite article of some kind" (p.278). Thus, we postulate that languages such as English and French with definite and indefinite articles have the feature [±definite] while article-less languages such as Chinese and Vietnamese do not (see below).

Regarding the featural representation of the article morphemes in English and French, *the* (or *le* / *la*) are [+definite] while *a* (or *un* / *une*) are [-definite]. With respect to the exact semantic/pragmatic nature of definiteness as well as its differentiation from specificity, the crux lies in referentiality. Borrowing Lyons' treatment, we assume that definites are unique, identifiable (familiar) and/or inclusive while indefinites are not. In

addition, specific definites and specific indefinites refer, while non-specific indefinites do not (see discussion in Lyons, p.165-166). Moreover, as far as syntactic representations are concerned, we take referential (specific) definites and referential (specific) indefinites to be DPs, while non-referential (non-specific) indefinites are NumPs (see Ritter 1991). This is because DPs are generally considered to be referential (e.g. Abney 1987) and since we equate referentiality with specificity, non-specific indefinites are therefore non-referential and do not seem to occur on D. Schaeffer (1997) assumes the non-referential indefinite determiner to occupy the Num head position (although she adopts the Specificity Hypothesis – see below); we shall follow her treatment. Hence, the singular specific definite article (*the* in English and *le / la* in French) and the singular specific indefinite article (*a* in English and *un / une* in French) are found on D, whereas the non-specific indefinite article (*a* in English and *un / une* in French) is on Num. Notice that our analysis is not inconsistent with the Specificity Hypothesis (e.g. Chomsky 1998, Schaeffer 1997) – our [±definite] echoes their [+specific] (i.e. only referential determiners (articles) are on D), but with different implications, especially for Chinese learners of DP-type languages. The reader is also referred to the Familiarity Hypothesis (i.e. [±hearer] on D) adopted by Schafer & De Villiers (2000). We shall return to these issues when we discuss the data in the experimental studies reported in Chapter Four.[10]

2.2.2 Chinese (Cantonese / Mandarin) nominal phrases

The Chinese languages, both Cantonese and Mandarin, do not have articles, whether definite or indefinite. We assume, following Cheng & Sybesma (1999) and others, that there is no DP in the Chinese languages. Instead, Chinese nominals are Numeral-projections (but crucially not Number, see below), and the Numeral head selects a classifier phrase (CLP):[11]

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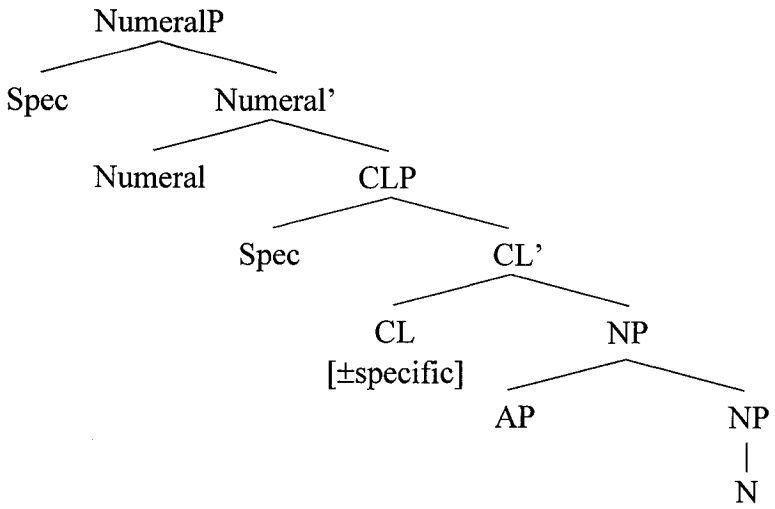
[10] The exact details of feature strength and feature checking mechanisms of [±definite] (if taken as a [-interpretable] feature) await further research. For a possible related solution, see Longobardi (1994, 1996) on ±R(eferential) and "strong D features in Romance" respectively. Particularities of interpretability and feature checking of [±definite] are not strictly crucial in this work. What is of most concerns is the presence or absence of the feature *per se* in interlanguage grammar.

[11] We leave aside the issue of demonstratives in this chapter. See C.-C. J. Tang (1990) and Cheng & Sybesma (p.538-9) for some discussion.

(28)



It is well known that Chinese languages (Mandarin, Cantonese, etc.) are classifier languages (Li & Thompson 1981; Matthews & Yip 1994). Classifiers are like "measure phrases" which render (mass) nouns countable. In Chinese, except in bare noun phrases, all types of noun require classifiers, including countable nouns. Classifiers cannot occur alone. They must co-occur (at least) with nouns (i.e. CL-N), as well as optionally with possessives, demonstratives and numerals (i.e. (Poss)-(Dem)-(Num)-CL-N). Classifiers have referential functions in Chinese languages (see below); in Cantonese in particular, bare nouns are non-referential/generic and [CL+N] is ambiguous between specific definiteness and indefiniteness.[12] Cheng & Sybesma (1999) argue that in Chinese, a [CL+N] phrase with an indefinite reading is a NumeralP (with an empty Numeral head), while that with a definite reading is a CLP (p.529). The following presents some examples illustrating the use of the classifier in Chinese (Cantonese):[13]

(29) a. syu2
book
"books (in general)"

[12] Mandarin nominal facts differ from Cantonese regarding the interpretations of bare nouns and [CL+N] phrases. See below for a more detailed exposition and some interesting implications of these on L2 acquisition.

[13] The Cantonese romanization system adopted in this thesis follows the LSHK (Linguistic Society of Hong Kong) JyutPing Scheme (1997). The numbers following each transliterated "word" stand for tones.

b. bun2 syu2
CL book
"the / a book"

c. jat1 bun2 syu2
one CL book
"one book / a book"

d. go2 (jat1) bun2 syu2
that (one) CL book
"that book / the book"

e. keoi3 go2 bun2 syu2
his/her that CL book
"his/her book"

As regards the issue of Number, Cheng & Sybesma (1999) use the term "Numeral Phrase" as the highest functional projection of Chinese noun phrases (p.529). In some of the works on Chinese noun phrases which have cited their paper (e.g. Au Yeung 1997, Pan 1999, Del Gobbo 1999), this Numeral Phrase is interpreted as the equivalent of the Number projection of English and French. Lisa Cheng (personal communication) reports that the literature is a bit mixed as to whether NumP refers to Number or Numerals. Cheng & Sybesma (1999) assume Numerals because they think that there is no Number in Chinese (and thus no NumP). In particular, they argue that languages need "grammatical markers of countability" (p.517) – while English (and French) use overt number/plural morphology, Chinese lacking such morphology, uses count-classifiers instead. Numerals are thus crucially not equal to Number (=overt plural morphology) (see however C.-C. J. Tang (1990) and S.-W. Tang (1999) for alternative views on the nominal structure of Chinese and other South-East Asian languages).

Nonetheless, classifiers in Chinese appear to function as Number. In Cantonese and in Mandarin, for instance, there is a so-called "plural classifier" (*di1* and *xie* respectively) which renders the semantic partitioning of count nouns lexically visible. The following are Cantonese examples:

(30) (a) jat1 di1 waa2
one CL(pl) picture
"a bunch of pictures / some pictures"

(b) di1 waa2
CL(pl) picture
"the pictures"

(c) go2 di1 waa2
that CL(pl) picture
"those pictures"

In fact, Cheng & Sybesma pointed out that "in Chinese, the classifier is the locus of grammatical Number" (p.536). Classifiers may indeed be associated with Number, or at least, the notion of plurality. However, we would like to suggest that crucially, Number is not marked overtly on Chinese nouns (unlike English, for instance) and Number *agreement* is clearly lacking in Chinese (as opposed to French). Therefore, it is not obvious that such issues as feature percolation and feature checking of Number would be applicable in Chinese. We contend that the so-called "plural classifier" in Chinese is purely a lexical device, not to be equated with the formal feature (or syntactic category) of Number.

As far as (in)definiteness is concerned, we have already assumed in Section 2.2.1 that it is, formally, not a universal feature. According to Cheng & Sybesma (1997), the classifier CL "only performs the discoursal deictic function of linking the extension of the noun to whatever entity in the real world it applies to [...] and *does not add*

definiteness" (p.31, emphasis added). This echoes Lyons (1999), who suggests that in those languages that have no formal/grammatical marking of definiteness, such as Chinese, "definite interpretations" depend heavily on discourse/pragmatics (p.278). A further piece of evidence contra the hosting of (in)definiteness formally on the Chinese (Cantonese) classifier comes from Matthews & Pacioni (1997)'s contention that "the use of the (Chinese) classifier is associated with specificity rather than definiteness" (p.45). Cantonese CL head, if filled, would therefore be related more to Chomsky's [+specific] rather than [±definite] if there is any formal referential feature in Chinese. As noted above, (post-verbal) Cantonese [CL+N] phrases are ambiguous as to definiteness but are interpreted as specific. The Cantonese classifier may thus be treated as bearing some referential function analogous to the [+specific] feature, as the following examples (adapted from Matthews & Pacioni, p.48 and p.51, emphasis added) illustrate:

(31) Keoi5 maai5-zo2 **gaan1** nguk1
s/he buy-PFV **CL** house
"S/he has bought a/the house." (= specific)

(32) Keoi5 maai5-zo2 ∅ ce1
s/he buy-PFV car
"S/he has bought a car." (= "some car", non-specific)

In the light of the above discussion, we argue for a [±specific] feature on the CL head in Chinese. Specifically, in Cantonese, a null CL head denotes non-specific entities (i.e. [-specific]) while a filled CL head entails specificity (either definite or indefinite) (i.e. [+specific]). This suggests that Cantonese native speakers would encounter problems when acquiring languages with articles where definiteness and indefiniteness have to be separately marked in the syntax and/or where the two semantic concepts have distinct formal or lexical realizations, such as English and French.

Mandarin facts are different from Cantonese in this respect. Bare nouns in Mandarin can be specific or non-specific while a [CL+N] phrase is strictly non-specific

(indefinite). Thus, if there is a formal feature [±specific] hosted on the CL head in Mandarin, contrary to Cantonese, a null CL can be either [+specific] or [-specific] (i.e. specific definite, specific or non-specific indefinite, or generic) while a filled CL is always [-specific]. The subtle interpretative contrasts between Cantonese and Mandarin may have significant differential consequences on the L2 acquisition of English and French. If the category of D has not been fully acquired and learners of English or French treat D as CL (i.e. D is present but underspecified for [±definite]), two possible outcomes concerning definiteness would be expected: Cantonese transfer would render learners not able to distinguish between definite and indefinite articles in the target French and English, since the Cantonese CL represents [+specific]. On the other hand, Mandarin transfer would lead to overgeneralization of the (non-specific) indefinite article to all definite/indefinite contexts in the target languages, since the Mandarin CL signifies [-specific]. These may have very interesting implications for our L2 and L3 cases. We return to the link between the English/French [±definite] and the Chinese (Cantonese/Mandarin) [±specific] in the experimental studies to be reported in Chapter Four. In sum, for the purposes of this chapter, we assume that the formal feature [±definite] is not overtly marked in the Chinese syntax (i.e. it is an optional feature not present in Chinese). Instead, a [±specific] feature is hosted on the CL head in Chinese (both Cantonese and Mandarin).

Finally, with respect to the relative ordering of adjectives and nouns, the following examples illustrate that Chinese (attributive) adjectives are strictly pre-nominal:

(33) Mandarin

(a) Ta renshi-le yi ge piaoliang de nühaizi.
He know-PFV one CL pretty 's girl
"He met a beautiful girl."

(b) *Ta renshi-le yi ge nühaizi piaoliang.
He know-PFV one CL girl pretty

(34) Cantonese

(a) Paak3laai1tou4 hai6 jat1 go3 wai5daai6 ge3 si1soeng2gaa1.
Plato be one CL great 's thinker
"Plato is a great thinker."

(b) *Paak3laai1tou4 hai6 jat1 go3 si1soeng2gaa1 wai5daai6.
Plato be one CL thinker great

It is assumed that Chinese adjectives are adjoined to NP (see (28) above). Since we have argued that both Cantonese and Mandarin do not involve the Num projection (nor the formal feature of Number), the issue of the feature strength of Number is irrelevant. The word order facts in Chinese as in (33)-(34) above can be accounted for by postulating that the [±specific] feature on CL motivates covert N raising for specific/non-specific interpretation of the nominal expression at LF. Whether in Cantonese or in Mandarin, the feature strength of CL is therefore taken to be weak and nouns do not move overtly over adjectives in either language.[14]

2.2.3 Vietnamese nominal phrases

We now turn to Vietnamese, which shares most of the nominal properties with Chinese (Cantonese). Vietnamese does not have articles, but has classifiers (L. Thompson 1965/1987; D.-H. Nguyen 1997). There is no overt plural morphology in the language except two so-called "pluralizers" *nhung* and *cac* which function like a quantifier (D.-H. Nguyen 1997 p.140), and Number agreement is absent. In addition, the classifier appears to be associated with specificity rather than definiteness. The following are examples illustrating some of the nominal properties of Vietnamese:

[14] Cheng & Sybesma, based on Chierchia (1998), proposed a non-overt ι operator in Chinese as a syntactic device that motivates (covert) N raising (to a new landing site presumably above AP). Specifically, they argued that in Mandarin, bare nouns have to move to CL (at LF) to receive a specific interpretation, while in Cantonese, lexical insertion of the CL fulfils this function. It appears that their analysis is incompatible with a stance that a [±specific] feature is present in both Cantonese and Mandarin, which we adopt. The [±specific] feature requires checking at LF in both languages and thus covert N-to-CL movement should be operative in both Cantonese and Mandarin in our view.

(35) a. sách
book
"book(s) (in general) / the book(s)

b. cuốn sách
CL book
"the book / a book"

c. một cuốn sách
one CL book
"a book"

d. hai cuốn sách
two CL book
"two books"

e. vài cuốn sách
some CL book
"some books"

f. những cuốn sách
plural CL book
"some, several (of the) books"

g. các cuốn sách
plural CL book
"all (of the) books"

As we can see from (35a), a bare noun in Vietnamese is ambiguous between singularity/plurality as well as specificity/non-specificity. The use of a classifier in (35b) individualizes the noun and signifies specificity (but ambiguous between a definite and

an indefinite reading). The numeral *mot* ("one") added to the CL-N string indicates that the noun is non-specific (indefinite) as in (35c). We can observe from (35d-g) that the noun can become "pluralized" by a numeral, a quantifier or a so-called "pluralizer". Notice, however, that by "pluralizers" or "plural markers", Vietnamese grammarians actually meant quantifiers (L. Thomspon 1965/1984 p.180-1; D.-H. Nguyen 1994 p.141-3). We will not go into the details of quantifiers (such as syntactic position and the associated issue of scope) here, but would like to suggest that Vietnamese does not seem to have the grammatical Number that is present in languages such as English and French and that has syntactic consequences such as plural marking on nouns, number agreement etc. Moreover, the so-called "pluralizers" are not obligatory morphological markers, but optional lexical devices to indicate the semantic notion of plurality in the language and hence should not be treated as the equivalent of a formal or morphosyntactic feature or category Number as in English and French.

Vietnamese is a rigidly head-initial SVO language (see Duffield 1998, 1999, 2000). As far as noun phrases are concerned, the order of constituents and an illustrative example (from D.-H. Nguyen 1997, p.175) are as follows:

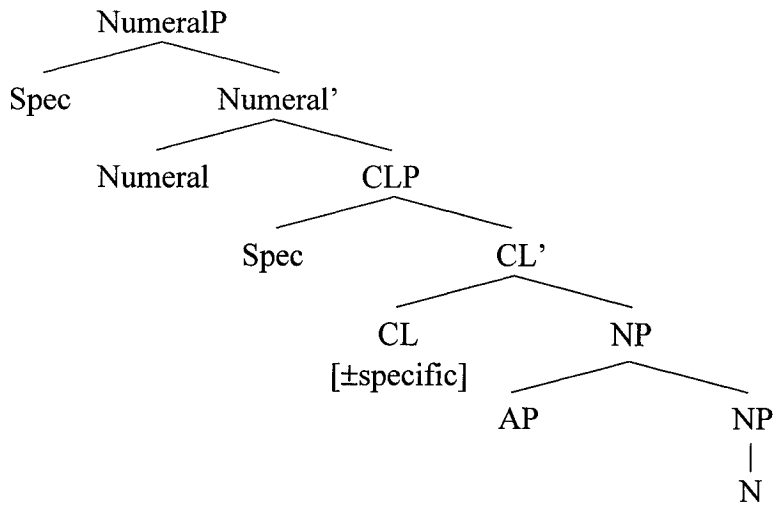
(36) Quantifier – Numeral – Classifier – Noun – Adjective – Demonstrative – Possessive

(37) cả hai cuốn từ-điển Việt-Anh này của nó
all two CL dictionary Vietnamese-English this of he
"these two / both of these Vietnamese-English dictionaries of his"

Leaving aside demonstratives and possessives which are not directly relevant to this work, we assume that the Vietnamese adjective is adjoined to NP. We also assume that all specifier positions occurs to the left of the head universally (Kayne 1994). Thus, based

on Cheng & Sybesma (1999)'s model for Chinese, the following nominal structure is postulated for Vietnamese:[15]

(38)



In other words, Vietnamese nominals are at least CLPs and there is no DP. As far as interpretation is concerned, bare nouns in Vietnamese are like Mandarin and [CL-N] phrases are like Cantonese. Specifically, a bare noun in Vietnamese can be both specific and non-specific while a [CL-N] string is specific but ambiguous between a definite and an indefinite reading. We posit a [±specific] feature on the Vietnamese CL head. A null CL can be either [+specific] or [-specific] (i.e. specific definite, specific or non-specific indefinite, or generic) while a filled CL bears the value [+specific]. Similar to what we discussed in Section 2.2.2 above on Chinese, specificity in Vietnamese has interesting impact on its native speakers' acquisition of English- or French-type languages. In particular, Vietnamese speakers may encounter problems in acquiring determiners in English or French: if the learner has not acquired the functional category of D (i.e. D is absent in interlanguage grammar), noun phrases (mostly treated as bare because the L1 category CL although still present is null) will be interpreted as either specific or non-specific (i.e. specific definite, specific or non-specific indefinite, or generic). On the other hand, if D is present in interlanguage grammar but if the feature of [±definite] is not well in place (and thus the learner is treating D as (filled) CL (which is ambiguous between a

[15] See S.-W. Tang (1999) for an alternative view on the nominal structure of Chinese, Thai and Vietnamese. See also Singhapreecha (2000b) for a DP-analysis for Thai nominals.

specific definite and a specific indefinite reading), then a DP may be interpreted as either specific definite or specific indefinite – in other words, the learner may not be able to distinguish between a definite and an indefinite article (i.e. they may treat either the definite or the indefinite article as default and overgeneralize it to both definite and indefinite contexts, or they may simply use either article randomly irrespective of contexts). We will explore the issue in Study V of Chapter Four.

Finally, regarding the relative ordering of adjectives and nouns, (39)-(40) below illustrate the post-nominal status of adjectives in Vietnamese (examples taken from X.T. Nguyen 1996, p.15 and p.20):

(39) a. con mèo mập/béo
CL cat fat
"a/the fat cat"

b. *con mập/béo mèo
CL fat cat

(40) a. cái thước dài
CL ruler long
"a/the long ruler"

b. *cái dài thước
CL long ruler

Recall from Section 2.2.2 that for Chinese (Mandarin and Cantonese), we have proposed that the weak feature strength of CL motivates the raising of the noun at LF for specific/non-specific interpretation. Given the nominal clause structure in (38), the word order facts in Vietnamese can be captured by postulating that the feature strength of CL is strong in the language; the N is thus attracted to move from its base position for feature

checking purposes overtly in syntax. The precise details of a new landing site required for this N movement are not strictly crucial to this work; we leave them for future research.

2.2.4 Summary of cross-linguistic facts on the nominal functional domain

Let us recapitulate a few important differences between the source and target languages involved in this work. As can be seen in Table 2.2 below, English and French both have DP projections, while Chinese (Cantonese/Mandarin) and Vietnamese do not. There is a [±definite] feature on D, both in English and French; such a formal feature is posited to be lacking in Chinese and Vietnamese which have a [±specific] feature hosted on the CL head instead. A NumP is projected in both English and French, bearing the formal feature [±plural], but not in Chinese nor Vietnamese. The feature strength of Number is strong in French but weak in English, and inapplicable in Chinese and Vietnamese (the feature strength of the latter two are assumed to be related to the CL). There is overt N-to-Num movement in French, which is covert in English; on the other hand, N-to-CL movement is postulated for Vietnamese (overt) and Chinese (covert). In more general typological terms, English and French share similar nominal properties, Chinese and Vietnamese are distinct from English and French. We shall apply these cross-linguistic observations in our hypotheses in the three studies to appear in Chapter Four.

	English	**French**	**Chinese**	**Vietnamese**
1. D	✓	✓	✗	✗
2. [±definite]	✓	✓	✗	✗
3. Number (or [±plural])	✓	✓	✗	✗
4. Feature strength of Number	Weak	Strong	(weak)*	(strong)*

Table 2.2

Cross-linguistic comparisons of English, French, Chinese and Vietnamese with respect to DPs

Note: * related to the feature strength of CL instead

2.3 Conclusion

This chapter has presented the theoretical details of the verbal and nominal functional properties of English, French, Chinese and Vietnamese. In a nutshell, the cross-linguistic facts reveal that Vietnamese and especially Chinese (the source languages) share very

few similarities with English and French (the target languages) as far as the structures that are relevant to this work are concerned. We shall examine the consequences for non-native language acquisition – Chapter Three investigates tense and agreement, while Chapter Four looks at DPs.

CHAPTER THREE

Tense and Agreement in L2A and L3A

3.0 Introduction

As mentioned in Chapter One, the present work consists of a number of L2 and L3 studies on the verbal and nominal functional domains. This chapter is concerned with the acquisition of the verbal functional domain (i.e. tense and agreement) in L2A and L3A. We divide the chapter into three studies: (i) a cross-sectional study on the developmental process of L2 acquisition of tense and agreement by Cantonese learners of English with different proficiency levels (Study I); (ii) a comparative study on the initial state of L2 and L3 acquisition of tense and agreement by Vietnamese monolinguals and Cantonese-English bilinguals who are beginning learners of French (Study II); and (iii) a final study on the later stages of L3 acquisition of tense and agreement with evidence from Cantonese-English bilinguals who are intermediate and advanced French learners (Study III).[1] We aim to test the Failed Features Hypothesis and the Full Transfer Full Access model using both L2 and L3 cases, and argue for a difference between L2A and L3A.

3.1 Study I: From initial state to steady state in L2A (tense and agreement)

3.1.0 Introduction

This section reports our first study which is on the L2 acquisition of the verbal functional domain. We look at how Cantonese learners of English with different proficiency levels acquire the parametric differences between Chinese and English with respect to tense and agreement. This study on L2 English is crucial for the later investigation of L3 French; as we will see in Study II, the central claim of the present work is that it is the L2 English steady state that constitutes Hong Kong Cantonese-English bilinguals' L3 French initial state. It is thus important to examine the development of L2 English in the same population and trace how the L2 steady state has come into being.

[1] Portions of the L3 French findings in Study II and Study III are reported in Leung (to appear).

3.1.1 Hypotheses and predictions

Recall that in Chapter One, we presented two alternative views on L2A, namely the Failed Features Hypothesis (FFH) and the Full Transfer Full Access model (FTFA). In this section, we apply these two theories and make some predictions regarding the acquisition of tense and agreement by Cantonese learners of L2 English. We address the following general research questions:

a) When learners first start learning an L2, what is the interlanguage grammar like? Does it start all over again with options made available by UG or is it the L1 that constitutes the L2 initial state?

b) How about development? What does development entail on FFH and FTFA? Will learners improve along the way when acquiring their L2? Does that imply parameter-resetting is possible in the L2 transitional state?

c) What is the final stage like? Do learners have native-like attainment or are they still stuck with their L1 in the end state (i.e. fossilization)?

We present below the predictions on various stages of L2 development based on the two models:

(I) L2 initial state

1. FTFA predicts that the L2 initial state of our subjects is L1 Chinese (both lexical and functional categories). Specifically, T and the associated features of [±finite], agreement and [±past] are absent in our beginners' English interlanguage. Both nominative Case assignment and adverb placement, owing to the availability of AspP in L1 as the checking domain as well as the similarities in L1 and L2 surface facts, will not pose a problem for the beginners.
2. FFH makes the same predictions as FTFA because it assumes full transfer in the L2 initial state (see Chapter One Section 1.2.2).

(II) L2 transitional state

1. FTFA predicts UG-based restructuring. It also predicts the possibility of improvement across proficiency groups which is due to target-like acquisition of new features and feature strength concerned, namely the category of T, [±finite], agreement, [±past], nominative Case assignment as well as adverb placement.
2. FFH predicts continuing "failure", across proficiency levels, to acquire T, [±finite], agreement, [±past]. Nonetheless, nominative Case assignment and adverb placement will continue to pose no (surface) problem owing to similarities between L1 Chinese and L2 English.

(III) L2 steady state

1. FTFA predicts a UG-constrained interlanguage grammar, including the possibility that the L2 steady state is target-like in which case advanced learners will be able to distinguish Asp from T and all new features and feature strength will be fully acquired. Specifically, all features of T *viz.* Case, [±finite], agreement, [±past] and feature strength of T will be present in advanced subject's L2 English.
2. FFH predicts all those parameterized features and feature strength that were not instantiated in L1 Chinese will not be acquired. In other words, [±finite], agreement features, [±past] will "fail" ultimately in advanced subjects' L2 English interlanguage grammar. Nominative Case assignment and adverb placement will not "fail", however, owing to L1 transfer effects.

3.1.2 Participants

Participants for this study consist of 147 Cantonese learners of L2 English with different proficiency levels. All of them were recruited and tested in a secondary school in Hong Kong. The average age of these subjects at the time of testing was 13.54. Based on the Michigan Placement Test results, we divided the subjects into five proficiency bands – there were 22 low beginners, 30 high beginners, 27 low intermediate, 32 high intermediate and 36 advanced learners. All subjects were native speakers of Cantonese, learning English as a second language. The following table shows the brief profile of the L2 English learners:

Proficiency band	Number of subjects	Average Michigan score (out of 80)	Average age
BL (low beginner)	22	21.55	12.59
BH (high beginner)	30	34.43	12.66
IL (low intermediate)	27	45.41	13.28
IH (high intermediate)	32	56.50	14.16
A (advanced)	36	68.00	15.03

Table 3.1

Profile of Hong Kong Cantonese learners of L2 English (Study I)

As pointed out in Chapter One, there exists a problem in determining whether this L2 English case should be considered as one of (early) child L2 acquisition, or whether it should be taken as a case similar to adult L2 acquisition where the question of the "critical period" becomes pertinent. Hong Kong children receive exposure to English rather early on (i.e. around the age of 4); this is the stage of lexical learning, with some sparse English input available to them. Normally, syntactic acquisition (i.e. the presence of substantial and systematic English input that triggers grammar learning) begins around the age 8-10, with some variation across different primary schools owing to differences in school policy, syllabus design, students' standard etc. Our case is tricky in the sense that the age at which subjects started acquiring English (syntactically) overlaps with what people generally assume to be the starting point of the "critical period", that is of course, if one believes that such a period exists. One point worth noting, though, is that the English learners are classroom learners. They receive formal language instruction instead of acquiring the language in a naturalistic interactive setting. It has been suggested that "formal learning environments do not provide learners with the amount of exposure needed for the age advantage of young learners to emerge" (Ellis 1994, p.489). Ellis reported the results of a number of school-based studies (e.g. Burstall 1975, Harley 1986) from which there is no evidence that children's level of attainment is greater than that of adults in classroom language learning. Age appears to be not a significant factor in distinguishing child versus adult learners' ultimate attainment as far as formal language instruction is concerned. In other words, one might argue that as far as language learning in a formal setting is concerned, there is not a big difference between early and late second language acquisition. Certainly, this conclusion has to be interpreted with caution,

since many other factors, such as neurological ones, have not been taken into consideration. Nonetheless, we would like to suggest that Hong Kong Cantonese "young" learners of L2 English are different from other cases to which the term "early bilingualism" normally applies, such as bilingual L1 acquisition (e.g. Yip & Matthews 2000), or early child L2 acquisition (e.g. Grondin & White 1996; Paradis, Le Corre & Genesee 1998). Our Hong Kong young learners did not start their L2 English acquisition as early as other child L2ers in those real cases of "early" child L2A, and the amount of exposure to naturalistic input outside of language classroom is not comparable to some other bilingual societies such as Singapore (Chinese-English) or Montréal/Canada (French-English). What is crucial to the present work is that there is support for the claim that late child L2A potentially qualifies for the predictions of the Failed Features Hypothesis (FFH), which is a theory for post-critical period L2A only.

In addition to the L1 Chinese-L2 English experimental subjects, a monolingual native English control group of 31 participants was tested in Montréal, Canada. They were either students at McGill University, or other anglophone speakers working and residing in Montréal. None of them were students of linguistics or education.

3.1.3 Experimental tasks

Four written experimental tasks (two elicited written production and two preference tasks) have been designed to target different properties related to tense and agreement and to test the above predictions at various stages:

3.1.3.1 Elicited written production task I: Composition on [±past]

The first elicited written production task was a composition task on past tense marking. Subjects were asked to write 100-150 words on one of the following two topics which required the use of the past tense in describing what happened in the past:

i. Describe your primary school life (favourite subjects? extracurricular activities? teachers? best friends?...).

ii. Tell us one or more of the most frightening or most unhappy experiences in your life (accidents? failures?...).

This task aimed to see whether subjects have acquired the feature [±past] (i.e. correct past tense morphology).

3.1.3.2 Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

A second elicited written production task was a sentence completion task adapted from Herschensohn (1998) which was originally on L2 French adverb placement. We modified the task to look at adverb placement in L2 English. We also designed the test items in such a way that it would be possible to look at agreement (and finiteness), particularly third person singular (since in English, finite forms and non-finite/root forms are identical for other persons/numbers). For each test item, the uninflected form of the verb (e.g. *eat*) was given together with other parts of speech for an activity (e.g. *an*, *apple*), as well as the agent (e.g. *Martin*) and the related frequency information of the activity concerned (e.g. *7 times / week*) (see example (19) below). Subjects were then asked to use one of the three frequency adverbs *often*, *rarely* or *never* to describe how often the activity concerned is performed. The choice of adverbs is not important in this task. We were only interested in what position in the sentence subjects put the adverbs in (i.e. SAV versus *SVAO). Since we only wanted to look at the placement of adverb relative to the verb (i.e. sentence-medial position), in order to ensure that subjects would not place adverbs in sentence-initial or sentence-final position, for each test item, the first and the last words were given as hints. There were a total of 12 sentences, 6 on third person singular and the other 6 on other persons/numbers. The full list of test items together with the instructions given can be found in Appendix A. The following are two examples from the task:

(1) Eat / an / apple
Martin: 7 times / week
Martin.....apple.

(2) Go / out / to / dinner

You: 0 time / month

You.....dinner.

3.1.3.3 Preference task I on Case, finiteness, agreement and [±past]

A preference task was designed to look at various features related to T. The format was adopted from White (1991a, 1991b). Subjects had to read pairs of sentences and decide on a response amongst five options given below the pair ("only a is correct", "only b is correct", "both correct", "both wrong", "not sure"). There were a total of 48 items, divided into four test types as follows:

i. 12 items on Case (i.e., 4 with the pronoun *they/them*, 4 with *he/him*, 4 with *she/her*)

ii. 12 on finiteness (i.e., 6 on present participle/gerund and 6 on irregular forms of past participle with *–en* ending)

iii. 12 on (wrong) agreement (i.e., 3 on third person singular (*no *–s*), 3 on third person plural (*with *–s*), 3 on first person singular (*with *–s*), and 3 on first person plural (*with *–s*))

iv. 12 on [±past] (i.e., 6 on [+past] and 6 on [-past]).

Owing to time and length constraint of the experiment, no distractors were included. The variety of test types was presumably wide enough to avoid subjects' guessing of what was being tested. A full list of test items are given in Appendix C. Here are some examples from the task (one from each of the test types):

(3) Case

(a) The workers fear that <u>them</u> may lose their jobs.

(b) The workers fear that <u>they</u> may lose their jobs.

(4) Finiteness

(a) Every summer she taken Yoga with me.

(b) Every summer she takes Yoga with me.

(5) Agreement

(a) Thomas eats a lot of fruits and vegetables every day.

(b) Thomas eat a lot of fruits and vegetables every day.

(6) [±past]

(a) We sent a parcel to our parents last month for their anniversary.

(b) We send a parcel to our parents last month for their anniversary.

3.1.3.4 Preference task II on adverb placement

Another preference task using the same format was also devised to test the feature strength of T. The task was adapted from White (1991a, 1991b) on L2 English adverb placement and involved various combinations of grammatical and ungrammatical adverb placement pairs (i.e. correct SAV order paired with a sentence-initial or sentence-final adverb; incorrect SVAO order paired with a sentence-initial or sentence-final adverb; and correct SAV-incorrect SVAO pair). Four frequency adverbs *often*, *always*, *sometimes*, *usually* and four manner adverbs *quickly*, *slowly*, *quietly*, *carefully* were used in the task. We excluded the items with prepositional phrases from White's original task since these were not directly relevant to our predictions and owing to time and length constraint of our experiment. For each of the two versions of the task that we used, therefore, there were a total of 26 sentence pairs (22 test items and 4 distractors). The two complete versions of the task used in our study are shown in Appendix E. Some examples are shown below:

(7) Frequency adverb – *SVAO paired with sentence-final adverb

(a) Superman saves people always.

(b) Superman saves always people.

(8) Manner adverb – SAV paired with sentence-initial adverb

(a) The students quietly write the test.

(b) Quietly the students write the test.

(9) Frequency adverb – *SVAO-SAV pair

(a) Tony often forgets his homework.

(b) Tony forgets often his homework.

3.1.4 Implementation procedures

All the tasks were conducted in the secondary school at which the subjects studied. Subjects were tested during their class time. They completed the tasks in the same order as presented in the above section. Each task was timed. Subjects were asked to complete the tasks as quickly and as accurately as possible, using their first intuition without pondering. They were also told not to go back to previous questions or change their answers. All these were attempts to minimize subjects' use of metalinguistic knowledge in the experiment. A background questionnaire as well as the Michigan Placement Test were administered in a separate session. A teacher was present in each class during the experiment to help the experimenter administer the tasks and maintain discipline.

3.1.5 Results

We now present the results of subjects' performance on each of the experimental tasks below:

3.1.5.1 Elicited written production task I: Composition on [±past]

Table 2.3 below presents the accuracy scores (percentages of correct past tense marking i.e. simple past, past progressive or present perfect[2] in obligatory contexts) for each proficiency level. Notice that in English, historical present is a grammatical option to

[2] Present perfect is not strictly [±past] as a feature. However, it can reflect subjects' sensitivity to past time reference and represent subjects' attempts to mark events that occurred in the past. Therefore, it was included in the accuracy counts.

describe what happened in the past. One major criterion for correct past tense marking in this task was therefore consistency. Given a particular context, if learners were resorting to historical present, they should have used present tense marking for all the relevant verbs throughout the piece they wrote. In other words, learners had to be consistent in their production. If in a certain composition, some of the verbs were in present tense and others were in past tense (i.e. optionality), then it was considered that historical present had not been opted for, and that the verbs that appeared in present tense should have been marked in past tense.

	No. of obligatory contexts	**Past tense marking (%)**
BL (n=22)	259	144 (55.60%)
BH (n=30)	406	251 (61.82%)
IL (n=27)	388	282 (72.68%)
IH (n=32)	402	305 (75.87%)
A (n=36)	389	338 (86.89%)

Table 3.2

Accuracy rates in elicited written production task I on [±past] (Study I)

Table 3.2 shows a very clear trend with respect to the production of past tense morphology – beginners performed the worst in the task, while advanced learners performed the best. We also observe steady improvement with increase in proficiency level. A single-factor ANOVA shows a highly significant difference across proficiency groups with respect to accuracy rates ($F(4,142)=14.1458$, $p<.0001$). Post-hoc Scheffé tests indicate that the differences amongst all groups were significant ($p<.0001$).

3.1.5.2 Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

Table 3.3 below presents the mean percentages of correct responses with respect to agreement/finiteness and adverb placement:

	Finiteness	Agreement	Adverb
BL (n=22)	71.24%	68.56%	100%
BH (n=30)	80.39%	79.11%	100%
IL (n=27)	90.12%	90.12%	100%
IH (n=32)	90.36%	90.36%	100%
A (n=36)	96.88%	96.88%	100%
NS Control (n=31)	99.45%	99.45%	99.45%

Table 3.3

Mean percentages of accurate responses in elicited written production task II on agreement/finiteness and adverb placement (Study I)

As far as agreement is concerned, we can observe a clear trend – the BL group performed the worst (accuracy rate below our 75% criterion); there is consistent improvement amongst learners as proficiency increases, and the A group was native-like. A single-factor ANOVA showed a highly significant difference across all proficiency groups and the controls ($F(5,168)=14.4974$, $p<.0001$). Post-hoc Scheffé tests indicated that the differences amongst all groups were significant except between BL and BH and between IL and IH. Most of the agreement errors found in this task were on third person singular (i.e. omission of *–s*); there were also occasional errors on other persons/numbers (e.g. adding *–s* to third person plural, cases of which were treated as finite but wrong agreement), especially amongst the low beginners. Regarding finiteness, since most of the agreement errors concerned involved missing *–s* for third person singular, we shall not go into that in detail for the present task.[3]

With respect to adverb placement in the same task, the performance of all the learners was perfect. No significant difference was found across all learner groups and the controls. Hence, it appears that our subjects have successfully acquired the feature strength of T in their L2 English right from the beginning, at least as far as frequency

[3] The criterion for finiteness is as follows: whenever a verb was inflected, whether with correct agreement or not, it was counted as finite. Notice that subjects of lower proficiency level have slightly higher accuracy rates for finiteness than agreement because they occasionally put *–s* for non-third person singular items. Omission of *–s* was counted as errors for both finiteness and agreement, although we acknowledge that this is problematic for English.

adverbs are concerned.[4] However, the findings of the preference task on adverb placement adapted from White (1991a, 1991b) did not suggest the same. We will take a closer look at this in Section 3.1.5.4 below.

3.1.5.3 Preference task I on Case, finiteness, agreement and [±past]

We now turn to the first preference task. Accuracy scores were computed for each of the four properties – Case, finiteness, agreement and [±past], as shown in Table 3.4 below. In this task, for each test item, only one answer is correct, hence an item marked with "both correct" was considered an error. Also, "both wrong" and "not sure" responses were discarded from analysis since these did not provide any information regarding subjects' preference for a sentence over another.

	Case	**Finiteness**			**Agreement**					**[±past]**		
		Pres. part.	*Past part.*	*Mean*	*No –s 3sg.*	*–s 3pl.*	*–s 1sg.*	*–s 1pl.*	*Mean*	*+past*	*-past*	*Mean*
BL	85.72	61.97	71.09	66.53	62.73	57.90	66.26	70.10	64.25	68.54	48.42	58.48
BH	89.61	73.26	86.22	79.74	84.45	58.34	80.56	83.89	76.81	81.17	53.89	67.53
IL	99.07	90.06	96.91	93.49	97.53	72.84	94.44	100	91.20	86.25	72.19	79.22
IH	99.48	95.52	99.48	97.50	93.75	80.19	96.35	95.83	91.53	85.21	79.35	82.28
A	98.94	96.87	96.87	96.87	96.88	88.54	97.92	98.96	95.58	88.83	78.07	83.45
NS	99.74	98.39	97.84	98.12	99.19	97.58	99.19	100	98.99	95.25	96.77	96.01

Table 3.4

Mean percentages of correct responses in preference task I

on Case, finiteness, agreement and [±past] (Study I)

Key: "pres. part." = correctly rejecting untensed present participles in obligatory finite contexts;

"past part." = correctly rejecting untensed past participles in obligatory finite contexts;

"No –s 3sg." = correctly rejecting items with absence of –s for 3rd person singular;

"–s 3pl." = correctly rejecting items with presence of –s for 3rd person plural;

"–s 1sg." = correctly rejecting items with presence of –s for 1st person singular;

"–s 1pl." = correctly rejecting items with presence of –s for 1st person plural

[4] This may be due to task bias – the way in which each of the test items was presented, i.e. the subject and frequency information occurred in the same line (e.g. "Martin: 7 times/week") may have favoured the SAV order. Note also that correct adverb placement could be related to the feature strength of Asp; see Section 3.1.6 below for more discussion.

Let us first take a look at subjects' performance on Case. Learners from all proficiency groups seemed to perform very well in this category (i.e. accuracy rates well above our 75% criterion). Nevertheless, a single-factor ANOVA showed a highly significant difference ($F(5,172)=8.4694$; $p<.0001$) amongst all learner groups and the controls. According to post-hoc Scheffé tests, however, the significance only lies in the difference between the two beginner groups and other groups ($p<.0001$). Still, the high accuracy rate even at the BL level indicates that Case is a property that has been established in subjects' L2 English interlanguage grammar right from the beginning.

Next, we consider finiteness. Results show a rather clear trend in this category: beginners performed the worst (mean accuracy rate of the BL group was below 75%) and there is considerable improvement across proficiency levels. Intermediate and advanced learners were native-like. A single-factor ANOVA shows a highly significant difference across all groups ($F(5,172)=16.2815$, $p<.0001$). Post-hoc Scheffé tests indicated no significant difference between BL and BH nor across IL, IH, A and the controls. In general, subjects performed better on past participles than on present participles (i.e. they correctly rejected untensed past participles in finite contexts more often), especially learners of lower proficiency levels.

With respect to agreement, the trend is similar to that of finiteness. Beginners' performance was the worst (again mean accuracy rate of the BL group was below 75%). Significant improvement was observed with increase in learners' proficiency level, and advanced learners were native-like. A single-factor ANOVA indicated a highly significant difference amongst all groups ($F(5,172)=17.22$. $p<.0001$). Post-hoc Scheffé tests indicated no significant difference between BL and BH, between IL and IH nor across IH, A and the controls. One interesting point was that subjects performed the worst on third person plural across all proficiency levels. Beginners were only accurate half of time in rejecting the ungrammatical *–s* on third person plural. Low beginners also had problems in detecting the ungrammatical *–s* on first person singular and plural. We have seen in the previous section that similar results were obtained from the production task on agreement.

Lastly, regarding the feature [±past], results suggest a clear acquisition pattern similar to that for finiteness and agreement. Beginners were inaccurate in their performance (mean accuracy rates of both BL and BH groups were below 75%). Intermediate and advanced learners made significant improvement. A single-factor ANOVA showed a highly significant difference amongst all learner groups and the controls ($F(5,172)=16.0336$, $p<.0001$). Post-hoc Scheffé tests indicated no significant difference between BL and BH, between IL and IH, nor across IH, A and the controls. Table 3.4 also demonstrated an intriguing phenomenon relating to the feature [±past], which is that subjects performed much worse on [-past] than [+past] across proficiency levels (i.e. they incorrectly rejected the present tense forms and accepted the past tense forms in present contexts more often). If [-past] is taken to be the unmarked/default setting, then it is surprising to find that our subjects performed much better on the marked value of [+past], which we expected to be more difficult for L2 learners. Given our case (L1 Chinese-L2 English), one possible explanation is that temporal adverbials are used much more commonly in Chinese to denote a past event (the only means in Chinese to represent the notion [+past]); that is, temporal adverbials tend to be absent in contexts which depict non-past (present) events. Our learners might have been more sensitive to the presence of temporal adverbials and have associated these with a [+past] setting only; they might then have overgeneralized this to their L2 English irrespective of the meaning of the adverbials concerned. Without paying enough attention to the actual content of the adverbial in a certain [±past] test item when they were doing the task, their performance in the preference task was ultimately affected.

Another interesting point related to the feature [±past] is that, of all the four properties investigated in the present preference task (i.e. Case, finiteness, agreement, [±past]), accuracy rates for [±past] of all proficiency groups were the lowest. If we also compare learners' performance on the two production tasks on [±past] and agreement respectively (as reported in Sections 3.1.5.1 and 3.1.5.2 above), the same observation applies. We suggest that the lower accuracy rates related to past tense production and judgement might be due to a slightly different nature of the (formal/functional/ morphosyntactic) feature [±past], which tends to have a closer link to semantics (such as

aspect and mood) and might be more susceptible to contextual influence. More discussions will follow in Section 3.1.6 below concerning the notion of a "default" [-past] as well as the semantic and pragmatic factors involved in the acquisition past tense morphology.

3.1.5.4 Preference task II on adverb placement

Finally, let us take a look at the results of the preference task on adverb placement. Table 3.5 below presents the error scores in percentages of subjects' performance in this task. The error scores indicate subjects' preference for the ungrammatical SVAO order (cf. criteria i. and ii. right below) as well as their rejecting (i.e. not preferring) the grammatical SAV order (cf. criteria iii. and iv.). The scores were calculated based on the following criteria:

i. a response of "only SVAO is correct" or "both correct" for an item that consists of the ungrammatical SVAO and another sentence with a sentence-initial or -final adverb (i.e. the first column (**SVA-other*) under "Frequency Adverbs" and "Manner Adverbs" respectively in Table 2.6);

ii. a response of "only SVAO is correct" or "both correct" for an item that consists of a SVAO-SAV pair (i.e. the second column (*Pair *SVA*) under each adverb type);

iii. a response of "only SVAO is correct" for an item that consists of a SVAO-SAV pair (i.e. the third column (*Pair SAV*) under each adverb type); and

iv. a response of "only the other order is correct" for an item that consists of the grammatical SAV and another sentence with a sentence-initial or -final adverb (i.e. the fourth column (*SAV-other*) under each adverb type).

In addition, as in the first preference task reported above, all responses of "both wrong" and "not sure" were excluded since these did not reflect subjects' preference for a particular order in a test item.

	Frequency Adverbs					Manner Adverbs					*Mean (both types)*
	**SVA-other*	*Pair *SVA*	*Pair SAV*	*SAV-Other*	*Mean*	**SVA-other*	*Pair *SVA*	*Pair SAV*	*SAV-other*	*Mean*	
BL	12.73	9.09	8.23	8.33	10.26	6.82	55.00	53.12	66.81	44.45	***25.97***
BH	7.50	5.00	4.06	2.50	8.61	6.94	67.50	67.50	63.11	43.50	***22.69***
IL	3.70	2.78	2.78	6.48	3.42	14.29	64.81	63.27	72.22	46.21	***23.25***
IH	5.99	8.59	8.59	7.03	6.79	10.16	53.65	53.65	55.47	36.35	***19.75***
A	2.78	2.67	2.67	8.33	2.78	2.50	43.33	43.33	56.67	32.37	***15.55***
NS	21.19	30.65	0.00	0.00	15.67	16.13	17.74	1.61	4.03	10.65	***14.14***

Table 3.5

Error scores (in percentages) obtained for preference task II
on adverb placement (Study I)
(All "both wrong" and "not sure" responses are excluded)

Note: **SVA-other* = prefer SVAO ("only SVAO correct" or "both correct" for an item with SVAO and a sentence-initial or -final adverb)

*Pair *SVA* = prefer SVAO ("only SVAO correct" or "both correct" for an item with SVAO-SAV pair)

Pair SAV = do not prefer SAV ("only SVAO is correct" for an item with SVAO-SAV pair)

SAV-other = do not prefer SAV ("only the other order is correct" for an item with SAV and a sentence-initial or -final adverb)

As we observe from Table 3.5, the results in the preference task demonstrate very interesting contrasts between learners' responses in the frequency adverb type and the manner adverb type, as well as between learners' responses and those of controls in both adverb types. First, there is a clear trend that learners were accurate in not preferring the ungrammatical SVAO order in English when it is compared to adverbs in the sentence-initial or sentence-final position, in both the frequency adverb type and the manner adverb type, as indicated by the generally low error scores in the first column (**SVA-other*) under each adverb type in Table 3.5. However, native English controls did not

have the same judgement. Their mean error scores for **SVA-other* items were rather high (21.19% and 16.13% for frequency adverbs and manner adverbs respectively). Moreover, when the ungrammatical SVAO order is paired with the grammatical SAV order (i.e. *Pair *SVA* items), learners' responses differed dramatically from those in the **SVA-other* items as far as manner adverbs are concerned – learners actually showed an incorrectly strong preference for the ungrammatical SVAO order for manner adverbs (see second column (*Pair *SVA*) under manner adverbs in the same table); for frequency adverbs, as in **SVA-other* items, learners mostly dis-preferred the ungrammatical SVAO order (as in the second column (*Pair *SVA*) under frequency adverbs in Table 3.5). Interestingly, the judgements of native English controls were the reverse – they preferred SVAO items in the frequency adverb type (mean error score 30.65%) much more than the manner adverb type (mean error score 17.74%) as far as *Pair *SVA* items are concerned.

Turning to the grammatical SAV order, the picture is similar to what we have found regarding the ungrammatical SVAO order – results on the two adverb types were not consistent with each other, and learners' and controls' responses did not totally converge. Both learners and controls indicated a very strong preference for the grammatical SAV order in the frequency adverb type, for both *Pair SAV* and *SAV-other* items. Native controls' performance was consistent in the manner adverb type as well (1.61% for *Pair SAV* and 4.03% for *SAV-other* items). However, we found very high rejection rates (reflected in the error scores of both *SAV-other* and *Pair SAV* items) of the grammatical SAV order in the manner adverb type in learners' responses, which deviated from the findings on the frequency adverb type, and which was also inconsistent with controls' responses. Notice that native controls showed high degree of variability in both adverb types as well (i.e. they opted "both correct" for items with SVAO-SAV pairs) while experimental subjects did not ("both correct" score was calculated by subtracting *Pair SAV* score from the *Pair *SVA* score in each adverb type).

Therefore, it appears that as far as frequency adverbs are concerned, learners showed highly consistent responses in both the ungrammatical SVAO and the grammatical SAV items. They correctly preferred the grammatical SAV order and dis-

preferred the ungrammatical SVAO order. This might suggest that they have successfully acquired correct adverb placement in English as far as frequency adverbs are concerned (see Section 3.1.5.2 above for similar results on the production of frequency adverbs in the sentence completion task). Nonetheless, for manner adverbs, learners showed an incorrectly strong preference for the ungrammatical SVAO order and high rejection of the grammatical SAV order in English. This contradicts the findings on frequency adverbs, and might instead point to a "failure" of the feature strength of T in our subjects' L2 interlanguage grammar. Moreover, it is interesting that our learners' and native controls' responses went in opposite direction in the task. It is also intriguing that our native controls' performance (as well as the child native speaker results of White 1991a, 1991b) showed such great deviance from what the theoretical literature predicted (i.e. a high degree of variability), especially for frequency adverbs.

As an attempt to arrive at a more coherent and conclusive statement, single-factor ANOVAs have been run on the means of responses in the frequency adverb type, the manner adverb type and both adverb types, across all learner groups and native controls. For frequency adverbs, we observed a highly significant difference amongst all learner groups and the controls ($F(5,171)=6.1267$, $p<.0001$) but post-hoc Scheffé tests found no significant difference across the learner groups. For manner adverbs, similar results were obtained: the difference was highly significant between the learner groups and the controls ($F(5,171)=13.0329$, $p<.0001$) but not across the learner groups. Regarding the overall mean of responses in both adverb types, a highly significant difference was found amongst all groups ($F(5,171)=4.8723$, $p<.0005$). Post-hoc Scheffé tests indicated that the differences between all groups were significant except that between the A group and the controls. These statistical findings have given us some evidence to conclude that the error scores between our (advanced) learners and controls were not totally incomparable, and that over time, with increase in proficiency level, learners could attain a more native-like judgement of adverb placement facts in their L2 English. Taking together the results of the elicited written production/sentence completion task (based on Herschensohn 1998) presented in Section 3.1.5.2 above, it is thus reasonable to claim that the general picture of our case is consistent with what has been predicted in the theoretical literature and

shown in other L2 studies on adverb placement/feature strength of T (see further discussion below).

3.1.6 Hypotheses and predictions revisited

(I) L2 initial state

As far as the L2 initial state is concerned, our data support full transfer (which both FTFA and FFH predict). Examining the performance of our beginners (BL and BH groups) in all of the experimental tasks conducted, we observe that L1 influence is evident in most of the properties being investigated. The first elicited written production task on [±past] has shown high error rates (about 40%-45%) amongst beginners, pointing to the absence of the feature [±past] in interlanguage grammar. This supports our hypothesis of L1 transfer in the L2 initial state since the feature [±past] is posited to be absent in Chinese. The second elicited written production task on agreement and adverb placement have indicated that agreement was a problem for beginners. Performance on adverb placement in the same task was, however, perfect. These results are also in line with a strong L1 transfer claim as they suggest that both the absence of agreement as well as the canonical SAV surface order in Chinese were transferred into the L2 English initial state. The third task, a preference task on Case, finiteness, agreement and [±past] demonstrated L1 transfer in L2 initial state as well. The associated features of T appeared to be absent in the L2 initial state, as reflected by the low accuracy rates on finiteness, agreement and [±past] of the (low) beginners. Case was not a problem even for (low) beginners and we interpreted this to be influence from L1 Chinese as well (see below). The last experimental task, also a preference task, which was on adverb placement also suggested that L1 Chinese might be playing a role in L2 initial state, especially as far as frequency adverbs are concerned, since low error scores both on SAV and *SVAO were observed for this adverb type. Manner adverbs have been shown to be problematic. Subjects did not prefer the correct SAV; on the other hand, they seemed to regard *SVAO as a grammatical order in English especially when they were presented with a SAV-*SVAO pair. This seems to contradict an L1 transfer account. Nonetheless, the overall results appeared to be consistent with our hypothesis – beginners were 75%

accurate on adverb placement for both adverb types, indicating that Chinese influence might be playing a role here (see below).

(II) L2 transitional state

Our data are more consistent with FTFA. Significant improvement is evident across all proficiency groups in all the experimental tasks implemented. Our findings have indicated considerable improvement in all of the aspects of inflection being investigated, i.e. nominative Case assignment, finiteness, agreement, [±past], adverb placement, from beginner to intermediate levels and from intermediate to advanced levels of L2 English, which seems to be more consistent with the FTFA stance which posits the possibility of UG-based restructuring in the course of L2 development, including target-like acquisition of new functional categories and associated features and feature strength in L2 interlanguage. Observed improvement across proficiency groups in our case thus supports the view that UG-based restructuring is under way (i.e. the construction of a fully-specified TP in progress). Discussion on the link between surface morphological improvement and deeper changes in abstract syntax in L2A will follow in Chapter Five.

(III) L2 steady state

Again, our data appear to be more in line with FTFA. The results we obtained from all of the experimental tasks demonstrate that parameter resetting is possible in L2A and that the steady state grammar is UG-constrained (if not target-like). Our advanced English learners performed perfectly on most the inflectional properties concerned – accuracy rates for agreement was 100% in the elicited written production task and 96% in the preference task; for finiteness[5] and Case close to 99% in the preference task; for [±past], around the range 85-86% (only) in both the elicited written production and the preference tasks (see below); for adverb placement 100% in the elicited written production task, with an error score of 15% (only 1% higher than native controls) in the preference task.

[5] See however Tsang (in progress) who reports that parameter resetting is not possible for her L1 Cantonese L2 English subjects with respect to finiteness.

As far as the feature [±past] is concerned, we notice that subjects' performance was not as perfect as for other verbal functional properties under investigation. Hawkins (2000) and Liszka (2001) have argued that the functional feature [±past] poses a permanent problem for Chinese learners of English. In other words, [±past] is a "failed" (formal) feature in (adult) L2A. Although our data do not support this view (notice that our subjects were children at the time of initial learning of English), they do seem to suggest that [±past] as a formal or functional feature is slightly more difficult than other verbal features and might take longer time to acquire.[6]

We now turn to the discussion of nominative Case and adverb placement, the results of which pose some (apparent) problem for us to make a strong case for L1 Chinese transfer in the L2 English initial state:

Nominative Case

The results we obtained from the first preference task regarding Case was that, even low beginners seemed to have acquired this abstract syntactic property right at the outset of L2 acquisition. This is consistent with the findings of Singhapreecha (2000a) on Thai learners of L2 English. Singhapreecha reported that her subjects, even those from the lowest proficiency level, performed in a near-native manner on nominative Case in an elicited production task, slightly less so in a grammaticality judgement task. She did not however discuss the possible source of the early acquisition of Case in her case. In this

[6] The subjects' less-than-perfect performance on the feature [±past] may be related to the acquisition of (grammatical) aspect, in particular, perfectivity. It is also suggested in the literature that lexical aspect (i.e. verb classes) may be relevant in investigating past tense in interlanguage grammar (e.g. Meisel (1994) for bilingual L1A; Gavruseva (2000) for child L2A; Salaberry (1999) for adult L2A). In order to fully explore the interaction between tense and aspect in non-native language acquisition and to find out whether the subtle problem of [±past] in interlanguage grammar lies in syntax, semantics, or their interface, in future research, it may be interesting to situate L2 data on past tense morphology within theoretical linguistic approaches on event structure and phrase structure (such as the L-syntax approach of Travis 1991, 1994, 2000; see also Stowell 1996 for a specific proposal for the phrase structure of tense which includes a new functional category ZP for Event time and Reference time). We believe that in our specific case, Chinese aspect may be playing a subtly significant role in our subjects' English grammar regarding the feature [±past] even in the L2 steady state. Readers are referred to Hawkins (2002) and Liszka (2002) for some relevant and interesting analysis on the interaction between tense and aspect (both grammatical and lexical) in L2 English interlanguage.

section, we attempt to tease apart L1 transfer from (direct) UG access in the L2 initial state with respect to Case. We argue, based on theories of underspecification (Wexler 1994, 1998; Hyams 1996), that our findings on Case are consistent with a L1 transfer claim.

According to Hyams (1996) (see also Wexler 1998), null subjects in child (English) grammar are licensed by a non-finite Infl, that is, null subjects occur when Infl remains underspecified (i.e. containing no tense or agreement features). This proposal is based on Chomsky & Lasnik (1992), who posit that a null subject PRO is a minimal NP argument that bears a so-called "Null Case", which is assigned or checked in the domain of IP (or TP). Hyams follows this line of argument and suggested that in L1A, an underspecified Infl (i.e. a non-finite verb without tense or agreement features) provides a checking domain for Null Case, hence a licit PRO. On the other hand, a fully-specified Infl (i.e. a finite verb with the presence of tense and agreement features) forms a checking domain for nominative Case, and PRO should be excluded.

Applying Hyams' proposal to our L2 case, since the formal features (finiteness, agreement, [±past]) associated with T appeared to be absent in the L2 initial state, if T (or Infl) were projected as an "underspecified" category, according to Hyams, Case had to be null (i.e. presence of null subjects or PRO), and nominative Case checking would not be taking place. It would therefore be inconsistent to posit an "underspecified" T to account for the accurate performance on nominative Case by our Chinese learners in the L2 English initial state. In other words, T cannot be assumed on the basis of the presence of nominative Case. The only solution which seems plausible would be L1 transfer from Chinese, since according to full transfer, all the lexical and functional categories of L1 would transfer to L2 initial state, including a fully-specified AspP, which serves as the checking domain for nominative Case. In the course of L2 development, T as a category emerges, together with its associated formal features, and thus in the L2 steady state, advanced learners' near-native mastery of the abstract notion of Case is a reflection of the presence of a fully-specified category TP, containing all the formal features of finiteness, agreement and [±past]. However, as far as findings on the L2 initial state are concerned,

we argue that L1 Chinese transfer is the only plausible explanation. It cannot be the case that nominative Case is properly checked but the feature that is responsible for nominative Case checking is absent (or the functional category concerned is underspecified for that feature).[7, 8]

Adverb placement / feature strength of T

It is a coincidence that Chinese and English share similar adverb placement facts, although for different underlying reasons. However, as we argued above, with correct nominative Case assignment, it cannot be the case that T is present or projected in interlanguage grammar but the associated functional features are absent. Without T being projected, the issue of feature strength of T and the corresponding (covert) verb movement in L2 English becomes irrelevant, and L1 transfer of weak strength of Asp appears to be the only plausible explanation for correct adverb placement in L2 initial state in our case. Moreover, in Study II (to be reported in Section 3.2 in this chapter), there is independent evidence for L1 Chinese transfer with respect to adverb placement in the L3 French initial state.

We therefore suggest that our L2 English beginners' correct adverb placement is attributable to the transfer of the L1 Chinese feature strength of Asp because T as a category is not yet present in the L2 initial state. Yuan (2001), however, found that francophone learners of Chinese were able to reset the Infl feature strength right at the outset of L2 acquisition. In other words, there is evidence of Full Access without transfer in the L2 initial state (Epstein *et al.* 1996). To us, this is rather intriguing. FTFA predicts a period of L1 transfer in the initial state of L2A. We would like to bring up a point concerning Yuan's results here. Yuan conducted an oral production task and a written grammaticality judgement task to test the placement of frequency adverbs. Although no

[7] See Schütze & Wexler (1996) and Wexler (1998) who contend that it is agreement that is responsible for nominative Case checking. Note however that they assume two separate inflectional categories TNS and AGR.

[8] A much more simple alternative view would be that since [±finite] as the categorial feature of T is not yet acquired, T cannot have been projected and served as the checking domain for nominative Case.

proficiency test was implemented, and no information was available on how *débutant* the beginners were, we may infer from subjects' reading ability that the beginners could not be of a very low proficiency level. Notice that all the judgement items were presented in Chinese characters. Consultation with teachers of Mandarin has shown that learners of Chinese (with L1 English or similar linguistic background) normally pick up *pinyin* (i.e. standard romanization system for Mandarin Chinese) quite fast in their L2 acquisition, but the recognition of Chinese characters may take a much longer time. We do not know the intensiveness of the Mandarin classes that Yuan's subjects underwent (the francophone beginners were said to have had an average of six months' study to Chinese at the time of testing), but if these beginners were able to perform without problem on a judgement task the whole of which was written in Chinese characters, then Yuan might have in fact missed the true beginners in his study (especially in the light of the possibility that "parameter resetting can sometimes take place within the first few weeks of L2 acquisition", as White (in press Ch.4) reports). We must emphasize that this is merely a speculation, as there is no independent measure of L2 Chinese proficiency available to support our claim. But if it were really the case, then Yuan's results would be consistent with what we found regarding L1 transfer of frequency adverb placement in the L2 initial state.

Summarizing the whole study, our findings on the various stages of L2A of English by Chinese speakers point towards Full Transfer Full Access. However, one should of course be cautious in interpreting our results as direct evidence for UG access in L2A. Recall that our subjects are classroom language learners. Tense and agreement, which is the focus of our study, is a core topic in the English language syllabus. Inflectional morphology is something that English language teachers explicitly teach. There thus exists a lot of classroom input (both positive and negative evidence) especially on finiteness, agreement and [±past], which can sometimes be highly metalinguistic in nature. Moreover, since Chinese and English are alike as far as nominative Case and adverb placement are concerned, and there is no way for us to dispel the possibility of L1 influence (i.e. the continuing presence of a Chinese AspP) in the later stages of acquisition of these two properties (see Chapter Five Section 5.3.1 on the status of L1

functional categories in L2 interlanguage), the fact that subjects seem to have acquired perfect mastery of nominative Case and adverb placement cannot constitute strong evidence for UG access. Hence, we cannot make a definite claim that our Chinese subjects have acquired the verbal features and feature strength because UG is available in their L2 acquisition of English.

3.2 Study II: The initial state of L2A vs. L3A (tense and agreement)

3.2.0 Introduction

Study II is a comparative study on the initial state of L2A and L3A with respect to tense and agreement. We have pointed out in Chapter One that L3A is an un(der)-explored area in the field of theoretical second language acquisition. This study (together with Study V to be reported in Chapter Four) aims to demonstrate that L3A is not simply another case of L2A – there are important differences between the two cases, at least as far as the initial state is concerned. We draw on production and judgement data collected from both Cantonese-English bilinguals and Vietnamese monolinguals who are beginning learners of French with comparable proficiency in the target language. Our findings show that L3 French learners with knowledge of English outperform L2 French learners without knowledge of English in those properties that are present in English and French but are absent (or optional) in Chinese and/or Vietnamese.

3.2.1 Hypotheses and predictions

Recall from Chapter Two that we assume that Chinese does not have the verbal features of finiteness, agreement and [±past], and no T category is projected in the language; nominal Case assignment as well as the weak feature strength and associated adverb placement facts are linked to the Asp category instead. As for Vietnamese, it is assumed that agreement features are absent in the language; however, unlike Chinese, Vietnamese is assumed to have TP, with an obligatory [±finite] feature and an optional [±past] feature hosted on its head. As in French and English, T in Vietnamese is responsible for nominative Case assignment; its weak feature strength is responsible for the relative ordering of verbs and adverbs as well. The respective predictions based on the Failed

Features Hypothesis (FFH) and Full Transfer Full Access (FTFA) on the L2 and L3 French learners with regard to the verbal functional domain are outlined as follows:

(I) L3 group (Cantonese-English bilinguals)

1. FFH hypothesizes that the L3 French initial state is the L1 Chinese final state. Specifically, T and the associated features of [±finite], agreement and [±past] are absent in the L3 group's French interlanguage. Nominative Case assignment, owing to the availability of AspP in L1 as the checking domain as well as the similarities in L1 and L3 surface facts, will not pose a problem for the subjects. However, adverb placement will be problematic: since T has not been acquired, the weak feature strength of the Chinese Asp will be transferred.
2. FTFA predicts either L1 or L2 transfer in the L3 initial state. It makes the same predictions as FFH if L1 transfer is hypothesized. On the other hand, if L2 transfer is hypothesized, then it predicts the L3 French initial state to be the L2 English steady state. In this case, all the features and feature strength concerned which have been acquired in the L2 English steady state will be transferred to the L3 French initial state. Specifically, all features of T *viz.* Case, [±finite], agreement, [±past] will be present in L3 group's English and French. The weak feature strength of T of English will also transfer hence causing problem in subjects' adverb placement in French.

(II) L2 group (Vietnamese monolinguals)

Both FTFA and FFH predict full transfer of L1 Vietnamese into the L2 French initial state. Since Vietnamese does not have agreement features, it is hypothesized that our L2 subjects will have problem with agreement in French. On the other hand, T and [±finite] are present in Vietnamese, thus [±finite] and nominative Case assignment in French should not pose a problem. In addition, [±past] is optionally present in Vietnamese, hence, subjects will be sensitive to a past/non-past distinction, although they may not perform as perfectly as French native speakers. Finally, the weak feature strength of T in Vietnamese is also predicted to transfer to L2 French initial state, causing problems with adverb placement.

The different predictions based on FFH and FTFA for L2 and L3 French are summarized in the following two tables:

	Case	T category	[±finite]	Agr	[±past]	f.s. of T
L3 group's Chinese	(✓)$^{\Psi}$	✗	✗	✗	✗	(weak)$^{\Psi}$
L3 group's English	(✓)$^{\Psi}$	✗	✗	✗	✗	(weak)$^{\Psi}$
L3 group's French (transfer from *Chinese*†)	(✓)$^{\Psi}$	✗	✗	✗	✗	(weak)$^{\Psi}$
L2 group's Vietnamese	✓	✓	✓	✗	(✓)	weak
L2 group's French (transfer from Vietnam.)	✓	✓	✓	✗	(✓)	weak

Table 3.6

Summary of hypotheses for L3 and L2 groups in French acquisition of the verbal functional domain based on FFH†

Key: ✓ present or acquired in (inter)language; ✗ absent or failed in (inter)language; $^{\Psi}$ related to (feature strength of) Asp instead

	Case	T category	[±finite]	Agr	[±past]	f.s. of T
L3 group's Chinese	(✓)$^{\Psi}$	✗	✗	✗	✗	(weak)$^{\Psi}$
L3 group's English	✓	✓	✓	✓	✓	weak
L3 group's French (transfer from *English)**	✓	✓	✓	✓	✓	weak
L2 group's Vietnamese	✓	✓	✓	✗	(✓)	weak
L2 group's French (transfer from Vietnam.)	✓	✓	✓	✗	(✓)	weak

Table 3.7

Summary of hypotheses for L3 and L2 groups in French acquisition of the verbal functional domain based on FTFA* (in the case of L2 transfer)

Key: ✓ present or acquired in (inter)language; ✗ absent or failed in (inter)language; $^{\Psi}$ related to (feature strength of) Asp instead

3.2.2 Participants

There was a total of four groups of participants in the present study: an L3 French experimental group (L1 Chinese-L2 English), an L2 French experimental group (L1 Vietnamese, with no English background) and two native control groups (L1 French and

L1 English respectively). The L3 experimental group consisted of 44 Cantonese-English bilingual undergraduate students who were studying French at the University of Hong Kong (HKU). Their average age at the time when the experiment was undertaken was 20.45. The mother tongue of all subjects is Cantonese; most of them can also speak some Mandarin. They are all advanced speakers of L2 English (average proficiency score for the Michigan Placement Test is 71.84 out of 80). French is the third language for all of them. They all started learning French in Hong Kong (formal classroom setting in the university) as adults. In other words, they were true L3 French beginners. The average French proficiency score obtained for the Laval Placement Test was 19.23 out of 54. All of the L3 French subjects were recruited and tested in Hong Kong.

The L2 experimental group was recruited and tested in Montréal, Canada. It consisted of 12 monolingual Vietnamese speakers who had learned or were learning French as a second language. Their average age at the time of testing was 34.42. None of the Vietnamese subjects spoke English, and they were true beginners of French (average Laval score was 17.96 out of 54). They all started learning French as adults in Montréal in a formal educational setting. A two-sample *t*-test showed no significant difference between L2 group's French proficiency and that of the L3 group ($t(54)=.9867, p=.3282$).[9]

As for the two native control groups, 30 native French and 31 native English speakers were recruited in Montréal, Canada. (The native English control group was the same as the one used in Study I). The control subjects were either university students, or other anglophone or francophone speakers working and residing in Montréal, but were of different countries of origin. All of them were monolinguals of their respective mother tongue, and had learned or were learning some second languages as adults. None were students of linguistics or education.

[9] It should be pointed out that the L2 group differs from the L3 group in some other respects, such as age, socio-economic and educational background, motivation to learn French, etc. Thus it raises the question of whether they constitute a truly comparable sample with the Hong Kong university students. We acknowledge this concern, but would like to emphasise that the best has been done in terms of controlling for an important variable, i.e. language proficiency, which we think is most crucial for testing grammatical properties in an experimental context.

3.2.3 Experimental tasks and implementation procedures

Experimental tasks used in the present study were the same as those used in Study I, namely, two elicited written production tasks (i.e. a composition task on [±past] and a sentence completion task adapted from Herschensohn 1998 on agreement/finiteness and adverb placement), as well as two preference tasks (i.e. one based on White 1991a, 1991b on adverb placement and another on Case, finiteness, agreement and [±past]). The L3 group completed first the French and then the English versions of the tasks with a 7- to 10-day lag while the L2 group took the French versions only. For each task, the test sentences in the French version were very similar in structure and in length to the ones used in the English version but were not lexically identical. In addition, the test items in the two languages were presented in different orders in the sentence completion task and the preference task on Case and other features, in order to minimize any ordering effects.

A few other differences in the design of the French tasks are worth noting. Specifically, for the sentence completion task, in a total of 12 items in the French version, there were 3 on first person singular, 3 on first person plural, 3 on second person plural and 3 on third person plural. Most of the test items involved overt agreement (e.g. *-ons*, *-dez*, etc.). The following present two examples:[10]

(10) Reçevoir / de / cadeau
Receive / any / gift
Je: 0 fois / an
I: 0 time / year
Je.....cadeau.
I.....gift.

[10] English glosses did not appear in the French tasks presented to the subjects.

(11) Aller / au / cinéma

Go / to the / cinema

Marc et Pete: 3 fois / mois

Marc and Pete: 3 times / month

Marc et Pete.....cinéma.

Marc and Pete.....cinema.

Regarding the preference task on Case, finiteness, agreement and [±past], in the French version, there were three sub-types under the finiteness category, namely, infinitives, present participles and past participles (4 tokens per sub-type). Under the agreement category, the two sub-types are number (i.e. first person singular vs. plural) and person (i.e. first person plural vs. third person plural) (6 tokens per sub-type). Together with the 12 Case items (3 with the pronoun *ils*, 3 *elles*, 3 *il*, 3 *elle*) and the 12 [±past] items, there were a total of 48 items, as in the English version. Example of test items (one from each category) are shown below:

(12) Case

(a) Ma mère croît que la va se remettre vite.

My mother believe-pres-3sg. that her will self recover soon

(b) Ma mère croît qu'elle va se remettre vite.

My mother believe-pres-3sg. that she will self recover soon

(13) Finiteness

(a) Je rencontre beaucoup de monde chaque jour.

I meet-pres-1sg. many people every day

(b) Je rencontrant beaucoup de monde chaque jour.

I meeting many people every day

(14) Agreement

(a) J'aimons écouter de la musique classique.

I love-pres-3pl. listen to some music classical

(b) J'aime écouter de la musique classique.
I love-pres-1sg. listen to some music classical

(15) [±past]

(a) Sophie a beaucoup parlé à la réunion hier soir.
Sophie has much talked at the party yesterday evening

(b) Sophie parle beaucoup à la réunion hier soir.
Sophie talk-pres-3sg. much at the party yesterday evening

As for the preference task on adverb placement, in the French version, two frequency adverbs (i.e. *souvent and parfois*) and four manner adverbs (i.e. *rapidement, lentement, tranquillement* and *prudemment*) were used. As in the English version, there were a total of 26 sentence pairs (22 test items and 4 distractors). In the experiment, subjects were randomly assigned to either version in each language. The following are three examples taken from the French adverb placement task:

(16) Frequency adverb – *SAVO paired with sentence-final adverb

(a) Il travaille à la soirée souvent.
He work-pres-3sg. in the evening often

(b) Il souvent travaille à la soiree.
He often work-pres-3sg. in the evening

(17) Manner adverb – SVA paired with sentence-initial adverb

(a) Elles font tranquillement le test.
They-fem do-pres-3pl. quietly the test

(b) Tranquillement elles font le test.
Quietly they-fem do-pres-3pl. the test

(18) Manner adverb – *SAVO-SVA pair

(a) Je prudemment nettoie les verres.
I carefully wash-pres-1sg. the glasses

(b) Je nettoie prudemment les verres.
I wash-pres-1sg. carefully the glasses

Finally, in the composition task on [±past], subjects were required to choose either i. or ii. of the following for the French version (instructions in French) and either iii. or iv. for the English version:

i. Describe your past summer holiday (any trips local or abroad? summer job? voluntary work?...).

ii. Tell us one or more of the happiest experiences in your life (birthday parties? graduating from secondary school? any other achievements?...).

iii. Describe your secondary school life (favourite subjects? extracurricular activities? best friends?...).

iv. Tell us one or more of the most frightening and/or most unhappy experiences in your life (accidents? failures?...).

Complete lists of test items of the French version of the other tasks (sentence completion, preference task I and preference task II) are found in Appendices B, D, F respectively in this thesis. To recall the experimental design of the English version of the tasks, see Study I (Section 3.1.3) above.

Concerning implementation procedures, for the L3 group, the French version of the tasks was administered first in the HKU French classroom; after a 7-10 day lag, the English version was implemented on the same subjects in individual appointments. Regarding the L2 group, each of the subjects was tested individually on the French version only. The same instructions used in Study I were given to all subjects in the present study. All the tasks, both French and English, were timed.

3.2.4 Results

This section presents the results of subjects' performance in the experimental tasks (i.e. L3 group's performance in both French and English as well as L2 group's in French).

3.2.4.1 Elicited written production task I: Composition on [±past]

Table 3.8 below shows the accuracy scores and error scores for the experimental subjects in the composition task. The criteria for determining accuracy and error scores for the English version were the same as those adopted in Study I (see Section 3.1.4.1). For the French task, agreement (person and number) and aspect (*passé composé* vs. *imparfait*) errors were not taken into account. We were only concerned with, given an obligatory context, whether subjects were sensitive to a past/non-past distinction in French.

	No. of obligatory contexts	**Past tense marking (%)**
L3 group's Eng	642	489 (76.17%)
***L3* group's Fr**	543	436 (80.29%)
***L2* group's Fr**	142	111 (78.17%)

Table 3.8

Accuracy rates in elicited written production task I on [±past] (Study II)

As we can see from Table 3.8, the performance of the L3 and L2 experimental groups in the French version of the composition task was very similar. Mean accuracy scores were rather high for both experimental groups (above our 75% criterion). A two-sample *t*-test shows no significant difference in the accuracy rates between the two groups. In addition, for the L3 group, their performance in the English and French tasks was also comparable, although accuracy scores were slightly higher in the French task. A paired two-sample *t*-test also shows no significant difference in the error rates between the two languages of the L3 group.

3.2.4.2 Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

We now turn to the results of the sentence completion task. Table 3.9 below presents the mean percentages of correct responses with respect to finiteness, agreement and adverb

placement in this task. Notice that finiteness does not constitute a significant factor in the English version of the present task since the form of agreement error found was exclusively on third person singular, in which lack of *–s* would potentially indicate an error both in finiteness and agreement (or the presence *–s* indicates both [+finite] and [+agreement] (correct [person] and [number]); cf. the same accuracy percentages for both finiteness and agreement in Table 3.9). Thus, the finiteness/agreement error in the English third person singular is an overlapping one: an error in agreement would, in most cases, entail an error in finiteness as well, and vice versa, and it would not possible to tease the two apart. Finiteness in French, on the other hand, is a clear and separate issue from agreement. For each person and/or number, a verb can be finite (i.e. not in infinitival form) but the agreement may still be wrong (cf. the different accuracy rates for finiteness and agreement in the French results).

	Finiteness	**Agreement**	**Adverb**
L3 group's Eng (n=44)	92.99%	92.99%	100%
***L3* group's Fr (n=44)**	97.59%	96.90%	79.36%
***L2* group's Fr (n=12)**	79.08%	61.50%	73.48%
Fr NS control (n=30)	100%	100%	100%
Eng NS control (n=31)	99.45%	99.45%	99.45%

Table 3.9

Mean percentages of accurate responses in elicited written production task II on finiteness, agreement and adverb placement (Study II)

We can observe from Table 3.9 that as far as finiteness and agreement are concerned, the L3 group performed much better than the L2 group. Regarding finiteness, L3 group's performance was native-like, while the L2 group's was less than perfect (although mean accuracy rate was higher than our 75% criterion). A single-factor ANOVA shows a significant difference across the L2 group, the L3 group and the controls on finiteness items ($F(2,83)=9.0318$, $p<.001$). As for agreement, the same trend was found: the L3 group's performance was again native-like (mean accuracy rate was 96.90%, compared to 100% of French controls), while the L2 group far lags behind (only 61.50%, well below our 75% criterion). A single-factor ANOVA shows a highly significant difference across L2 group, L3 group and controls on agreement items

($F(2,83)=24.0147$, $p<.0001$). Turning to the L3 group's French and English, subjects' performance on finiteness and agreement was consistent in both languages. Paired two sample *t*-tests show only a marginally significant difference between L3 group's performance in French and English for both finiteness and agreement items (for finiteness, $t(43)=-2.5324$, $p<.05$; for agreement, $t(43)=-2.2146$, $p<.05$). Furthermore, the L3 group's English was shown to be significantly different from that of English native controls (for finiteness, $F(1,73)=8.9855$, $p<.005$; for agreement, $F(1,73)=10.0308$, $p<.005$).

With respect to adverb placement, both L2 group and L3 group performed at a less than perfect level (although the accuracy rate of the L3 group was above 75%).[11] A single-factor ANOVA shows a highly significant difference across L2 group, L3 group and controls ($F(2,83)=9.9581$, $p<.0005$). Regarding the L3 group's performance in French and English, a paired two sample *t*-test shows a significant difference ($t(43)=-3.6511$, $p<.0005$) between the two languages. The L3 group's English did not however differ significantly from English native controls.

3.2.4.3 Preference task I on Case, finiteness, agreement and [±past]

We now turn to the first preference task. Results are broken down into four separate tables: Table 3.10 will report the mean accuracy scores on Case, Table 3.11 on finiteness, Table 3.12 on agreement and Table 3.13 on [±past].

[11] This may reflect a task bias. See fn.3 above.

Nominative Case

	Case (French)	Case (English)
***L3* group (n=44)**	82.93%	96.95%
***L2* group (n=12)**	70.29%	-
French NS control (n=30)	99.43%	-
English NS control (n=31)	-	99.74%

Table 3.10

Mean percentages of correct responses in preference task I on Case (Study II)

Table 3.10 above indicates that the L3 group (accuracy rate above 75%) performed better than the L2 group on nominative Case items in the French task but both groups differed significantly from the French controls. A single-factor ANOVA shows a highly significant difference amongst groups ($F(2,83)=10.9181$, $p<.0001$). Regarding the L3 group's English, subjects did not differ from the controls in the English task. There was a highly significant difference between the L3 group's French and English with respect to Case (paired two sample t-test: $t(43)=3.6336$, $p<.0005$), and but no significant difference was found between the L3 group's performance in English and that of controls.

Finiteness

	Finiteness (French)				Finiteness (English)		
	Infinitives	*Pres part.*	*Past part.*	*Mean*	*Pres part.*	*Past part.*	*Mean*
***L3* group**	93.75%	79.50%	75.93%	83.06%	98.41%	97.73%	98.07%
***L2* group**	70.36%	68.98%	71.67%	70.34%	-	-	-
Fr NS	100%	100%	97.50%	99.17%	-	-	-
Eng NS	-	-	-	-	98.39%	97.84%	98.12%

Table 3.11

Mean percentages of correct responses in preference task I on finiteness (Study II)

Results on finiteness also demonstrated that the L3 group performed better than the L2 group in the French task. The L3 group performed considerably better on infinitive items than on present or past participles, whereas the L2 group performed similarly across the three finiteness types (accuracy rates below 75%). A single-factor

ANOVA shows a highly significant difference between groups regarding finiteness ($F(2,83)=31.0520$, $p<.0001$). The L3 group's English did not differ from the controls. A highly significant difference was found between the L3 group's performance in French and English based on a paired two sample t-test ($t(43)=6.9427$, $p<.0001$) but no significant difference was found between the L3 group and the controls in the English task.

Agreement

	Agreement (French)			**Agreement (English)**				
	1sg. vs. 1pl.	*1pl. vs. 3pl.*	*Mean*	*No -s on 3sg.*	*-s on 3pl.*	*-s on 1sg.*	*-s on 1pl.*	*Mean*
***L3* gp**	94.48%	93.75%	94.14%	96.20%	90.91%	99.25%	99.25%	96.40%
***L2* gp**	72.50%	55.83%	64.17%	-	-	-	-	-
Fr NS	98.23%	99.43%	98.83%	-	-	-	-	-
Eng NS	-	-	-	99.19%	97.58%	99.19%	100%	98.99%

Table 3.12

Mean percentages of correct responses in preference task I on agreement (Study II)

As revealed in Table 3.12, the L3 group out-performed the L2 group on the French agreement items. The mean accuracy rate of the L2 group was only 64.17% (below our 75% criterion). The distinction between first and third person plural appeared to be particularly problematic for the L2 group. A single-factor ANOVA found a highly significant difference across groups with respect to French agreement ($F(2,83)=30.9196$, $p<.0001$). With respect to the L3 group's French and English, a paired two sample t-test found no significant difference between the two. In addition, the L3 group's English was again native-like, and no significant difference was found between the two groups.

[±past]

	French [+/-past]			English [+/-past]		
	[+past]	*[-past]*	*Mean*	*[+past]*	*[-past]*	*Mean*
***L3* group**	74.91%	82.55%	78.73%	88.03%	78.35%	83.19%
***L2* group**	69.28%	76.20%	72.74%	-	-	-
French NS	93.11%	95.57%	94.34%	-	-	-
English NS	-	-	-	95.25%	96.77%	96.01%

Table 3.13

Mean percentages of correct responses in preference task I on [±past] (Study II)

Finally, we turn to the findings on the feature [±past]. Table 3.13 indicates that the L2 group and the L3 group performed similarly in this category in the French task although the mean accuracy rate of the L2 group was slightly lower than our 75% criterion. A single-factor ANOVA found no significant difference between the L2 group and the L3 group. However, both groups differed highly significantly from the controls ($F(2,83)=9.6361$, $p<.0005$). Regarding the L3 group's English, the results were similar to what we obtained in Study I. Our advanced English L2 learners performed well but were not as native-like as they were in other categories such as finiteness and agreement in the same task. The difference between the L3 group's English and the English controls was significant ($F(1,73)=6.006$, $p<.05$). Moreover, the findings that L3 group performed better on [+past] rather than [-past] in the English task was also consistent with our findings in Study I. The same phenomenon was not observed in the French task. In fact, for the French [±past], the trend was the reverse (i.e. both L2 and L3 groups performed better on [-past] than [+past]). As far as the overall results are concerned, the difference between L3 group's English and French with respect to the feature [±past] was significant (paired two sample *t*-test: $t(43)=3.3505$, $p<.005$).

3.2.4.4 Preference task II on adverb placement

We now take a look at the results of the preference task on adverb placement. Tables 3.14 and 3.15 below present the error scores in percentages of L2 and L3 groups' performance in the French and English versions of this task. The criteria for determining the error

scores were similar as those outlined in Study I (Section 3.1.5.4). For details, see also the key under the two tables here.

	Frequency Adverbs					Manner Adverbs					Mean (both types)
	**SAV-other*	*Pair *SAV*	*Pair SVAO*	*SVAO -other*	*Mean*	**SAV-other*	*Pair *SAV*	*Pair SVAO*	*SVAO -other*	*Mean*	
L3 Fr	55.59	39.77	12.65	20.07	40.27	44.32	44.32	19.63	25.39	35.85	***38.38***
L2 Fr	65.67	66.67	39.58	28.46	55.50	66.00	58.33	25.00	35.41	51.75	***53.81***
Fr NS	2.13	0.00	0.00	0.00	0.83	9.17	0.00	0.00	1.67	2.67	***1.53***

Table 3.14

Error scores (in percentages) obtained for preference task II (French version) on adverb placement (Study II)

(All "both wrong" and "not sure" responses are excluded)

Key to Table 3.14:

**SAV-other* = prefer *SAV ("only SAV correct" or "both correct" for an item with SAV and a sentence-initial or -final adverb)

*Pair *SAV* = prefer *SAV ("only SAV correct" or "both correct" for an item with SVAO SAV pair)

Pair SVAO = do not prefer SVAO ("only SAV is correct" for an item with SVAO-SAV pair)

SVAO-other = do not prefer SVAO ("only the other order is correct" for an item with SVAO and a sentence-initial or -final adverb)

	Frequency Adverbs					Manner Adverbs					Mean (both types)
	**SVA-other*	*Pair *SVA*	*Pair SAV*	*SAV Other*	*Mean*	**SVA-other*	*Pair *SVA*	*Pair SAV*	*SAV other*	*Mean*	
L3 Eng	5.49	6.82	5.33	3.41	5.87	11.93	29.55	22.69	33.71	23.47	***13.82***
Eng NS	21.19	30.65	0.00	0.00	15.67	16.13	17.74	1.61	4.03	10.65	***14.14***

Table 3.15

Error scores (in percentages) obtained for preference task II (English version) on adverb placement (Study II)

(All "both wrong" and "not sure" responses are excluded)

Key to Table 3.15:

**SVA-other*	= prefer *SVAO ("only SVAO correct" or "both correct" for an item with SVAO and a sentence-initial or -final adverb)
*Pair *SVA*	= prefer *SVAO ("only SVAO correct" or "both correct" for an item with SVAO-SVA pair)
Pair SAV	= do not prefer SAV ("only SVAO is correct" for an item with SVAO-SAV pair)
SAV-other	= do not prefer SAV ("only the other order is correct" for an item with SAV and a sentence-initial or -final adverb)

As shown in Table 3.14, both L2 and L3 groups had problems with correct adverb placement in French. The overall mean error rates (both frequency and manner adverb types) were 38.38% for the L3 group and 53.81% for the L2 group. A single-factor ANOVA shows a highly significant difference amongst L2 group, L3 group and controls in the overall performance on French adverbs ($F(2,83)=37.4938$, $p<.0001$). Looking at individual adverb types, frequency adverbs appeared to be more problematic for the L3 group, while the L2 group had equal difficulty with both frequency and manner adverbs. We also observe a certain degree of variability in experimental subjects' French adverb placement. Focussing on the **SAV-other* and *SVAO-other* items, for the L3 group, subjects accepted both the ungrammatical SAV order (55% for frequency adverbs and 45% for manner adverbs) and the grammatical SVAO order (80% for frequency adverbs and 75% for manner adverbs (note: acceptance rate for grammatical SVAO order was obtained by subtracting the *SVAO-other* score from 100%)). For the L2 group, the degree of variability is even higher – subjects accepted both the ungrammatical SAV order and the grammatical SVAO order at roughly the same rate (around 65-70% for both adverb types). Subjects' response rates of "both correct" for items with SAV-SVAO pair were around 30% for both L3 group and L2 group for both adverb types (note: "both correct" score was calculated by subtracting the *Pair SVAO* score from the *Pair *SAV* score; for L3 group, frequency adverb "both correct" score was 27.12% and manner adverb 24.69%; for L2 group, frequency adverb "both correct" score was 27.09% and manner adverb 33.33%). Thus, our results seemed to suggest that the feature strength of T is variable in both the L2 and L3 French interlanguage grammar.

Turning to Table 3.15, we observe that the results on L3 group's English are consistent with those reported in Study I. As advanced L2 English learners, subjects in the L3 French group have perfectly acquired correct adverb placement in English with respect to frequency adverbs (mean error rate was only 5.87%); they still seemed to have some difficulty with the manner adverbs (mean error rate was 23.47%), as the advanced L2 English subjects in Study I experienced (cf. Table 3.5 in Study I above). The overall performance of the L3 group in the English task was approaching nativeness (overall mean error rate was 13.82%). A single-factor ANOVA shows no significant difference between L3 group's English and the English controls with respect to the overall performance on both adverb types. However, a highly significant difference was found between L3 group's English and French ($F(1,42)=18.4938$, $p<.0001$), indicating possible transfer effects of L2 English in the L3 French initial state.

3.2.5 Hypotheses and predictions revisited

Table 3.16 below summarizes the findings on L2 and L3 initial state which indicates partial transfer of functional categories and formal features:

	Case	T category	[±finite]	Agreement	[±past]	f.s. of T
L3 group's English steady state	✓	✓	✓	✓	✓	weak
L3 group's French initial state	✓	✓	✓	✓	✓	variable
L2 group's French initial state	(✓)	(✓)	(✓)	✗	(✓)	variable

Table 3.16

Summary of findings for L3 and L2 groups in French acquisition of the verbal functional domain (Study II)

Key: ✓ present or acquired in interlanguage; ✗ absent or failed in interlanguage

(I) L3 group (Cantonese-English bilinguals)

Our findings point to partial transfer of the L2 English steady state in the L3 French initial state (feature strength seems to be variable, see below). FFH predicted the L3

French initial state to be L1 Chinese. Our data do not support this. If transfer were from L1 Chinese, we would expect the T category and its associated features to be absent from our L3 subjects' interlanguage grammar. This is however not what we have found. On the other hand, FTFA has predicted the possibility of L2 transfer, in which case the T category and the associated features, though absent in L1 Chinese, will have been acquired in the L2 English steady state and these successfully acquired properties in turn will transfer to the L3 French initial state. As we have seen in our results section above, this is exactly the case. Feature strength, on the other hand, is more tricky. In our case, there is no substantial evidence for L2 transfer of feature strength in the L3 initial state and the results across tasks were rather mixed – in the production task in French, probably owing to the task effect (see fn.3 and fn.11 above), subjects' performance on frequency adverb placement was slightly less than perfect (mean accuracy rate approaching 80%), but this may argue still against English transfer effects. On the other hand, findings of the preference task revealed that our L3 subjects were in fact variable in their judgement of adverb placement in French, and the overall mean error score was rather high (approaching 40%). This variability is not consistent with a L2 transfer account. We will return to the issue of feature strength in the initial state of non-native language acquisition and group variability vs. individual variability in Chapter Five.

(II) L2 group (Vietnamese monolinguals)

For the L2 group, both FTFA and FFH predicted full transfer of L1 Vietnamese in L2 French initial state. Again, the prediction was only partially supported. Transfer effects do not seem to operate as strongly as expected, and feature strength appears to be variable as well, as in the L3 group. Some support for L1 transfer comes from agreement – both production and judgement data demonstrated that agreement features were not well in place in our subjects' L2 French initial state (mean accuracy rates were less than 65%). This implicates transfer effects from Vietnamese in which agreement features are lacking. As regards Case, finiteness and [±past] (and the associated T category), our results showed that subjects' performance was poorer than predicted (interestingly, subjects performed better in the production tasks than in the preference task). For Case, finiteness and [±past], preference task results were less than perfect (mean accuracy rates were only

around 70%), while production tasks results were higher (for finiteness and [±past], mean accuracy rates were approaching 80%). All these may serve as evidence for L1 Vietnamese transfer, although not as compellingly as expected. However, viewed from another angle, because the T head is almost always null in Vietnamese, the feature [±finite] is seldom instantiated (notice that the head of a Vietnamese clause is A(ssertion), not T); in addition, as discussed in Chapter Two, [±past] is optional in the language. These may constitute the reasons why subjects' performance was not native-like with respect to Case, finiteness and [±past]. The findings, thus, are not inconsistent with a strong transfer claim that may be upheld with respect to formal features. As far as feature strength is concerned, our subjects also performed better on the production task (mean accuracy rate 73%) than the preference task (overall mean accuracy rate was only 53%). In addition, preference results indicated a certain degree of variability in adverb placement in subjects' French interlanguage grammar, which suggests that the feature strength of T may be variable in the L2 initial state as well (see Chapter Five).

To sum up, at the outset of this study, we predicted a difference between the L2 and the L3 initial state. Feature strength aside, as revealed in Table 3.16 above, the L2 group's performance on most of the properties under investigation was significantly poorer than that of the L3 group. We contend that this is because the L3 group has acquired the relevant properties in English which aids the acquisition of French subsequently. What we have demonstrated in this study is that there are indeed important differences between L2A and L3A, at least as far as the initial state is concerned. It appears that the more languages one has acquired, the more beneficial it would be for the acquisition of additional non-native languages. Study V of the next chapter on the nominal functional domain will provide further evidence attesting this claim. We now turn to the final study of this chapter on the verbal functional domain, which is concerned with the nature of L3 interlanguage beyond the initial state.

3.3 Study III: Beyond the initial state in L3A (tense and agreement)

3.3.0 Introduction

This final study on tense and agreement looks at L3 French interlanguage in the transitional state and towards the steady state. We will compare the predictions of the two L2 models, namely FTFA and FFH, and evaluate their applicability in the later stages of L3A/L*n*A.

3.3.1 Hypotheses and predictions

(I) L3 transitional state

1. FTFA predicts continuing presence of the features finiteness, agreement and [±past] as well as correct nominative Case assignment. It also predicts improvement in adverb placement as parameter resetting of the feature strength of T from the weak value in English to the strong value in target French is possible on this view.
2. FFH predicts continuing "failure" of the features finiteness, agreement and [±past] in L3 interlanguage grammar owing to L1 transfer. Nominative Case assignment will take place owing to the continued presence of Chinese Asp and its weak feature strength will be retained, causing problem in French adverb placement.

(II) Towards L3 steady state

1. FTFA predicts a UG-constrained interlanguage grammar, including the possibility of one that is target French-like in which case advanced L3 French learners will have fully acquired all features and feature strength concerned; specifically, all features of T *viz.* Case, [±finite], agreement, [±past] and as well as the strong feature strength of T will be acquired.
2. FFH predicts the absence of verbal properties due to L1 Chinese to persist in advanced group's L3 French interlanguage. In other words, parameter resetting is not possible and transfer effects can never be overridden. Thus, finiteness, agreement and [±past] will be absent, and the weak feature strength of Asp transferred from Chinese will be retained. Nominative Case assignment will not apparently "fail" owing to transfer from L1.

3.3.2 Participants

A total of 40 Cantonese-English bilingual undergraduate students who were studying French at intermediate and advanced levels at the University of Hong Kong (HKU) were recruited and tested for this study. Their average age at the time when the experiment was undertaken was 21.19. All the subjects' mother tongue is Cantonese; most of them can also speak some Mandarin. They are all advanced speakers of L2 English (average proficiency score for the Michigan Placement Test was 71.46 out of 80). French is the third language for all of them. They all started learning French in Hong Kong (formal classroom setting in the university) as adults. Based on the Laval Placement Test results, 30 of the subjects were classified as intermediate French learners (average Laval score was 30.87 out of 54) and the remaining 10 advanced French learners (average Laval score was 43.50 out of 54).

The present study will also recapitulate the findings on the 44 Cantonese-English bilingual L3 French beginners reported in Study II, for comparison purposes. Single-factor ANOVAs indicated a highly significant difference across the three L3 French groups (i.e. beginners from Study II, as well as the intermediate and advanced learners from the present study) with respect to their L3 French proficiency ($F(2,81)=215.8001$, $p<.0001$) but no significant difference with respect to their L2 English proficiency ($F(2,81)=.0533$, $p=.9482$). Once again, the 30 native speakers of French and the 31 native speakers of English in Study II serve as the controls.

3.3.3 Experimental tasks and implementation procedures

All experimental subjects were tested on both the French and the English versions of the two elicited written production tasks as well as the two preference tasks. The experiment was carried out in precisely the same way as described in Study II. See Section 3.2.3 above for details.

3.3.4 Results

This section presents the results on intermediate and advanced L3 French learners' performance in the four experimental tasks concerned (both French and English

versions). For comparison purposes, here we also give the L3 French beginners' results together with the French and English native control results that were reported in Study II.

3.3.4.1 Elicited written production task I: Composition on [±past]

Table 3.17 below shows the accuracy scores and error scores for the experimental subjects in the composition task. The criteria for determining accuracy and error scores for both the French and English versions were the same as those adopted in Study II (see Section 3.2.4.1).

	No. of obligatory contexts	Past tense marking (%)
L3 Beg's French	543	436 (80.29%)
L3 Beg's English	642	489 (76.17%)
L3 Inter's French	440	363 (82.50%)
L3 Inter's English	460	364 (79.13%)
L3 Adv's French	132	107 (81.06%)
L3 Adv's English	146	114 (78.08%)

Table 3.17

Accuracy rates in elicited written production task I on [±past] (Study III)

We observe from Table 3.17 a consistently high accuracy rate with respect to past tense marking in the production task in both languages and across proficiency levels (mean accuracy rate was around 80%, although subjects performed slightly better in French than in English in all three L3 groups). No significant difference was found in accuracy rates in the French version amongst all three groups, in the English version amongst all three groups, between L3 intermediate groups' French and English, nor between L3 advanced group's French and English.

3.3.4.2 Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

We now turn to the results of the sentence completion task. Table 3.18 below presents the mean percentages of correct responses with respect to finiteness, agreement and adverb placement in this task.

	Finiteness	Agreement	Adverb
L3 Beg's French (n=44)	97.59%	96.90%	79.36%
L3 Beg's English	92.99%	92.99%	100%
L3 Inter's French (n=30)	98.33%	99.10%	95.27%
L3 Inter's English	93.60%	93.60%	98.33%
L3 Adv's French (n=10)	100%	100%	96.70%
L3 Adv's English	97.50%	97.50%	100%
Fr NS control (n=30)	100%	100%	100%
Eng NS control (n=31)	99.45%	99.45%	99.45%

Table 3.18

Mean percentages of accurate responses in elicited written production task II on finiteness, agreement and adverb placement (Study III)

We can observe from Table 3.18 that subjects' performance on finiteness/ agreement in both French and English was native-like. Single-factor ANOVA shows slightly significant difference across all experimental groups and controls with respect to finiteness in French ($F(3,110)=3.6323$, $p<.05$) and agreement in English ($F(3,111)=3.3207$, $p<.05$). Specifically, regarding agreement, paired two-sample t-tests show slightly significant difference between intermediate group's French and English ($t(29)=-2.415$, $p<.05$) but no significant difference between advanced group's French and English.

As far as adverb placement is concerned, intermediate and advanced learners show significant improvement from the beginners ($F(2,82)=5.0975$, $p<.005$) and do not differ significantly from controls in the French version. As regards the English version, no significant difference was found across all experimental groups and controls. Paired two-sample t-tests also show no significant difference between intermediate and advanced learners' French and English.

3.3.4.3 Preference task I on Case, finiteness, agreement and [±past]

As in Study II, results on the first preference task are broken down into four separate tables: Table 3.19 on Case, Table 3.20 on finiteness, Table 3.21 on agreement and Table 3.22 on [±past]:

Nominative Case

	Case (French)	Case (English)
L3 Beginner (n=44)	82.93%	96.95%
L3 Intermediate (n=30)	95.87%	99.70%
L3 Advanced (n=10)	99.10%	100%
French NS control (n=30)	99.43%	-
English NS control (n=31)	-	99.74%

Table 3.19

Mean percentages of correct responses in preference task I on Case (Study III)

Table 3.19 indicates that intermediate and advanced L3 learners performed in a native-like manner in the task with respect to Case in French. A single-factor ANOVA shows a highly significant difference between their performance and that of beginners ($F(2,82)=7.6183$, $p<.0005$); no significant difference was found between L3 intermediate and L3 advanced groups and controls. As far as the English Case is concerned, no significant difference was found amongst the experimental and control groups. Paired two-sample *t*-tests show no significant difference between L3 intermediate group's French and English nor between L3 advanced group's French and English.

Finiteness

	Finiteness (French)				Finiteness (English)		
	Infinitives	*Pres part.*	*Past part.*	*Mean*	*Pres part.*	*Past part.*	*Mean*
L3 Beg	93.75%	79.50%	75.93%	83.06%	98.41%	97.73%	98.07%
L3 Inter	96.00%	81.83%	72.10%	83.31%	99.43%	99.43%	99.43%
L3 Adv	100%	100%	82.50%	94.17%	100%	100%	100%
Fr NS	100%	100%	97.50%	99.17%	-	-	-
Eng NS	-	-	-	-	98.39%	97.84%	98.12%

Table 3.20

Mean percentages of correct responses in preference task I on finiteness (Study III)

Results on finiteness show that improvement of the L3 learners was a bit slower in this category. L3 beginners and L3 intermediate learners performed similarly on the finiteness items in the French task and the overall mean of both groups was around 83%.

A highly significant difference was found amongst the experimental and control groups ($F(3,110)=20.6534$, $p<.0001$) and no significant difference was found between the beginner and intermediate groups. Advanced learners showed considerable improvement and no significant difference was found between their performance and that of controls. Regarding the English results, no significant difference was found amongst experimental and control groups. Paired two-sample *t*-tests found a highly significant difference between the intermediate group's French and English ($t(29)=8.2372$, $p<.0001$) but not for the advanced group.

Agreement

	Agreement (French)			**Agreement (English)**				
	1sg. vs. 1pl.	*1pl. vs. 3pl.*	*Mean*	*No -s on 3sg.*	*-s on 3pl.*	*-s on 1sg.*	*-s on 1pl.*	*Mean*
L3 Beg	94.48%	93.75%	94.14%	96.20%	90.91%	99.25%	99.25%	96.40%
L3 Inte	97.77%	97.67%	97.72%	100%	93.33%	100%	98.90%	98.06%
L3 Adv	98.30%	95.00%	96.65%	100%	100%	96.70%	100%	99.18%
Fr NS	98.23%	99.43%	98.83%	-	-	-	-	-
Eng NS	-	-	-	99.19%	97.58%	99.19%	100%	98.99%

Table 3.21

Mean percentages of correct responses in preference task I on agreement (Study III)

As revealed in Table 3.21, our subjects' performance on agreement in the preference task was very similar across proficiency levels and test languages. No significant difference was found amongst experimental groups and controls, both French and English. With respect to the specific performance in the two test languages, paired *t*-tests show no significant difference for the intermediate group nor the advanced group between the French task and the English task.

[±past]

	French [+/-past]			English [+/-past]		
	[+past]	*[-past]*	*Mean*	*[+past]*	*[-past]*	*Mean*
L3 Beg	74.91%	82.55%	78.73%	88.03%	78.35%	83.19%
L3 Inter	78.90%	87.00%	82.95%	88.63%	76.67%	82.65%
L3 Adv	98.30%	93.00%	95.65%	86.62%	82.98%	84.80%
French NS	93.11%	95.57%	94.34%	-	-	-
English NS	-	-	-	95.25%	96.77%	96.01%

Table 3.22

Mean percentages of correct responses in preference task I on [±past] (Study III)

We now take a look at the findings on the feature [±past]. For the French task, subjects showed gradual improvement across proficiency levels. A single-factor ANOVA shows a highly significant difference amongst experimental and control groups ($F(3,110)=7.2121$, $p<.0005$) but advanced learners did not differ significantly from the French controls. Comparing the French and the English results, we observe that while the English [-past] consistently and intriguingly posed a greater problem for our subjects in the initial and transitional states (see results of Study I as well), the reverse was true for French – as expected, [+past] in French was more problematic for our L3 beginners and intermediate learners than [-past]. Moreover, as far as the steady state is concerned, interestingly, subjects performed nearly perfectly on the French [±past] but less so on the English counterpart (a paired *t*-test shows a significant difference between the advanced group's French and English with respect to [±past]: $t(9)=3.8574$, $p<.005$) which could suggest that a better performance was attained in the L3 steady state than the L2 steady state. No significant difference between the intermediate group's French and English was found.

3.3.4.4 Preference task II on adverb placement

Finally, we turn to the results of the preference task on adverb placement. Tables 3.23 and 3.24 below present the error scores in percentages of subjects' performance in the French and English versions of the task:

	Frequency Adverbs					Manner Adverbs					Mean (both types)
	**SAV-other*	*Pair *SAV*	*Pair SVAO*	*SVAO Other*	*Mean*	**SAV-other*	*Pair *SAV*	*Pair SVAO*	*SVAO other*	*Mean*	
L3 B Fr	55.59	39.77	12.65	20.07	40.27	44.32	44.32	19.63	25.39	35.85	*38.38*
L3 I Fr	27.90	26.67	21.42	5.83	20.07	19.17	20.56	19.12	12.50	16.37	*16.71*
L3 A Fr	13.57	17.50	15.13	7.50	13.33	3.33	3.33	3.33	0.00	2.00	*7.73*
Fr NS	2.13	0.00	0.00	0.00	0.83	9.17	0.00	0.00	1.67	2.67	*1.53*

Table 3.23

Error scores (in percentages) obtained for preference task II (French version)
on adverb placement (Study III)
(All "both wrong" and "not sure" responses are excluded)

Key to Table 3.23:

"L3 B"=L3 Beginner; "L3 I"=L3 Intermediate; "L3 A"=L3 Advanced

**SAV-other* = prefer *SAV ("only SAV correct" or "both correct" for an item with SAV and a sentence-initial or -final adverb)

*Pair *SAV* = prefer *SAV ("only SAV correct" or "both correct" for an item with SVAO SAV pair)

Pair SVAO = do not prefer SVAO ("only SAV is correct" for an item with SVAO-SAV pair)

SVAO-other = do not prefer SVAO ("only the other order is correct" for an item with SVAO and a sentence-initial or -final adverb)

	Frequency Adverbs					Manner Adverbs					Mean (both types)
	**SVA other*	*Pair *SVA*	*Pair SAV*	*SAV Other*	*Mean*	**SVA other*	*Pair *SVA*	*Pair SAV*	*SAV other*	*Mean*	
L3 B Eng	5.49	6.82	5.33	3.41	5.87	11.93	29.55	22.69	33.71	23.47	*13.82*
L3 I Eng	15.07	7.5	7.50	1.67	8.61	13.33	36.67	21.46	34.17	26.00	*16.52*
L3 A Eng	17.50	17.50	16.28	7.50	13.33	42.50	55.00	22.32	50.00	47.00	*28.64*
Eng NS	21.19	30.65	0.00	0.00	15.68	16.13	17.74	4.03	1.61	10.65	*14.14*

Table 3.24

Error scores (in percentages) obtained for preference task II (English version)
on adverb placement (Study III)
(All "both wrong" and "not sure" responses are excluded)

Key to Table 3.24:

"L3 B"=L3 Beginner; "L3 I"=L3 Intermediate; "L3 A"=L3 Advanced

**SVA-other*	= prefer *SVAO ("only SVAO correct" or "both correct" for an item with SVAO and a sentence-initial or -final adverb)
*Pair *SVA*	= prefer *SVAO ("only SVAO correct" or "both correct" for an item with SVAO-SVA pair)
Pair SAV	= do not prefer SAV ("only SVAO is correct" for an item with SVAO-SAV pair)
SAV-other	= do not prefer SAV ("only the other order is correct" for an item with SAV and a sentence-initial or -final adverb)

As shown in Table 3.23, the pattern of the acquisition of French adverb placement is rather clear. Intermediate and advanced learners showed significant improvement from the beginners, although there still exist some differences between the advanced group's performance and that of native speaker controls especially regarding frequency adverbs. A single-factor ANOVA shows a highly significant difference amongst experimental and control groups in French in the frequency adverb type ($F(3,110)=14.8685$, $p<.0001$), in the manner adverb type ($F(3,110)=19.7178$, $p<.0001$) as well as in terms of overall performance ($F(3,110)=21.3396$, $p<.0001$). However, the difference between the advanced group and the control group in terms of overall performance was not significant, suggesting that our advanced French learners were approaching nativeness with respect to adverb placement. In addition, intermediate and advanced learners did not have variable judgements on the French test items, as opposed to the beginners (see Study II for discussion) and subjects generally performed better on the frequency adverbs than the manner adverbs.

Results on the English version of the task, as shown in Table 3.24, were as complex as those reported in our previous studies (Study I and Study II). One surprising finding is that, as indicated by the overall mean of error rates, the higher the French proficiency of the subjects, the poorer the performance on English adverb placement. Subjects also showed increasingly higher degree of variability in the English manner adverb type as their French proficiency rises (for the advanced group for instance, subjects' acceptance rates of the ungrammatical SVAO order and the grammatical SAV

order were both around 40%-50%). There seems to exist a certain degree of "reverse transfer", i.e. L3 transfer effects on the L2 interlanguage grammar (see Chapter Five Section 5.3.3). As far as subjects' performance in the English version of the task is concerned, experimental groups and the English control group differed significantly in the frequency adverb type ($F(3,111)=4.6165$, $p<.005$), in the manner adverb type ($F(3,111)=7.7187$, $p<.0001$) as well as in terms of overall performance ($F(3,111)=4.2458$, $p<.001$). Comparing the French and English results, regression was not significant between subjects' performance in the two languages across all L3 proficiency levels and across adverb types, indicating that L2-L3 transfer effects are not evident.

3.3.5 Hypotheses and predictions revisited

Our findings on the L3 transitional and steady states are more consistent with FTFA. Significant improvement was observed in all the properties being investigated in the study, namely Case, finiteness, agreement, [±past] as well as the feature strength of T across L3 French proficiency levels, and near-native performance was attained by the advanced group of subjects as well. In other words, it appears that none of the features or feature strength "failed" towards the L3 steady state, contra the predictions of FFH.

3.4 Chapter summary and conclusion

The results of the three studies reported in this chapter do not seem to support FFH. Our findings suggest that FTFA appears to be a more viable stance in non-native language acquisition. The role of transfer in L*n* initial state is, however, more complex than expected owing to the special nature of feature strength (the issue of variability in relation to group vs. individual results will be discussed in Chapter Five). To summarize, Study I investigated L2A of English from the initial state to the steady state. Results supported full transfer of Chinese in the L2 initial state. Significant improvement was observed amongst the intermediate learners, and advanced learners attained near-native proficiency in all the verbal properties concerned. This implicated UG access in L2A. Study II is a comparative study of L2 and L3 French initial states. In the L3 case, all the relevant verbal features and feature strength were acquired in the L2 English steady state and it

was found that only the features but not the feature strength transferred to the L3 French initial state. In the L2 case, on the other hand, the absence of agreement in L1 Vietnamese was shown to transfer to the L2 French initial state, together with the other verbal properties present in the source language such as finiteness and the optional [±past]. Feature strength was, like the L3 case, variable in the L2 French initial state. Moreover, the L2 English results of the L3 case seemed to argue against FFH, and the findings on both L2 and L3 French initial states suggested that transfer in L*n* initial state may only be partial. Finally, Study III looks at L3 French transitional and steady states. Again, intermediate learners improved significantly from the beginners and advanced learners' performance on all the verbal properties concerned were native-like, demonstrating UG access in L3A. In sum, our findings of the three studies on the verbal functional domain are highly consistent and they together point to a "partial transfer full access" stance in L*n*A.

In general, this chapter has shown that properties of the verbal functional domain are acquirable in non-native language acquisition. Certain verbal properties, such as finiteness and agreement, appeared to emerge earlier than others. The feature [±past] in English seemed to pose a subtle problem even for advanced L2 learners and it was conjectured that semantics and/or the interaction between tense and aspect may play a role, which requires further examination in future work. The same feature in French was not problematic for advanced L3 learners, illustrating the possibility that the more languages one has acquired, the more beneficial it would be to acquire a new (typologically-related) language. This chapter has also demonstrated that feature strength is an issue more complex than research to date has shown. The phenomenon of variable feature strength in the initial state of some cases of non-native language acquisition is particularly intriguing and apparently not predictable based on transfer theories alone. More discussion on these issues will follow in Chapter Five.

CHAPTER FOUR

The Determiner Phrase (DP) in L2A and L3A

4.0 Introduction

This chapter reports three experimental studies on the nominal functional domain. We are interested in the functional projection Determiner Phrase (DP) and its associated properties in L2A and L3A. The three studies to be reported are as follows: (i) Study IV is a cross-sectional study on various stages of L2 acquisition of English DPs by Cantonese speakers; (ii) Study V is a comparative study on the initial state of L2 and L3 acquisition of French DPs by Vietnamese monolinguals and Cantonese-English bilinguals; and (iii) Study VI is a study on the intermediate and advanced stages of L3 acquisition of French DPs by Cantonese-English bilinguals.[1] These studies serve as parallel cases to Studies I, II and III of the last chapter; they aim to test the L2 models of FFH and FTFA with respect to the nominal functional domain, and provide further evidence for the claim that L2A and L3A are not the same.

4.1 Study IV: From initial state to steady state in L2A (DP)

4.1.0 Introduction

This section reports a study on the L2 acquisition of the nominal functional domain. It looks at how Hong Kong Cantonese learners of English with different proficiency levels acquire the parametric differences in Chinese and English with respect to DPs. As mentioned in Study I of Chapter Three, the investigation of the L2 acquisition of English is essential for our understanding of the L3 acquisition of French: as our claim regarding the initial state of L3 French hinges crucially on the steady state of L2 English (see Study II of Chapter Three and Study V of this chapter), it is important to examine the English interlanguage development of Hong Kong Cantonese and see which of the acquired or "failed" L2 properties might potentially transfer to L3 French.

[1] Portions of the main part results of Study V and Study VI have appeared in Leung (2001, 2002).

4.1.1 Hypotheses and predictions

This section presents the different hypotheses and predictions regarding L2 acquisition of English DPs by Hong Kong Cantonese speakers based on the Full Transfer Full Access (FTFA) model and the Failed Features Hypothesis (FFH):

(I) L2 initial state

1. FTFA predicts that the L2 initial state of our subjects is L1 Chinese (both lexical and functional categories). Specifically, the functional category D and the associated formal feature [±definite] as well as the Number category (and its associated feature [±plural]) are absent in the English interlanguage. On the other hand, the L1 Chinese category of CL is present in the L2 initial state. The weak feature strength of CL is thus transferred as well, resulting in apparently correct adjective placement in beginners' English grammars.
2. FFH makes the same predictions as FTFA because it assumes full transfer in the L2 initial state (see Chapter One Section 1.2.2).

(II) L2 transitional state

1. FTFA predicts that UG-based restructuring of interlanguage grammar is possible. It also predicts the possibility of improvement across proficiency levels owing to acquisition of relevant features and feature strength, namely the categories D and Num, the feature [±definite], the feature strength of Num and the distinction of D from CL. Note however that FTFA does not make any specific prediction about the relative rate and/or order of emergence of new functional categories. In other words, the development of new functional categories is not necessarily gradual and the projection of Num may or may not develop faster than that of D.
2. FFH predicts no improvement across proficiency levels for D, [±definite] and Num, because of "failure" to acquire new categories and features. It also predicts that the L1 CL category is maintained in intermediate subjects' L2 English. The weak feature strength of CL is thus retained and hence adjective placement will continue to pose no (surface) problem owing to similarities between L1 Chinese and L2 English.

(III) L2 steady state

1. FTFA predicts a UG-constrained steady state grammar, including one that is target-like in which case advanced learners should be able to distinguish D from CL and all new features and feature strength concerned will be fully acquired. Specifically, D, [±definite] as well as Num and its feature strength will be present in advanced subjects' L2 English but the Chinese category of CL will not.
2. FFH predicts all those parameterized features and feature strength that were not instantiated in L1 Chinese will not be acquired. In other words, D, [±definite] and Num will "fail" (i.e. will not be acquired and thus absent) ultimately. CL, however, remains a functional category in the subjects' L2 system. In addition, adjective placement will continue to pose no problem owing to permanent L1 (surface) transfer effects.

4.1.2 Participants

A total of 102 Cantonese learners of L2 English with different proficiency levels participated in this study. All of the subjects were recruited and tested in a secondary school in Hong Kong. Their average age at the time of testing was 13.76. Subjects were divided into five proficiency bands based on the Michigan Placement Test results – there were 18 low beginners, 27 high beginners, 16 low intermediate, 13 high intermediate and 28 advanced learners. All subjects were native speakers of Cantonese, learning English as a second language. The following table shows the brief profile of the L2 English learners:

Proficiency band	**Number of subjects**	**Average Michigan score (out of 80)**	**Average age**
BL (low beginner)	18	18.20	12.28
BH (high beginner)	27	33.00	13.30
IL (low intermediate)	16	46.38	13.94
IH (high intermediate)	13	55.85	14.17
A (advanced)	28	68.70	15.12

Table 4.1

Profile of Hong Kong Cantonese learners of L2 English (Study IV)

The experimental subjects in this study were drawn from the same samples of L1 Chinese-L2 English population in Hong Kong as those in Study I. As discussed in Chapter Three, late child L2A potentially qualifies for the predictions of the FFH which is a theory on post-critical period L2A.

In addition to the L1 Chinese-L2 English experimental subjects, two monolingual native English control groups were recruited in Montréal, Canada. The first group consisted of 27 participants who were tested on three of the experimental tasks (i.e. an elicited written production task on definiteness, a grammaticality judgement task on adjective placement and a picture identification task on Number) and the second group consisted of 31 participants who were tested on the remaining two tasks (i.e. a multiple choice task on definiteness and a preference task on classifier). All native English controls were either students at McGill University or other anglophone speakers working and residing in Montréal. None of them were students of linguistics or education.

4.1.3 Experimental tasks

The experiment consisted of five tasks which examine different properties related to the DP, i.e. an elicited written production task on the formal feature [±definite] on D and the projection of Num, a grammaticality judgement and correction task on adjective placement/feature strength of Num, a picture identification task on Number (the feature [±plural]), a multiple choice task on the feature [±definite] on D and the projection of Num, as well as a preference task on the presence versus absence of the Chinese functional category of CL(assifier) in L2 English interlanguage.

4.1.3.1 Elicited written production task on [±definite] on D and the projection of Num

A written production task was designed in order to elicit specific definite as well as specific and non-specific indefinite articles. The format of this task was adapted from Schafer & De Villiers (2000) who conducted an oral task with children acquiring English as L1. Subjects were required to provide a short answer to questions, which aimed to elicit articles plus nouns. There were 3 conditions in our task, namely, specific definite-

the, specific indefinite-*a*, and non-specific indefinite-*a*, 6 tokens per type.[2] A total of 18 test sentences and 10 distractors were designed. A list of all the English test items can be found in Appendix H. The following are three examples (one token from each test type) from the task:

(1) Specific definite-*the*

Q: Calvin had two pets, a pig and a crocodile. He decided to sell one of them. Which one do you think it was?

A: The pig OR the crocodile

(2) Specific indefinite-*a*

Q: You probably have something on your desk in your room at home. What is it?

A: A lamp / a computer / a pen / etc.

(3) Non-specific indefinite-*a*

Q: You are going to the cinema. You want to watch a movie on your own. What will you need to buy at the cinema?

A: A ticket

Recall from Chapter Two (Section 2.2.1) that we follow Ritter (1991) and take specific definites and specific indefinites to be DPs and non-specific indefinites to be NumPs owing to the generally-assumed referential status of DPs. In English, therefore, the specific definite and the specific indefinite articles are on D, while the non-specific indefinite article is on Num. The binary contrast of the feature [±definite] on D was tested in the present task (and the multiple choice task – see below) by the specific definite and indefinite conditions; the non-specific indefinite condition was included in both tasks to verify the status of Num.

[2] Schafer & De Villiers had a total of 8 conditions (5 tokens each) in their experiment. Out of these we only selected 3 conditions that were directly pertinent to the hypotheses to be tested in the present study.

4.1.3.2 Grammaticality judgement and correction task on adjective placement

Knowledge of the relative ordering of adjectives and nouns (i.e. feature strength of Num and noun raising) in English was tested with a grammaticality judgement and correction task. There were a total of 16 test items (half of which are grammatical and half are ungrammatical) and 10 distractors. Definiteness and number were controlled (i.e. definite and indefinite as well as singular and plural noun phrases were equally distributed in the test items; see Appendix J). The following are four examples from the task:

(4) Singular definite – ungrammatical

The dress expensive did not look good on me.

(5) Singular indefinite – grammatical

I just got a new car. Would you like to go for a ride?

(6) Plural definite – grammatical

The headmaster has already punished the naughty pupils.

(7) Plural indefinite – ungrammatical

When we were in New York, we went to try restaurants famous from time to time.

4.1.3.3 Picture identification task on Number ([±plural])

A third task was designed to test subjects' knowledge of Number (the feature [±plural]). It was a comprehension task using triplets of pictures; subjects were asked to match a sentence with the appropriate picture (see White *et al.* 2001). There were 16 test items (8 singular and 8 plural, all definite noun phrases) and 10 distractors. See Appendix L for a list of all the test sentences in English. The following are two examples from the task (test sentences, pictures not shown):

(8) Singular

You can put all your things on the table.

(9) Plural

I have washed the plates we used last night.

4.1.3.4 Multiple choice task on [±definite] on D and the projection of Num

Another task was designed to look at the formal feature [±definite] on D as well as the projection of Num. This was a multiple choice task. Each test item consisted of one or two sentences with a blank before a noun and three choices (i.e. *a*, *the*, ∅). Subjects were asked to circle the choice that they most preferred. There were a total of 30 test items, with the same conditions (i.e. specific definite-*the*, specific indefinite-*a*, non-specific indefinite-*a*; recall again from Section 4.1.3.1 that the first two articles types are on D and the last one is on Num), 10 tokens each. A full list of test items can be found in Appendix N. The following are three examples (one token example from each type):

(10) Specific definite-*the*

I saw a very romantic movie last night. The name of ___ movie is *Bounce.*

(11) Specific indefinite-*a*

Arnold has ___ sister who is very sportive. She likes all kinds of sports.

(12) Non-specific indefinite-*a*

When I was small, my ideal was to become ___ doctor.

4.1.3.5 Preference task on CL

A final task was a short task to test the presence versus absence of the Chinese functional category CL in L2 interlanguage grammar. This is related to our prediction that, in the initial state, feature strength of CL is transferred, leading to mastery of adjective placement. We made use of the contrast between Chinese and English with respect to a co-occurrence constraint on D. In particular, a Chinese (Cantonese) classifier can co-occur with a demonstrative or a possessive, while an English article cannot. Our prediction was that, if learners still retained the Chinese CL in their English interlanguage grammar, they would allow the English (definite) article to co-occur with a demonstrative

or a possessive. The following are examples illustrating the contrasts between Cantonese and English:

(13) a. Ngo3 mai3 zo2 **go2 bun2** syu1.
I buy PFV that CL book
"I bought that book."

b. *I bought **that the** book. (*demonstrative-article)

(14) a. **Keoi3 go3** mui2 hou2 leng3.
His/her CL sister very beautiful
"His sister is very beautiful."

b. ***His the** sister is very beautiful. (*possessive-article)

The format of the preference task was adopted from White (1991a, 1991b). Subjects had to read pairs of sentences and decide on a response amongst five options given below the pair (i.e. "only a is correct", "only b is correct", "both correct", "both wrong", "not sure"). There were a total of 10 test items (5 using demonstrative (all in object position)[3] and 5 using possessive (all in subject position)). Two examples are presented below. A full list of test items can be found in Appendix P.

(15) Demonstrative
(a) Jessica is going to marry <u>that the</u> guy we saw last Sunday
(b) Jessica is going to marry <u>the</u> guy we saw last Sunday.

(16) Possessive
(a) <u>The</u> big dog died last week.
(b) <u>Their the</u> big dog died last week.

[3] According to native speakers of English, the co-occurrence of a demonstrative (especially *that*) and the definite article in the subject position might not sound as bad as predicted due to garden path effects.

4.1.4 Implementation procedures

Subjects were tested in the secondary school at which they studied. The tasks were presented to the subjects in the same order as described above. In order to minimize their use of metalinguistic knowledge in the experiment, subjects were asked to complete the tasks as quickly and as accurately as possible, using their first intuition without pondering and they were told not to go back to previous questions or change their answers. All the tasks were timed. A background questionnaire as well as the Michigan Placement Test were completed in a separate session. A teacher was present in each class during the experiment to help the experimenter administer the tasks and maintain discipline.

Finally, a methodological note on the nature of the tasks. Some of the tasks in the present experiment, such as the multiple choice task on [±definite] on D and the projection of Num, are rather metalinguistic in nature. Notice however that each task in the experiment was tightly timed in order to reduce the possibility of students' resorting to explicit metalinguistic knowledge to a minimum. As far as the multiple choice task is concerned, since we had another task (written production) looking at the same nominal properties, the use of a multiple choice format in this task was considered as both complementary and supplementary to the production task. Arguably, it should be ideal to include on-line tasks in the experiment. But owing to practical reasons, it was impossible to do so. More discussion on methodological concerns will follow in Chapter Five regarding how the nature of the tasks in the experiments on both the verbal and the nominal functional domains might have affected the results and the overall picture of the L2/L3 cases presented in this work.

4.1.5 Results

4.1.5.1 Elicited written production task on [±definite] on D and the projection of Num

	Specific Definite (D)	Specific Indef (D)	Non-spec Indef (Num)
BL (n=18)	6.67%	33.33%	40.00%
BH (n=27)	9.63%	47.41%	62.22%
IL (n=16)	14.58%	68.75%	68.75%
IH (n=13)	23.14%	69.23%	76.92%
A (n=28)	60.71%	77.86%	85.71%
Control (n=27)	88.52%	97.96%	99.23%

Table 4.2

Mean percentages of correct responses in elicited written production task (Study IV)

Note: Cases of article omission are excluded (see Table 4.3)

Results on the elicited written production task are presented in Tables 4.2 and 4.3. Table 4.2 shows the percentages of correct responses (i.e. correct use of articles divided by the number of obligatory contexts in which an article is supplied; incorrect use means suppliance of a wrong article) while Table 4.3 presents the rates of incorrect omission of articles (null D and null Num) found in the task.

Table 4.2 shows that all experimental groups performed the worst on the specific definite article. The accuracy rates for beginners were extremely low (i.e. less than 10%). Intermediate groups show gradual improvement, and advanced learners attained a 60% accuracy rate on the specific definite article. This is, however, still significantly different from the control results and below our 75% criterion. A single-factor ANOVA indicated a highly significant difference amongst all the experimental groups and the control group ($F(5,123)=26.2252$, $p<.0001$). Post-hoc Scheffé tests also showed highly significant differences amongst all the learner groups ($p<.0001$). The performance on the specific indefinite article was much better, with accuracy rates of high beginners approaching 50%. There exists a highly significant difference between experimental and control groups ($F(5,123)=9.8274$, $p<.0001$). Post-hoc tests also showed highly significant differences amongst the L2 learner groups ($p<.0001$). As regards the performance on the non-specific indefinite article, it was the best amongst the three article types. The

accuracy rates of the high beginners reached as high as 60%. Considerable improvement was observed across proficiency levels, but the experimental groups still differed significantly from the control group ($F(5,123)=8.5934$, $p<.0001$). Again, post-hoc Scheffé tests indicated highly significant differences across learner groups ($p<.0001$).

	Ungram null articles (total % out of all 18 test items)	**Specific definite context**	**Specific indefinite context**	**Non-specific indefinite context**	***Null Ds (% out of 12 spec def + spec indef test items)***	***Null Num (% out of 6 non-spec indefinite test items)***
BL (n=18)	51.54%	17.18%	20.62%	13.74%	*56.70%*	*41.22%*
BH (n=27)	47.03%	19.75%	14.11%	13.17%	*50.79%*	*39.51%*
IL (n=16)	43.40%	13.32%	14.46%	15.62%	*41.67%*	*46.86%*
IH (n=13)	45.30%	17.21%	13.59%	14.50%	*46.20%*	*43.50%*
A (n=28)	30.16%	8.82%	10.78%	10.56%	*29.40%*	*31.68%*
Control (n=27)	8.81%	3.17%	2.12%	3.52%	*7.94%*	*10.56%*

Table 4.3

Mean rates of omission of articles in elicited written production task by contexts (Study IV)

Turning to inappropriate article omission (see Table 4.3 above), a single-factor ANOVA showed a highly significant difference amongst all experimental groups and the control group ($F(5,123)=54.4939$, $p<.0001$) with respect to the total percentages of ungrammatical null articles. As regards the contexts in which the null articles occurred, the distribution was rather even. It appears that incorrect omission of articles is independent of context. Separating the specific definite/indefinite articles (i.e. Ds) from the non-specific indefinite articles (i.e. Num), Table 4.3 also shows the percentages of null Ds and null Num in the task. The rates of both null Ds and null Num were very high for the beginners; the problem persists for intermediate and advanced learners. One point worth noting though is that even controls have unexpectedly high rates of both null Ds and null Num. This may be attributed to the nature of the task (i.e. short answers required). Single-factor ANOVAs showed a highly significant difference amongst all experimental groups and the control group with respect to null Ds ($F(5,123)=40.9880$, $p<.0001$) as well as to null Num ($F(5,123)=25.5114$, $p<.0001$). Post-hoc Scheffé tests indicated highly significant differences amongst L2 learner groups with respect to both

types of null articles (p<.0001). The difference between null D and null Num was also significant for the BL group and the BH group (p<.001).

4.1.5.2 Grammaticality judgement and correction task on adjective placement

	Ungrammatical	Grammatical	Overall
BL (n=18)	79.16%	100%	89.58%
BH (n=27)	81.48%	100%	90.74%
IL (n=16)	91.42%	100%	95.70%
IH (n=13)	94.32%	100%	97.12%
A (n=28)	94.64%	100%	97.54%
Control (n=27)	99.07%	100%	99.54%

Table 4.4

Mean percentages of correct responses in grammaticality judgement and correction task on adjective placement (Study IV)

Table 4.4 presents the results of the grammaticality judgement and correction task on adjective placement. It shows that all L2 learners had perfect performance on the grammatical items in the task. As regards the ungrammatical items, low beginners performed the worst (although their accuracy rate was in fact above 75%) and there was significant improvement across proficiency levels. A single-factor ANOVA shows a highly significant difference amongst all groups ($F(5,123)=12.5910$, p<.0001) on the ungrammatical items and post-hoc Scheffé tests indicated no significant difference between the IL and A groups and the controls. With respect to the overall performance in the task, again a highly significant difference was found amongst all groups ($F(5,123)=10.2197$, p<.0001) but no significant difference was found between the IH and A groups and the controls based on the post-hoc Scheffé test results.

4.1.5.3 Picture identification task on Number ([±plural])

	Singular	Plural	Overall
BL (n=18)	97.94%	16.67%	57.29%
BH (n=27)	98.61%	45.13%	71.87%
IL (n=16)	100%	90.47%	95.31%
IH (n=13)	99.04%	99.04%	99.04%
A (n=28)	100%	97.32%	98.66%
Control (n=27)	100%	100%	100%

Table 4.5

Mean percentages of correct responses in picture identification task on Number (Study IV)

Results from the picture identification task on Number are presented in Table 4.5. As can be seen, performance of all L2 learners on the singular test items in the picture identification task was native-like. No significant difference was found across all experimental groups and the control group. However, it appeared that beginners encountered rather serious problems with plurality. Accuracy rates of BL and BH groups on the plural test items were far below our 75% criterion. In particular, it is worth noting that the BL group appears to be treating almost all plurals as singulars. Intermediate and advanced learners showed considerable improvement and their performance were native-like. A single-factor ANOVA showed a highly significant difference across all groups ($F(5,123)=69.3312$, $p<.0001$) but post-hoc Scheffé tests found no significant difference between the IH and A groups and the controls. As far as the overall results are concerned, again, a highly significant difference was found across all groups ($F(5,123)=65.5528$, $p<.0001$) but no significant difference was found amongst the IH group, the A group and the controls based on the post-hoc Scheffé test results.

4.1.5.4 Multiple choice task on [±definite] on D and the projection of Num

	Specific Definite (D)	Specific Indef (D)	Non-spec Indef (Num)
BL (n=18)	37.22%	42.13%	48.58%
BH (n=27)	56.80%	63.04%	64.96%
IL (n=16)	74.13%	72.64%	78.08%
IH (n=13)	85.35%	82.37%	90.98%
A (n=28)	100%	97.78%	99.21%
Control (n=31)	100%	99.35%	99.00%

Table 4.6

Mean percentages of correct responses in multiple choice task (Study IV)

(Cases of article omission are excluded – see Table 4.7)

As can be observed from Table 4.6, [±definite] results on the multiple choice task were much better than on the elicited written production task. For the beginners, there was still a tendency for better performance on the indefinite (both specific and non-specific) items. However, there was no such difference for intermediate and advanced learners. It thus appeared that the specific definite article posed a bigger problem for the beginners, perhaps owing to L1 transfer (see Section 4.1.6 below). A two-factor ANOVA with repeated measures indicated a highly significant effect across groups ($F(5,127)=44.9945$, $p<.0001$) and across article types ($F(2,127)=32.2856$, $p<.0001$) but no significant interaction. In order to pin down the exact sources of the significant differences, individual single-factor ANOVAs on the three article types were performed. Highly significant differences were found across all learner groups and controls for specific definite ($F(5,127)=51.6655$, $p<.0001$), specific indefinite ($F(5,127)=25.1777$, $p<.0001$) and non-specific indefinite ($F(5,127)=54.1320$, $p<.0001$). Post-hoc Scheffé tests indicated highly significant differences for all article types for the two beginner groups ($p<.0001$) and a moderately significant difference for the intermediate and advanced groups ($p<.01$). In addition, post-hoc Scheffé tests found no significant difference between the advanced learners and the controls, but highly significant differences were found amongst the four beginner/intermediate groups and the control group for all article types ($p<.0001$).

With respect to the inappropriate choice of null articles in the task (see Table 4.7 below)[4], a single-factor ANOVA showed a highly significant difference amongst all the experimental groups and the control group ($F(5,127)=64.3043$, $p<.0001$). Highly significant differences were also observed amongst all learner groups based on post-hoc Scheffé tests ($p<.0001$). As regards the contexts in which articles were omitted, it was found that the distribution of null articles was rather even, although the non-specific indefinite items appeared to be slightly more prone to article omission. However, no significant difference was found across contexts in which null articles occurred. Turning to null Ds (i.e. omission of specific definite/indefinite articles) and null Num (i.e. omission of non-specific indefinite articles), single-factor ANOVAs indicated highly significant differences between all the experimental groups and the control group (for null Ds, $F(5,127)=80.4683$, $p<.0001$; for null Num, $F(5,127)=72.5714$, $p<.0001$) and post-hoc Scheffé tests also indicated highly significant differences across L2 groups with respect to null Ds and null Num ($p<.0001$). We observe from Table 4.7 that beginners had very high rates of null Ds and null Num, but considerable improvement was made by the intermediate learners, and advanced learners demonstrated native-like performance. This is contrary to the findings of the elicited written production task.

	Ungram null articles (total % out of all 29 test items)	**Specific definite context**	**Specific indefinite context**	**Non-specific indefinite context**	***Null Ds (% out of 20 spec def + spec indef test items)***	***Null Num (% out of 9 non-spec indefinite test items)***
BL (n=18)	45.56%	12.26%	15.54%	17.76%	*41.70%*	*53.28%*
BH (n=27)	28.74%	10.23%	9.19%	9.32%	*29.13%*	*27.96%*
IL (n=16)	12.02%	3.33%	4.04%	4.65%	*11.06%*	*13.95%*
IH (n=13)	12.99%	2.65%	3.78%	6.56%	*9.65%*	*19.68%*
A (n=28)	6.55%	1.96%	1.97%	2.62%	*5.90%*	*7.86%*
Control (n=31)	0.87%	0%	0%	0.87%	*0%*	*2.61%*

Table 4.7

Mean percentages of null articles in multiple choice task by contexts (Study IV)

[4] Item No.5 in the task – "Cindy is going to the pond. She wants to catch ___ fish" ("fish" can be a mass or a count noun) was removed from all analyses since it might have caused a bias towards article omission.

4.1.5.5 Preference task on CL

	Demonstrative	Possessive	Overall
BL (n=18)	50.41%	52.82%	51.62%
BH (n=27)	65.38%	72.40%	68.89%
IL (n=16)	79.51%	85.25%	82.38%
IH (n=13)	85.33%	86.97%	86.15%
A (n=28)	92.30%	93.42%	92.86%
Control (n=11)[5]	96.36%	100%	98.18%

Table 4.8

Mean percentages of correct responses in preference task on CL (Study IV)

Table 4.8 above presents that results on the preference task which indicated that beginners whose mean accuracy rates were below 75% allowed the co-occurrence of the demonstrative or the possessive with the definite article in English. It appeared that subjects retained the Chinese category CL in the initial state. Intermediate and advanced learners did not however permit such a CL-like property in their L2 English grammar. As far as the overall results are concerned, a single-factor ANOVA showed a highly significant difference across all groups ($F(5,107)=26.2317$, $p<.0001$). Post-hoc Scheffé tests indicated significant differences amongst the beginner and intermediate groups and the control group ($p<.0001$) but no significant difference was found between the advanced learners and the controls. In general, subjects performed slightly better on the possessive type of items than the demonstrative type but no statistically significant difference was observed.

4.1.6 Hypotheses and predictions revisited

(I) L2 initial state

Our data largely support full transfer (which both FTFA and FFH assume) in the L2 initial state. Results of the elicited written production task and the multiple choice task have shown that the functional category of D appeared to be absent in beginners' interlanguage grammar. The rate of inappropriate null Ds was as high as 50% for the BL

[5] Only 11 (out of 31) of the English control subjects completed this task owing to some timing problem in experimental design and control testing.

group. This can be attributed to transfer from L1 Chinese which lacks the D category. Where they produced the articles, however, it appears that it is a CL instead of a true D (see below). The low accuracy scores of beginners on the definite/indefinite articles in the elicited written production and the multiple choice tasks also suggest the absence of the formal feature [±definite] in the L2 initial state. Specifically, both tasks indicate that the definite article appeared to be more difficult for our L2 beginners. Learners were most accurate with the non-specific use of indefinite article in both tasks, and it appeared that they were overusing the indefinite article for definite contexts in both tasks.[6] This could be attributed to L1 Mandarin (=standard written Chinese) transfer rather than Cantonese: as mentioned in Chapter Two (Section 2.2.2), since the Cantonese CL represents [+specific], Cantonese transfer would render learners not able to distinguish between definite and indefinite articles in target English and thus either have equally poor performance on both types of articles, by random use irrespective of contexts, or consistently overgeneralize the definite article for indefinite contexts if misapplying [+specific] for [+definite]. However, neither possibility was found. The results point instead to Mandarin transfer – since the Mandarin CL signifies [-specific], the substitution of the indefinite article for the definite article might be attributed to learners' misapplying [-specific] for [-definite] and overgeneralizing the indefinite article to all definite/indefinite contexts in target English. We believe, as far as the present study is concerned, that because both of the experimental tasks on [±definite] were written in nature, and Cantonese is considered a spoken language, Mandarin transfer effects might have overridden those of Cantonese in this case. However, the control results in the elicited written production task suggest that there might be something inherent in the task that has led to the apparent one-way problem of the definite article, which is more considerable than that demonstrated in the multiple choice task.

With respect to the Number category, results of the picture identification task have indicated that the beginners were highly accurate on the singular test items but

[6] Notice that our results are consistent with the SLI findings of Tsimpli & Stavrakaki (1999) on a Greek subject, but not with those reported in most L2 (English) studies in the literature, such as Huebner (1985), Thomas (1989), Young (1996), Robertson (2000), Ionin & Wexler (2002) and Trenkic (2002) which have found high overuse of the definite article in indefinite contexts but not vice versa.

performed poorly on the plural items. We suggest that the feature of [±plural] is absent in the L2 initial state and subjects were resorting to their L1 Chinese for interpretation. Since all the test items in the picture identification task involved a definite article plus a noun, subjects might have equated the English definite article with the Chinese CL and treated all English noun phrases as some sort of "singular default" in the L2 initial state (recall from Chapter Two that in Cantonese at least, [CL+N] sequences are normally singular unless a so-called plural classifier is used). We contend that this constitutes evidence for L1 transfer. In addition, the elicited written production task and the multiple choice task have indicated that the omission rates of non-specific indefinite articles (i.e. null Num) were very high for beginners, which might suggest that the category of Num is in fact absent.

The hypothesis that the L1 Chinese category of CL is present in the L2 English initial state was also supported. The findings of the preference task on CL was that beginners allowed the co-occurrence of the demonstrative or the possessive with the definite article in English. This suggest that the Chinese category CL is retained in the L2 initial state. Finally, perfect performance on adjective placement was achieved in the grammaticality judgement task. We argue that this is due to L1 transfer of the weak feature strength of CL from Chinese, that is, N moves only to CL at LF, i.e. covertly.

(II) L2 transitional state

Our results on D, [±definite] and Num are more consistent with FTFA which predicts the possibility of improvement attributable to acquisition of new categories and features across L2 proficiency levels. As we saw in the last section, intermediate subjects made significant improvement in their performance in most of the tasks testing the nominal properties concerned (although the rates of null D and null Num and the one-way problem of the definite article appeared to be still considerable as far as the elicited written production task is concerned, which might suggest that D, Num and [±definite] are still absent and the effect of the Chinese CL and [±specific] is still dominant). However, the preference task on CL indicated that the L1 functional category did not seem to be present in intermediate learners' interlanguage any more. In addition, as we

argued above, the control results of the elicited written production task indicated that the nature of the task might have magnified the definiteness problem to some extent. Furthermore, adjective placement poses no problem to our L2 learners, and one might argue that the surface similarities between L1 Chinese and L2 English might have contributed to subjects' perfect performance in English adjective placement. Nonetheless, since CL was shown to be absent in English interlanguage, correct adjective placement might not be attributable to L1 Chinese transfer on the abstract level, but rather subjects' successful acquisition of the English weak feature strength of Num. The findings on L2 transitional state in general are thus more in line with FTFA.

(III) L2 steady state

Results on the advanced learners do not converge across tasks, and they are not totally consistent with the predictions of FFH. Advanced learners' performance was far from native-like with respect to D, [±definite] and Num in the elicited written production task; the rates of inappropriate null Ds and null Num were still rather high and the accuracy rates on the definite/indefinite articles were still low. However, findings of the multiple choice task demonstrated very low rates of inappropriate null Ds and null Num as well as very high accuracy rates with respect to definite/indefinite articles amongst the same subjects. In addition, the picture identification task on Number has indicated that advanced learners' performance on both the singular and the plural items was perfect. These results may suggest that D, [±definite] and Num were in fact acquired in the L2 English steady state. Notice that the results of the production task on the nominal properties concerned, especially regarding the feature [±definite], were less perfect than those obtained in the multiple choice task, which might simply reflect a generally greater demand on subjects' processing load in a production task. On the other hand, the multiple choice task is arguably more metalinguistic in nature despite the fact that all tasks were timed in our study, which might have contributed to the higher accuracy rates amongst subjects. The divergence in results from the two tasks suggested a difference in performance with respect to tasks demanding different levels of processing and/or meta-linguistic awareness. Furthermore, results obtained from the preference task on CL argued against the persistent or permanent influence of the L1 grammar in the L2 steady

state; and since CL is absent, our results from adjective placement suggest that the weak feature strength of Num has been acquired.

In sum, our findings on the nominal functional domain in Hong Kong Cantonese speakers' L2 English are not fully consistent with the FFH. Full transfer in the L2 initial state has been strongly supported. However, as we have seen, in some cases, owing to the nature of the property investigated (e.g. adjective placement) and the divergence in results across tasks (e.g. on [±definite]), it is not possible to tease apart "failed" features and full access in the L2 steady state.

4.2 Study V: The initial state of L2A vs. L3A (DP)

4.2.0 Introduction

This study compares the initial state of L2A and L3A with respect to French DPs. As we pointed out in the previous chapters, in L3A, transfer does not necessarily (wholly) come from L1. Study II of Chapter Two has attested partial transfer of the L2 English steady state to the L3 French initial state in the verbal functional domain. In the present study, we will examine whether the same is true of the nominal functional domain.

4.2.1 Hypotheses and predictions

Recall in Chapter Two that neither Chinese and Vietnamese has the functional categories of D or Num nor the formal feature of [±definite] instantiated in the grammar. Feature strength and the related adjective placement phenomenon is linked to the category of CL instead. It was posited that the feature strength of CL is strong in Vietnamese and weak in Chinese. The respective hypotheses and predictions according to FFH and FTFA on the L2 and L3 French interlanguage with respect to the nominal functional domain are outlined as follows:

(I) L3 group (Cantonese-English bilinguals)

1. FFH hypothesizes that the L3 French initial state is the L1 Chinese final state. Specifically, D, Num and [±definite] are absent but the Chinese CL will be present in

the L3 group's French interlanguage. Adjective placement will be problematic since the weak feature strength of the Chinese CL will be transferred.

2. According to FTFA, the L3 French initial state could be the L1 Chinese final state or the L2 English steady state. It makes the same predictions as FFH if L1 transfer is hypothesized. Alternatively, if L2 transfer is hypothesized, then it predicts that the UG-constrained interlanguage grammar achieved at the L2 English steady state will transfer to the L3 French initial state. Subjects will be able to distinguish D from CL in both English and French since the L1 Chinese category will no longer exist in L2 and L3 interlanguage grammars. In addition, all the features and feature strength which have been acquired in the L2 English steady state will be transferred to the L3 French initial state. Specifically, the functional categories of D and Num as well as the feature [±definite] will be present in L3 group's English and French. The weak feature strength of Num of English will also transfer hence causing problems in subjects' adjective placement in French.

(II) L2 group (Vietnamese monolinguals)

Both FTFA and FFH predict full transfer of L1 Vietnamese into the L2 French initial state. Therefore the category of CL will be present. In addition, since Vietnamese does not have D, Num nor [±definite], it is hypothesized that L2 subjects will have problems with these properties in French. Nonetheless, adjective placement will pose no apparent problem to the Vietnamese speakers as the strong feature strength of CL in Vietnamese will transfer to L2 French initial state.

The different predictions based on FFH and FTFA for L2 and L3 French are summarized in the following two tables:

	D category	Num ([±plural])	[±definite]	CL category	f.s. of Num
L3 group's Chinese	✗	✗	✗	✓	(weak)$^{\Psi}$
L3 group's English	✗	✗	✗	✓	(weak)$^{\Psi}$
L3 group's French (transfer from *Chinese*†)	✗	✗	✗	✓	(weak)$^{\Psi}$
L2 group's Vietnamese	✗	✗	✗	✓	(strong)$^{\Psi}$
L2 group's French (transfer from Vietnam.)	✗	✗	✗	✓	(strong)$^{\Psi}$

Table 4.9

Summary of hypotheses for L3 and L2 groups in French acquisition of the nominal functional domain based on FFH†

Key: ✓ present or acquired in (inter)language; ✗ absent or failed in (inter)language; $^{\Psi}$ related to f.s. of CL instead

	D category	Num ([±plural])	[±definite]	CL category	f.s. of Num
L3 group's Chinese	✗	✗	✗	✓	(weak)$^{\Psi}$
L3 group's English	✓	✓	✓	✗	weak
L3 group's French (transfer from *English)**	✓	✓	✓	✗	weak
L2 group's Vietnamese	✗	✗	✗	✓	(strong)$^{\Psi}$
L2 group's French (transfer from Vietnam.)	✗	✗	✗	✓	(strong)$^{\Psi}$

Table 4.10

Summary of hypotheses for L3 and L2 groups in French acquisition of the nominal functional domain based on FTFA* (in the case of L2 transfer)

Key: ✓ present or acquired in (inter)language; ✗ absent or failed in (inter)language; $^{\Psi}$ related to f.s. of CL instead

4.2.2 Participants

There were a total of eight groups of participants in the present study which comprises two parts (i.e. a main study and a follow-up). The two parts of the experiment were administered in two different years. Details of the participants are as follows:

Main study

For the main study, there were four groups of participants: an L3 French experimental group (L1 Chinese-L2 English), an L2 French experimental group (L1 Vietnamese, with no English background) and two native control groups (L1 French and L1 English respectively). The L3 experimental group consisted of 41 Cantonese-English bilingual undergraduate students who were studying French at the University of Hong Kong (HKU). Their average age at the time when the experiment was undertaken was 20.61 and their mother tongue is Cantonese; most of them can also speak some Mandarin. They are all advanced speakers of L2 English (average proficiency score for the Michigan Placement Test is 71.49 out of 80). French is the third language for all of them. They all started learning French in Hong Kong (formal classroom setting in the university) as adults. In other words, they were true L3 French beginners. The average French proficiency score obtained for the Laval Placement Test was 18.41 out of 54. All of the L3 French subjects were recruited and tested in Hong Kong.

The L2 experimental group was recruited and tested in Montréal, Canada. It consisted of 16 monolingual Vietnamese speakers who had learned or were learning French as a second language. Their average age at the time of testing was 32.15. None of the Vietnamese subjects spoke any English, and they were true beginners of French (average Laval score was 17.58 out of 54). They all started learning French as adults in Montréal in a formal educational setting. A two-sample *t*-test showed no significant difference between L2 group's French proficiency and that of the L3 group ($t(55)=.6920$, $p=.4917$).[7]

As for the two native control groups, 22 native French and 27 native English speakers were recruited in Montréal, Canada. (The native English control group was the same as the first control group used in Study IV). The control subjects were either university students, or other anglophone or francophone speakers working and residing in Montréal of different countries of origin. All of them were monolinguals of their

[7] See fn.9 of Chapter Three regarding the issue of comparability between the L2 and L3 groups.

respective mother tongue, and had learned or were learning some second languages as adults. None were students of linguistics or education.

Follow-up

For the follow-up of the study, there were four additional groups of participants: an L3 French experimental group (L1 Chinese-L2 English), an L2 French experimental group (L1 Vietnamese, with no English background) and two native control groups (L1 French and L1 English respectively). These four experimental/control groups were the same as the ones tested in Study II on L2/L3 tense and agreement. Readers are referred to Chapter Three (Section 3.2.2) for details.

To establish statistically that the two L2 groups and the two L3 groups from the main study and the follow-up were representative samples from their respective populations, a single-factor ANOVA was run on these subjects' Laval test scores. No significant difference was found across the four learner groups with respect to their French proficiency ($F(3,109)=.8609, p=.4638$).[8]

4.2.5 Experimental tasks

There were a total of six tasks (five of which were the same as in Study IV). The main part of the experiment consisted of an elicited oral production task on D, [±definite] and adjective placement, an elicited written production task on [±definite] on D and the projection of Num, a grammaticality judgement and correction task on adjective placement, as well as a picture identification task on Num.[9] The follow-up part of the experiment comprised a multiple choice task on [±definite] on D and the projection of Num as well as a preference task on CL. For all the tasks, the L3 groups completed both the French and the English versions (in that order, with a 7- to 10-day lag) while the L2 groups completed the French version only. For each task, the test sentences in the French

[8] See fn.7 above.

[9] Originally, an act-out task adapted from Katz *et al.* (1974) was included in the experiment to investigate L2/L3 learners' sensitivity to D; however, the control subjects did not behave as expected, which renders the experimental results uninterpretable. Hence it is not reported in this work.

version were very similar in structure and in length to the ones used in the English version. In addition, the test items were presented in different orders in the sentence completion task and the preference task in order to minimize any ordering effects. The following presents details about the elicited oral production task which was not included in Study IV, together with information on the French versions of the remaining five tasks.

Main study

4.2.3.1 Elicited oral production (picture description) task on D, [±definite] and adjective placement

A picture description task was used to elicit oral production in French (and English). All the pictures were printed in colour and were particularly rich in eliciting adjectives and noun phrases in general. For the L3 group, two different sets of pictures (3 in each set) were used for French and English elicitation and each participant talked about the pictures for about 10 minutes in each language. For the L2 group, only one set of pictures were presented to each participant who described the three pictures in turn for a total of 10-15 minutes. Data were recorded and transcribed. The number of occurrences of noun phrases with null and overt determiners, the distribution of definite and indefinite articles as well as the order of adjectives and nouns in adjective-noun sequences were counted and compared across the L2 and L3 groups (French version) and across the two languages (French and English) for the L3 group.

4.2.3.2 Elicited written production on [±definite] on D and projection of Num

As in the English version of this task used for Study IV, the French version was designed to elicit specific definite and specific and non-specific indefinite articles. The format of was same as the English version. There were 3 conditions, namely, specific definite-*le/la*, specific indefinite-*un/une*, and non-specific indefinite-*un/une,* 6 tokens per type. Gender in the answers required was not controlled for. A total of 18 test sentences and 10 distractors were designed. A list of all the French test items can be found in Appendix I. The following are three examples from the task:[10]

[10] English glosses did not appear in the French tasks presented to the subjects.

(17) Specific definite-*le/la*

Q: Michelle a deux enfants, une fille et un garçon. Un des deux aime jouer avec des poupées. Lequel?
Michelle has two children, a daughter and a son. One of them likes playing with dolls. Which one?

A: La fille OR le garçon
The daughter OR the son

(18) Specific indefinite-*un/une*

Q: Je suis sûr que vous avez quelque chose dans votre chambre sur quoi vous dormez. Qu'est-ce que c'est?
I am sure you have something in your room on which you sleep. What is it?

A: Un lit
A bed

(19) Non-specific indefinite-*un/une*

Q: Christine est dans la rue. Il pleut à verse. Qu'est-ce qu'elle doit acheter?
Christine is on the street. It's pouring. What should she buy?

A: Un parapluie
An umbrella

4.2.3.3 Grammaticality judgement and correction task on adjective placement

This task tests knowledge of the relative ordering of adjectives and nouns (i.e. feature strength of Num and noun raising). As in the English version, there were a total of 16 test items (half of which are grammatical and half are ungrammatical) and 10 distractors. Definiteness, number and gender were controlled (i.e. definite and indefinite, singular

and plural as well as masculine and feminine noun phrases were equally distributed in the test items; see Appendix K).[11] The following are four examples from the task:

(20) Singular definite – ungrammatical
Tout me plaît à Montréal, sauf le froid climat.
All me pleases in Montreal, except the cold climate

(21) Singular indefinite – grammatical
Je vais prendre seulement une boisson chaude. Je n'ai pas faim.
I will take only a drink hot. I NEG have NEG hunger

(22) Plural definite – grammatical
Voyez-vous les costumes blancs là-bas? Ils doivent coûter très cher.
See-you the suits white there? They must cost very expensive

(23) Plural indefinite – ungrammatical
J'aime essayer des exotiques cuisines.
I like try some exotique cuisines

4.2.3.4 Picture identification task on Number ([±plural])

As in the English version of the task, the French version of the picture identification task tests subjects' knowledge of Number ([±plural]) in French using triplets of pictures. There were 16 test items (8 singular and 8 plural, all definite noun phrases; there were an equal number of masculine and feminine items in the singular cases) and 10 distractors. See Appendix M for a list of all the French test sentences. The following are two examples from the task (test sentences, pictures not shown):

[11] Item 12 in the French version (i.e. *les garçon vilains*) was excluded in our final data analysis since according to native speakers, it could be either *les garçons vilains* ("les garçons qui sont moches") or *les vilains garçons* ("les garçons qui sont méchants") (i.e. one of those exceptional cases of adjectives in French that can occur before or after the noun with a different meaning, which we are not concerned with in the present study).

(24) Singular

Je ne peux pas ouvrir cette porte avec la clé.

I NEG can NEG open this door with the key

(25) Plural

Les paquets de Paris sont finalement arrivés ce matin.

The parcels from Paris are finally arrived this morning

Follow-up

4.2.3.5 Multiple choice task on [±definite] on D and projection of Num

A follow-up task on [±definite] on D and projection of Num was designed in French using a multiple-choice format. There were a total of 30 test items, with 3 conditions (i.e. specific definite-*le/la*, specific indefinite-*un/une*, non-specific indefinite-*un/une*) and 10 tokens each. A full list of test items of the French version can be found in Appendix O. The following are three examples:

(26) Specific definite-*le/la*

Isabelle et Joyce ont essayé un restaurant à Paris. ___ restaurant est connu pour son steak.

Isabelle and Joyce have tried a restaurant in Paris. ___ restaurant is famous for its steak

(27) Specific indefinite-*un/une*

J'ai ___ grand frigo chez moi. Donc je peux garder beaucoup de viandes et de légumes.

I have ___ big fridge in my place. Thus I can keep a lot of meat and of vegetables

(28) Non-specific indefinite-*un/une*

On dit que si vous mangez ___ pomme par jour, vous resterez en bonne santé.

One says that if you eat ___ apple per day, you stay-FUT in good health

4.2.3.6 Preference task on CL

A French version of the preference task was used to test the presence vs. absence of the Chinese functional category CL in L3 interlanguage grammar. The format was the same as in the English version. There were a total of 10 test items (5 using demonstrative and 5 using possessive). Two examples are presented below. A full list of test items in French can be found in Appendix Q.

(29) Demonstrative

(a) Jean a encore vu <u>la</u> jolie femme hier.

John has again seen the pretty woman yesterday

(b) Jean a encore vu <u>cette la</u> jolie femme hier.

John has again seen this the pretty woman yesterday

(30) Possessive

(a) <u>Son le</u> restaurant vietnamien sur la rue Peel est le meilleur à Montréal.

His the restaurant Vietnamese on the street Peel is the best in Montreal

(b) <u>Le</u> restaurant vietnamien sur la rue Peel est le meilleur à Montréal.

The restaurant Vietnamese on the street Peel is the best in Montreal

4.2.4 Implementation procedures

<u>Main study</u>

For the main study, the written parts of the experiment were administered inside the HKU French classroom for the L3 group. They wrote the French version first and then, after a

7- to 10-day lag, the English version. The French written tasks took about two hours and the English tasks an hour. There was no time limit for each individual task. Individual interviews were set up with each of the L3 subjects for the oral test. Some subjects took the oral test in between the two written test sessions while others had it after both. All of the subjects took the French version of the oral test before the English one.[12] As for the L2 group, individual appointments were set up for both the written and the oral parts of the experiment in Montréal. Again, there was no time limit for each task. Each L2 subject completed the written tasks first and then attempted the oral part in one testing session which approximately took three hours. The same instructions used in Study IV were given to all the experimental subjects, both L3 and L2 groups.

Follow-up

As regards the follow-up, for the L3 group, the French version of the tasks was administered first in the HKU French classroom; after a 7-10 day lag, the English version was implemented in individual appointments. Regarding the L2 group, each of the subjects was tested individually on the French version only. Again, the same instructions used in Study IV were given to all subjects in the present study. All the tasks were timed.

4.2.5 Results

Main study

4.2.5.1 Elicited oral production (picture description) task on D, [±definite] and adjective placement

Elicited oral production data were transcribed based on the criteria set by Huebner (1983).[13] We focused on singular, countable, concrete noun phrases for the investigation

[12] Owing to time constraints, subjects did both the French and English oral tests in one single session (i.e. 45 minutes to an hour). Efforts have already been made to minimize L2 interference to L3 by making the subjects do the French version first. However, some type of reverse interference from L3 back to L2 might have been present.

[13] Following Huebner, eight environments were *excluded* from our analysis:

i) Second and subsequent mention of nouns in reformations and repetitions, when only the first noun has a surface article.
ii) Second and subsequent nouns in a series, when only the first noun has a surface article.
iii) Nouns or NPs preceded by possessives.
iv) Nouns or NPs preceded by numerals (including *one*).

of [±definite] both in French and in English. Abstract/mass nouns as well as partitives/ indefinite plurals were excluded, and gender (in)appropriateness was not calculated. For adjective placement, however, both singular and plural noun phrases were considered, because only the relative ordering of nouns and adjectives is relevant. We break down the results into three parts. First, we consider suppliance of articles (i.e. specific definite and specific indefinite):

Presence or absence of D

	L3 group (n=41)		**L2 group (n=16)**
	French (L3)	***English (L2)***	***French (L2)***
Total no. of obligatory contexts requiring articles	1619	2337	994
Total no. of NPs with an article supplied (filled Ds)	1478 (91.29%)	2189 (93.67%)	706 (71.03%)

Table 4.11

Correct suppliance of articles in obligatory contexts in elicited oral production task (Study V) (singular, countable, concrete nouns only)

As we can see from Table 4.11, for the L3 group, the accuracy rate is very high with respect to the suppliance of specific definite and indefinite articles in obligatory contexts (i.e. filled Ds), in both French and English. A paired two-sample *t*-test found no significant difference between L3 group's French and English with respect to the rate of correct supplicance of articles. On the other hand, a two-sample *t*-test found that the L3 group has a significantly higher rate of filled Ds in French than the L2 group ($t(55)$=-10.0056, p<.0001). It appears that the D category is firmly established and accurately supplied in the L2 English steady state as well as the L3 French initial state, but less so in the L2 French initial state.

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v) Nouns or NPs preceded by quantifiers such as *many* and *a lot of.*
vi) Nouns or NPs preceded by *wh*-words.
vii) Proper nouns.
viii) Idioms and formulaic expressions (e.g. *in the future*).

The feature [±definite]

	L3 group (n=41)				L2 group (n=16)	
	French (L3)		English (L2)		French (L2)	
	Definite contexts	***Indefinite contexts***	***Definite contexts***	***Indefinite contexts***	***Definite contexts***	***Indefinite contexts***
1.Correct use of articles	316 (58.63%)	948 (87.78%)	571 (80.31%)	1487 (91.45%)	167 (48.97%)	388 (59.42%)
2.Substitution errors	210 (38.96%)	4 (0.37%)	123 (17.30%)	8 (0.50%)	149 (43.70%)	2 (0.30%)
3.Omission errors	13 (2.41%)	128 (11.85%)	17 (2.39%)	131 (8.06%)	25 (7.33%)	263 (40.28%)
4.Obligatory contexts	539	1080	711	1626	341	653

Table 4.12

Correct vs. incorrect use of articles in elicited oral production task (Study V)

(singular, countable, concrete nouns only)

Turning to definiteness, Table 4.12 shows that both the Chinese and Vietnamese subjects produced far more indefinite articles than definite articles, no matter whether in English or in French. Paired *t*-tests found a highly significant difference between the rates of correct use of the definite article and of the indefinite article for L3 group's French ($t(40)=-11.3954$, $p<.0001$), for L2 group's French ($t(15)=-4.0963$, $p<.0005$), as well as for L3 group's L2 English ($t(40)=-10.7807$, $p<.0001$). This may suggest that both groups of learners have greater problem with the definite article, and a possible one-way "failure" of [+definite] (see below).[14]

As far as L2 vs. L3 French is concerned, the rates of correct use of both the definite and indefinite articles were significantly higher for the L3 group than the L2 group (for definite, $t(55)=11.2074$, $p<.0001$; for indefinite, $t(55)=8.0147$, $p<.0001$). With respect to the type of errors concerned (i.e. substitution errors vs. omission errors), we

[14] It should be pointed out that our featural analysis would not predict any subject-object asymmetry in subjects' performance on [±definite] (i.e. our account does not predict that Chinese learners would assume subject definiteness by default in L2 English and/or L3 French owing to L1 transfer). In fact, as Table 4.12 shows, the rates of incorrect substitution of the definite article for the indefinite article are extremely low. See Leung (2001) for further exposition and evidence. See also Yip (1995 Ch.7) for related discussion.

notice that for the L3 group, the rate of substitution errors in definite contexts was high (i.e. substituting the indefinite article for the definite article), but the rate of omission errors in indefinite contexts (i.e. omitting the indefinite article) was significantly lower ($t(40)=28.4460$, $p<.0001$); together with the subjects' poor performance in definite contexts as reported above, these suggest that the indefinite article was well in place in interlanguage grammar and was being overgeneralized and treated as some kind of "default" because the definite article (or the featural value [+definite]) has not been fully acquired. For the L2 group, the rate of substitution errors in definite contexts and the rate of omission errors in the indefinite context were similar (although a paired two-sample *t*-test showed a significant difference: $t(15)=3.3909$, $p<.01$), demonstrating that the L2 subjects may have problems (both overgeneralization and omission) with the indefinite article in French. However, their low rate of correct use of the definite article in definite contexts (see above) suggest that the definite article was also problematic. It thus appears that both [+definite] and [-definite] "fail" in L2 group's French interlanguage.

Regarding L3 group's L2 English, the rate of correct use in definite contexts was significantly lower than indefinite contexts ($t(40)=5.0238$, $p<.0001$), although the accuracy percentage is in fact rather high (i.e. 80%). There are still a few cases where the indefinite article was being overgeneralized in definite contexts but omission of the indefinite article in indefinite contexts was rare (the rate of substitution errors of the definite context was significantly higher than the rate of omission errors of the indefinite context ($t(40)=10.3278$, $p<.0001$)). These findings suggest that both the definite and indefinite articles might have indeed been acquired in L3 group's L2 English, although the definite article is still slightly more problematic than the indefinite article.

To sum up, it appears that for the L2 French group, both values of the feature [±definite] "fail", while for the L3 group, only [+definite] "fails" (in French but apparently not in English). These results are intriguing, and do not converge with the findings of the two other tasks on [±definite] in this study. The problem may be related to the presence vs. absence of the functional category CL in subjects' L2/L3 French initial state (and L3 group's L2 English steady state). We will return to the issue below.

Adjective placement

	L3 group (n=41)		L2 group (n=16)
	French (L3)	***English (L2)***	***French (L2)***
Total no. of NPs with adjectives	530	830	326
Total no. of NPs with correct adj. placement	400 (75.19%)	830 (100%)	312 (95.71%)

Table 4.13

Correct adjective placement in elicited oral production task (Study V)

Finally, with respect to subjects' performance on the relative ordering of adjectives and nouns, we observe that the L2 group performed significantly better than the L3 group ($t(55)=-22.7925$, $p<.0001$) in the French task. As for L3 group's performance in French and English, a paired two-sample t-test showed a highly significant difference ($t(40)=14.8263$, $p<.0001$).

4.2.5.2 Elicited written production task on [±definite] on D and projection of Num

	French (L3 / L2)			English (L2)		
	Definite	***Spec indef***	***Nonspec indef***	***Definite***	***Spec indef***	***Nonspec indef***
L3 group (n=41)	33.00%	81.26%	83.33%	47.02%	87.24%	94.56%
L2 group (n=16)	13.62%	45.00%	49.98%	-	-	-
French controls (n=22)	87.97%	95.45%	85.00%	-	-	-
English controls (n=27)	-	-	-	88.52%	97.96%	99.23%

Table 4.14

Mean percentages of correct responses in elicited written production task (Study V)

(Cases of article omission are excluded – see Table 4.15)

We now turn to the written tasks. Tables 4.14 and 4.15 present the results of the elicited written production. As far as correct responses in the French task are concerned, a two-factor ANOVA with repeated measures showed a highly significant effect across groups ($F(2,76)=31.5130$, $p<.0001$) and article types ($F(2,76)=40.6830$, $p<.0001$) but no significant interaction. Individual t-tests were computed to see where the significance

lies. With respect to the performance on the specific definite article in French, the L3 group performed significantly better than the L2 group ($t(55)=2.1710$, $p<.05$). As for the specific and non-specific indefinite articles, the performance of both groups was much better; again the L3 group performed significantly better than the L2 group (for specific indefinite, $t(55)=4.6660$, $p<.0001$; for non-specific indefinite, $t(55)=5.1017$, $p<.0001$). When compared with the performance of French native speakers, single-factor ANOVAs indicated that both L2 and L3 subjects differed highly significantly from the controls with respect to the specific definite article ($F(2,76)=30.6830$, $p<.0001$) and the specific indefinite article ($F(2,76)=21.5130$, $p<.0001$). The L2 group performed significantly poorer than the controls on the non-specific indefinite article as well ($t(36)=5.2696$, $p<.0001$) but no significant difference was found between the L3 group and the controls on the same test items.

With respect to the L3 group's L2 English, subjects also performed the worst on the specific definite article, and considerably better on the specific and non-specific indefinite articles. Two-sample *t*-tests showed a (highly) significant difference between the learners and the controls with respect to the specific definite article ($t(66)=-4.6160$, $p<.0001$) and the specific indefinite article ($t(66)=-2.1637$, $p<.05$) but not the non-specific indefinite article. As regards subjects' comparative performance in the French and the English tasks, paired two-sample *t*-tests showed a significant difference between L3 group's French and English with respect to the specific definite article ($t(40)=-2.1481$, $p<.05$) and the non-specific indefinite article ($t(40)=-3.2422$, $p<.005$) but not the specific indefinite article.

The findings of this task suggest a one-way "failure" of [+definite] in the L2 and L3 French initial state of the L2 and the L3 groups, as well as the L2 English steady state of the L3 group, contra the results of the elicited oral production task (which showed a two-way "failure" of the feature [±definite] for the L2 group's French, and no apparent "failure" for the L3 group's English). More discussion will follow below.

Turning to inappropriate article omission (see Table 4.15 below), we observe that the rate of the L2 group was high while that of the L3 group was very low. A two-sample *t*-test found a highly significant difference between the L2 group and the L3 group with respect to the rate of total article omissions ($t(55)=-5.2239$, $p<.0001$). As far as null Ds and null Num are concerned, two-sample *t*-tests showed a highly significant difference between the L2 group and the French controls (for null Ds, $t(36)=3.6758$, $p<.0005$; for null Num, $t(36)=4.7293$, $p<.0001$) but not between the L3 group and the French controls. All these suggest that the functional categories of D and Num are not well in place in L2 subjects' French interlingual systems.

Regarding the L3 group's L2 English, the rate of total article omissions was significantly higher than their L3 French ($t(40)=-2.6216$, $p<.05$). This is intriguing, and may be attributed to input – since French does not generally allow bare nouns, learners are more aware of the presence of an article before a noun. In English, bare nouns are possible; in fact our English native speaker controls allowed a significantly higher rate of null articles (both null Ds and null Num) than their French counterparts ($t(47)=-1.7150$, $p<.05$), demonstrating the contrasts between the two languages concerning the obligatoriness of articles. A two-sample *t*-test showed no significant difference between L3 group's L2 English and the controls with respect to null articles.

	Ungram null articles (total % out of all 18 test items)	**Specific definite context**	**Specific indefinite context**	**Non-specific indefinite context**	***Null Ds (% out of 12 spec def + spec indef test items)***	***Null Num (% out of 6 non-spec indefinite test items)***
L3 gp's Eng	12.23%	3.72%	4.87%	3.64%	*12.89%*	*10.92%*
***L3* gp's Fr**	2.83%	0.56%	1.33%	0.94%	*2.84%*	*2.82%*
***L2* gp's Fr**	30.67%	10.33%	9.26%	11.08%	*29.39%*	*33.24%*
Fr controls	2.05%	0.35%	0.47%	1.23%	*1.23%*	*3.69%*
Eng controls	8.81%	3.17%	2.12%	3.52%	*7.94%*	*10.56%*

Table 4.15

Mean rates of omission of articles in elicited written production task by contexts (Study V)

4.2.5.3 Grammaticality judgement and correction task on adjective placement

	French (L3)		English (L2)	
	U	G	U	G
L3 group (n=41)	33.84%	96.17%	98.78%	100%
L2 group (n=16)	67.97%	100%	-	-
French controls (n=22)	95.45%	98.70%	-	-
English controls (n=27)	-	-	99.07%	100%

Table 4.16

Mean percentages of correct responses in grammaticality judgement and correction task on adjective placement (Study V)

Regarding the results on the grammaticality judgement and correction task on adjective placement, Table 4.16 shows that L2 and L3 groups performed similarly well on the grammatical N-Adj items of the French task. A single-factor ANOVA found no significant difference amongst the L2 group, the L3 group and the French controls. However, the two experimental groups differed considerably in their performance on the ungrammatical items – the L2 group outperformed the L3 group significantly ($t(55)$=-3.4241, p<.0001) possibly owing to L1 Vietnamese transfer, although the accuracy rates of both groups were below our 75% criterion. On the other hand, the very low accuracy rate of the L3 group in detecting the ungrammaticality of Adj-N items may be attributed to transfer from L2 English (or L1 Chinese) (see below).

The L3 group's performance in the English task was native-like. No significant difference was found between this group and the English controls. As regards the effects of L2 English on L3 French, a paired two-sample t-test showed a highly significant difference ($t(40)$=21.0607, p<.0001) between the L3 group's performance on the ungrammatical items in French and in English. This may indicate that L2 transfer may be playing a role in L3 subjects' French initial state as far as adjective placement is concerned. However, one may also argue that the feature strength of Num is in fact variable in the L3 group's French initial state, since the L3 subjects appeared to be accepting both the grammatical N-Adj and the ungrammatical Adj-N items in the French task. We will return to the issue of variability in Chapter Five.

4.2.5.4 Picture identification task on Number ([±plural])

	French (L3/L2)			English (L2)		
	Singular	***Plural***	***Overall***	***Singular***	***Plural***	***Overall***
L3 group (n=41)	96.34%	98.78%	97.56%	98.17%	99.39%	98.78%
L2 group (n=16)	96.09%	53.53%	74.81%	-	-	-
French controls (n=22)	100%	98.86%	99.43%	-	-	-
English controls (n=27)	-	-	-	100%	100%	100%

Table 4.17

Mean percentages of correct responses in picture identification task on Number (Study V)

(Cases of article omission are excluded – see Table 4.18)

The next written task was a picture identification task on Number ([±plural]). As we observe from Table 4.17, both L2 and L3 groups performed native-like on the singular items in the picture identification task. A single-factor ANOVA showed no significant difference amongst the L2 group, the L3 group and the French controls. However, the accuracy rate of the plural items for the L2 group was far below our 75% criterion and significantly lower than the L3 group ($t(55)=9.196$, $p<.0001$) and the French controls ($t(36)=6.749$, $p<.0001$). These results may suggest that the L2 subjects were resorting to some "singular default" owing to L1 transfer, since [CL+N] sequences in Vietnamese normally have singular interpretation (unless a so-called plural classifier is used), as in Chinese, and the category Number is absent in their French interlanguage. As regards the L3 group, their performance was almost perfect in both the French and the English tasks. No significant difference was found between the L3 group and the controls in both languages, nor between the French and the English overall results of the L3 group.

Follow-up

4.2.5.5 Multiple choice task on [±definite] on D and projection of Num

	French (L3 / L2)			English (L2)		
	Definite	***Spec indef***	***Nonspec indef***	***Definite***	***Spec indef***	***Nonspec indef***
L3 group (n=44)	93.56%	89.05%	79.80%	99.29%	96.42%	95.40%
L2 group (n=12)	66.58%	53.83%	56.21%	-	-	-
French controls (n=30)	99.00%	99.33%	99.00%	-	-	-
English controls (n=31)	-	-	-	100%	99.35%	99.00%

Table 4.18

Mean percentages of correct responses in multiple choice task (Study V)

(Cases of article omission are excluded – see Table 4.19)

Table 4.18 presents the results of the multiple choice task on [±definite] on D and projection on Num. A two-factor ANOVA with repeated measures indicated a highly significant effect across groups ($F(2,83)=24.2648$, $p<.0001$) and article types ($F(2,83)=14.1757$, $p<.0001$) but no significant interaction. More specific analyses are as follows: as can be seen, the results of this task have some interesting contrasts with those obtained from the elicited oral and written production tasks reported above. First, the L3 group's performance on the definite article items in both the French and the English tasks was native-like. No significant difference was found between the L3 group and the two control groups in the respective languages. A paired two-sample *t*-test showed a marginally significant difference between the L3 group's French and English with respect to the definite article ($t(43)=-2.2292$, $p=.0481$). In addition, for both the L3 group and the L2 group, subjects performed better on the definite article than the indefinite articles; this diverges from the findings of both elicited oral and written production tasks, based on which a one-way "failure" of the [+definite] value has been posited. What is consistent with previous findings reported in this chapter is that the L2 group performed significantly poorer than the L3 group for all three types of articles (for specific definite, $t(54)=7.0558$, $p<.0001$; for specific indefinite, $t(54)=8.5143$, $p<.0001$; for non-specific indefinite, $t(54)=4.8512$, $p<.0001$). Moreover, the L2 group's accuracy rates on all test items were below our 75% criterion and significantly lower than those of the French controls (for specific definite, $t(40)=-10.2020$, $p<.0001$; for specific indefinite, $t(40)=-$

14.5326, $p<.0001$; for non-specific indefinite, $t(40)=-10.1655$, $p<.0001$). In sum, the results of this task suggest that the feature of [±definite] seems to be absent in the L2 group's French initial state; the same feature does not however seem to "fail" (uni-directionally) in the L3 group's French initial state nor English steady state.

As regards article omissions (see Table 4.19 below), the results also diverge from the elicited oral and written production tasks. Incidences of null articles are very low for L3 group's French and English and no significant difference was found with the respective control groups. As for the L2 group, the rate of null articles is still significantly higher than the L3 group ($t(54)=-5.1515$, $p<.0001$) as well as the French controls ($t(40)=-6.8454$, $p<.0001$), suggesting that the categories D and Num may indeed be not well in place in L2 group's French initial state.

	Ungram null articles (total % out of all 30 test items)	**Specific definite context**	**Specific indefinite context**	**Non-specific indefinite context**	***Null Ds (% out of 20 spec def + spec indef test items)***	***Null Num (% out of 10 non-spec indefinite test items)***
L3 gp's Eng	5.83%	0.78%	2.21%	2.84%	*4.49%*	*8.52%*
***L3* gp's Fr**	6.95%	2.24%	2.62%	2.09%	*7.29%*	*6.27%*
***L2* gp's Fr**	22.78%	7.92%	8.81%	6.05%	*25.10%*	*18.15%*
Fr controls	1.90%	0%	0%	1.90%	*0%*	*5.70%*[15]
Eng controls	0.87%	0%	0%	0.87%	*0%*	*2.61%*

Table 4.19

Mean percentages of null articles in multiple choice task by contexts (Study V)

[15] All cases of article omission amongst the French controls in the task were on item No.29: "Je ne connais personne qui veux devenir ___ chanteur professionel" where a null article was preferred to a non-specific indefinite article for a few native speakers. This has led to a slightly higher rate of null Num for the French control group.

4.2.5.6 Preference task on CL

	French (L3 / L2)			English (L2)		
	Demons	***Possess***	***Overall***	***Demons***	***Possess***	***Overall***
L3 group (n=44)	93.99%	93.29%	93.64%	96.31%	97.47%	96.89%
L2 group (n=12)	64.86%	61.70%	63.28%	-	-	-
French controls (n=12)	100%	100%	100%	-	-	-
English controls (n=11)[16]	-	-	-	96.36%	100%	98.18%

Table 4.20

Mean percentages of correct responses in preference task on CL (Study V)

Results on the preference task demonstrated that the L3 group do not retain the Chinese functional category CL in their French initial state nor the English steady state. No significant difference was found between the L3 group's performance in the French and English tasks, nor between the L3 group's French and English and the controls in both languages. However, as we can see from Table 4.20, the L2 group performed significantly poorer than the L3 group in the French task ($t(54)=-6.5234$, $p<.0001$). Their overall accuracy rate which is below our 75% criterion is also significantly lower than the French controls ($t(22)=-5.6109$, $p<.0001$). This suggests that the Vietnamese CL may still be present in the French initial state of the L2 group. In general, all subjects, experimental or control, performed similarly in both the demonstrative type and the possessive type of items.

4.2.6 Hypotheses and predictions revisited

Table 4.21 below summarizes the findings on L2 vs. L3 initial state with respect to the nominal functional domain:

[16] Only 12 (out of 30) of the French controls and 11 (out of 31) of the English controls completed this task owing to some timing problem in experimental design and control testing.

	D category	Num ([±plural])	[±definite]	CL category	f.s. of Num
L3 group's English steady state	✓	✓	✓	✗	weak
L3 group's French initial state	✓	✓	✓	✗	variable
L2 group's French initial state	✗	✗	✗	✓	(strong)*

Table 4.21

Summary of findings for L3 and L2 groups in French acquisition of the nominal functional domain (Study V)

Key: ✓ present or acquired in interlanguage; ✗ absent or "failed" in interlanguage

*related to f.s. of CL instead

L3 group (Cantonese-English bilinguals)

Results of this study point to partial transfer of the L2 steady state in the L3 initial state. We have shown in the various tasks in this study that the functional categories of D and Num are strongly established in L3 subjects' French (and English) interlanguage grammars and that the Chinese category of CL is no longer present. This argues against FFH which posits L1 transfer in any initial state, L2 or L3. The feature of [±definite] is, however, a bit tricky, since different experimental tasks yield different findings. Subjects' performance on [+definite] items in the elicited oral and written production tasks was short of native-like. It seems that there exists a one-way "failure" of the feature [±definite] in their French (and English – in written production) interlanguage grammars. On the other hand, the multiple choice task testing the same feature has demonstrated perfect performance amongst the subjects in both languages. The metalinguistic nature of the multiple choice task is debatable, as discussed earlier. Nonetheless, it also appears, as we pointed out in Study IV, that what is really subject to "failure" is performance in specific (i.e. production) tasks, not competence across-the-board or the abstract grammatical properties *per se*. What accounts for this one-way performance "failure" of the feature [±definite] awaits further research. See Prévost & White (2000a, 2000b) and White *et al.* (in submission) for a possible solution to similar problems related to tense/agreement and gender, based on Distributed Morphology. Finally, as regards the

feature strength of Num, results indicated that it may be variable in the L3 initial state (subjects accepted both *Adj-N and N-Adj orders in the grammaticality judgement task and produced both correctly- and incorrectly-placed nominal adjectives in the elicited oral production task). This echoes the findings of Study II in Chapter Three. We will return to the issue of variable feature strength in the Chapter Five. All in all, our results attest to partial L2 transfer rather than L1 transfer in the initial state of L3A, and appear to be inconsistent with FFH.

L2 group (Vietnamese monolinguals)

For the L2 group, our results strongly support full transfer from L1. The functional categories of D and Num as well as the formal feature of [±definite] were absent in the French interlanguage grammar of our subjects. In addition, the L1 Vietnamese category of CL and its feature strength was found to have transferred to L2 French initial state. Unlike Study II which suggested optionality of adverb placement, the results on adjective placement obtained in this study demonstrated that the L1 (surface) transfer effects are dominant, although subjects' performance on the ungrammatical items in the grammaticality judgement task was lower than expected. It may be due to the fact that French allows both pre-nominal and post-nominal adjectives,[17] and subjects might not have acquired this language-specific property, the knowledge of which was demanded in the grammaticality judgement task but not in the elicited oral production task; this might have led to the divergence in results of the two tasks. In a nutshell, full transfer is strongly supported by the findings on the L2 French group in the present study.

To sum up, we have strong evidence for full L1 (Vietnamese) transfer in the L2 French initial state, which both FFH and FTFA predicted. However, although transfer from L2 (English) is only partial in the L3 French initial state (feature strength seems to be variable), our findings do not seem to be compatible with FFH which predicts that L1 (Chinese) would constitute the L3 French initial state. What is most crucial is, nonetheless, that the demonstrated contrasts between the L2 and L3 initial states are very

[17] Bruce Anderson (personal communication, October 4th 2001 at PacSLRF, Hawai'i).

clear in this study. This, taken together with what we found in Study II of the last chapter, allows us to draw a strong conclusion that L2A and L3A are indeed different.

4.3 Study VI: Beyond the initial state in L3A (DP)

4.3.0 Introduction

In the previous sections of this chapter, we have examined the initial state to the steady state of L2A of English DPs (Study IV) and compared the L2 vs. L3 initial state in the acquisition of French DPs (Study V). This section reports our last study in this work – we will investigate the transitional and steady states of L3A in the nominal functional domain. As mentioned in earlier chapters, since FTFA and FFH make different predictions regarding the L2 end state, we are interested in testing their applicability in L3A, here, the case of French DPs.

4.3.1 Hypotheses and predictions

(I) L3 transitional state

1. FTFA predicts continuing presence of D, Num and [±definite] and the absence of Chinese CL in the French interlanguage. It also predicts significant improvement in subjects' adjective placement as the weak feature strength of Num in English can be reset to the strong value in target French.
2. FFH predicts no change over the course of L3 development. Hence, the D and Num categories and the [±definite] feature will continue to be absent from the L3 transitional state. The Chinese category CL and its weak feature strength will be retained in L3 interlanguage grammar as well.

(II) Towards L3 steady state

1. FTFA predicts a UG-constrained L3 steady state. It also predicts that a target-like French interlanguage grammar is possible, in which the functional categories of D and Num, the feature [±definite] as well as the strong feature strength of Num will be fully acquired.
2. FFH predicts all the transferred from L1 Chinese will "fail" permanently in the advanced group's L3 French interlanguage. In other words, transfer effects can never

be overridden. Thus, D, Num and [±definite] will be absent, and CL and its weak feature strength will be retained.

4.3.2 Participants

The present study comprises two parts, a main part and a follow-up. The two parts of the experiment were administered in two different years. Details of the experimental subjects in each part are as follows:

Main study

For the main study, a total of 40 Cantonese-English bilingual undergraduate students who were studying French at intermediate and advanced levels at the University of Hong Kong (HKU) were recruited and tested. Their average age at the time when the experiment was undertaken was 21.84. All the subjects' mother tongue is Cantonese; most of them can also speak some Mandarin. They are all advanced speakers of their L2 English (average proficiency score for the Michigan Placement Test was 72.17 out of 80). French is the third language for all of them. They all started learning French in Hong Kong (formal classroom setting in the university) as adults. Based on the Laval Placement Test results, 27 of the subjects were classified as intermediate French learners (average Laval score was 32.70 out of 54) and the remaining 13 advanced French learners (average Laval score was 44.67 out of 54).

Results on the 41 L3 French beginners in the main part of Study V will be recapitulated in the present study for comparison purposes. Single-factor ANOVAs indicated a highly significant difference across the three L3 French groups (beginners from Study V, as well as the intermediate and the advanced learners from the present study) with respect to their L3 French proficiency ($F(2,78)=253.2633$, $p<.0001$) but no significant difference was found across the three groups with respect to their L2 English proficiency ($F(2,78)=.1094$, $p=.8965$).

In addition, the two native control groups (22 native French and 27 native English speakers) used in the main part of Study V again served as controls for the main part of this study.

Follow-up

The same 40 Cantonese-English bilingual undergraduate students recruited and tested for Study III on tense and agreement took part in the follow-up of the present study as well. See Chapter Three Section 3.3.2 for details. In addition, results on the 44 L3 French beginners in the follow-up part of Study V will be recapitulated in the present study for comparative purposes, and the two native control groups (30 native French and 31 native English speakers) used in the follow-up part of Study V served as controls for the follow-up of this study.

Since the experiment was implemented in two different years on two different samples of subjects, we need to establish statistically that the subjects of both the main study and the follow-up were representative samples of the same L3 French population in the Hong Kong university setting. A two-sample *t*-tests indicated no significant difference between the intermediate L3 French learners of the main study and those of the follow-up with respect to their French proficiency ($t(55)=-.9832$, $p=.1649$), nor was the difference significant between the advanced L3 French learners ($t(21)=-.7139$, $p=.2416$). A single-factor ANOVA also showed no significant difference amongst these subjects with respect to their English proficiency ($F(3,76)=.0819$, $p=.9697$).

4.3.3 Experimental tasks and implementation procedures

All experimental subjects were tested on both the French and the English versions of all the six tasks, as in Study IV. Recall that in the main study, there were (i) an elicited oral production (picture description) task on D, [±definite] and adjective placement, (ii) an elicited written production task on [±definite] and Num, (iii) a grammaticality judgement and correction task on adjective placement, (iv) a picture identification task on Number ([±plural]); in the follow-up, (v) a multiple choice task on [±definite] and Num, (vi) a

preference task on CL. The experiment was carried out in precisely the same way as described in Study IV. See Section 4.3.3 above for details.

4.3.4 Results

Main study

4.3.4.1 Elicited oral production (picture description) task on D, [±definite] and adjective placement

Presence or absence of D

	L3 Beginner (n=41)		L3 Intermediate (n=27)		L3 Advanced (n=13)	
	French (L3)	***English(L2)***	***French (L3)***	***English(L2)***	***French (L3)***	***English(L2)***
Total no. obligatory contexts requiring articles	1619	2337	764	1172	330	585
Total no. NPs with an article supplied (filled Ds)	1478 (91.29%)	2189 (93.67%)	718 (93.98%)	1103 (94.11%)	311 (94.24%)	548 (93.68%)

Table 4.22

Correct suppliance of articles in obligatory contexts in elicited oral production task (Study VI)

As we can see from Table 4.22, all the L3 French learners were native-like with respect to the suppliance of articles in obligatory contexts in both the French task and the English task. Single-factor ANOVAs found no significant difference amongst the three experimental groups with respect to the rate of filled Ds in French nor in English. Paired two-sample *t*-tests showed a significant difference between subjects' rates of null Ds in the two languages for the L3 beginners ($t(40)=7.3937$, $p<.0001$) but not for the L3 intermediate learners nor the L3 advanced learners.

The feature [±definite]

	L3 Beginner (n=41)				L3 Intermediate (n=27)				L3 Advanced (n=13)			
	French (L3)		English (L2)		French (L3)		English (L2)		French (L3)		English (L2)	
	Def	*Indef*	*Def*	*Indef*	*Def*	*Indef*	*Def*	*Indef*	*Def*	*Indef*	*Def*	*Indef*
1.	316 58.6%	948 87.8%	571 80.3%	1487 91.5%	169 77.2%	506 92.8%	328 87.7%	737 92.4%	102 82.3%	195 94.7%	174 84.9%	351 92.3%
2.	210 39.0%	4 0.4%	123 17.3%	8 0.5%	39 17.8%	4 0.8%	36 9.6%	2 0.2%	17 13.7%	2 0.9%	26 12.7%	1 0.2%
3.	13 2.4%	128 11.9%	17 2.4%	131 8.1%	11 5.0%	35 6.4%	10 2.7%	59 7.4%	5 4.0%	9 4.4%	5 2.4%	28 7.5%
4.	539	1080	711	1626	219	545	374	798	124	206	205	380

Table 4.23

Correct vs. incorrect use of articles in elicited oral production task (Study VI)

Key: *Def* = definite contexts; *Indef* = indefinite contexts;

1. Correct use of articles; 2. Substitution errors; 3. Omission errors; 4. Obligatory contexts

Table 4.23 above shows that all three groups produced more indefinite articles than definite articles, both in French and in English. Paired *t*-tests found a significant difference between the rates of correct use in definite and indefinite contexts for the L3 intermediate group, both in French ($t(26)=-16.993$, $p<.0001$) and in English ($t(26)=-3.6959$, $p<.001$), as well as the for L3 advanced group, again both in French ($t(12)=-5.9765$, $p<.0001$) and in English ($t(12)=-5.3491$, $p<.0001$), although the rates of correct use of the definite article in all L3 groups' English are in fact rather high (i.e. over 80%).

With respect to the performance across French proficiency levels, single-factor ANOVAs indicated a significant improvement on the correct use of the definite article ($F(2,78)=70.9674$, $p<.0001$) and the correct use of the indefinite article ($F(2,78)=13.4150$, $p<.0001$) in French amongst the three groups of L3 learners. No significant difference was found, however, with respect to the correct use of the definite article and the correct use of the indefinite article in English.

As we can see from Table 4.23, most of the substitution errors in both languages involved definite contexts (i.e. indefinite articles substituting definite articles). As regards the omission of articles, in the French task, the error rate of the indefinite article is

significantly higher than the definite article for all the three experimental groups (for L3 beginners, $t(40)=-42.1767$, $p<.0001$; for L3 intermediate, $t(26)=-3.4316$, $p<.005$; for L3 advanced, $t(12)=-2.2454$, $p<.05$). Similarly, in the English production, the omission rate of the indefinite article is significantly higher than the definite article in all the three groups (for L3 beginners, $t(40)=-19.6146$, $p<.0001$; for L3 intermediate, $t(26)=-12.7436$, $p<.0001$; for L3 advanced, $t(12)=-9.1576$, $p<.0001$).

Adjective placement

	L3 Beginner (n=41)		**L3 Intermediate (n=27)**		**L3 Advanced (n=13)**	
	French (L3)	***English(L2)***	***French (L3)***	***English(L2)***	***French (L3)***	***English(L2)***
Total no. of NPs w/ adjectives	530	830	154	293	143	208
Total no. of NPs w/ correct adj placement	400 (75.19%)	830 (100%)	151 (98.05%)	292 (99.66%)	137 (95.80%)	206 (99.03%)

Table 4.24

Correct adjective placement in elicited oral production task (Study VI)

Finally, with respect to subjects' performance on the relative ordering of adjectives and nouns, significant improvement was observed in the L3 intermediate and L3 advanced learners whose performance was native-like ($F(2,78)=58.9617$, $p<.0001$). With respect to the English task, all subjects were native-like and only a marginally significant difference was found across all three experimental groups ($F(2,78)=3.1417$, $p=.0487$).

4.3.4.2 Elicited written production task on [±definite] on D and projection of Num

	French (L3 / L2)			English (L2)		
	Def	*Spec*	*Nonspec*	*Def*	*Spec*	*Nonspec*
L3 Beginners (n=41)	33.00%	81.26%	83.33%	47.02%	87.24%	94.56%
L3 Intermediate (n=27)	38.39%	68.27%	79.01%	40.93%	89.93%	93.22%
L3 Advanced (n=13)	61.11%	60.00%	66.67%	64.10%	72.22%	100%
French controls (n=22)	87.97%	95.45%	85.00%	-	-	-
English controls (n=27)	-	-	-	88.52%	97.96%	99.23%

Table 4.25

Mean percentages of correct responses in elicited written production task (Study VI)

(Cases of article omission are excluded – see Table 4.26)

Table 4.13 presents the results on the elicited written production task. As shown, amongst the three article types in French, for the L3 intermediate group, performance on the specific definite article was the worst. Significant improvement was observed in the L3 advanced group but still their performance was considerably short of native-like. A single-factor ANOVA indicated a highly significant difference amongst the experimental groups and the French controls with respect to the specific definite article ($F(3,99)=10.8719$, $p<.0001$). Post-hoc Scheffé tests also indicated highly significant differences amongst the learner groups ($p<.0001$). As for the two other article types, we observe that the L3 intermediate group performed significantly better on the specific and non-specific indefinite articles than the definite article. A single-factor ANOVA with repeated measures indicated a highly significant difference across article types for the L3 intermediate group ($F(2,25)=13.2422$, $p<.0001$). On the other hand, the overall performance pattern of the L3 advanced group was more even and a moderately significant difference across article types was found for this group ($F(2,11)=4.8923$, $p<.01$). However, for both indefinite article types, somewhat surprisingly, the L3 advanced group's performance was considerably poorer than the L3 beginners and the L3 intermediate. A highly significant difference was found amongst the learner groups for the specific indefinite article ($F(2,99)=8.4428$, $p<.0001$) but no significant difference was found for the non-specific indefinite article. Post-hoc Scheffé tests also indicated significant differences amongst the learner groups for the specific definite article ($p<.001$) but not for the non-specific article. It is unclear as to why the L3 advanced

learners would encounter greater difficulty with the specific indefinite and non-specific articles in the task.

Regarding the English results, similarly, both L3 intermediate and L3 advanced learners had the most difficulty with the definite article. A single-factor ANOVA showed a highly significant difference amongst all experimental groups and the English control group ($F(3,104)=8.7099$, $p<.0001$). Post-hoc Scheffé tests also indicated highly significant differences across learner groups ($p<.0001$). For the specific indefinite article, mysteriously, the L3 advanced group performed significantly poorer than the other two experimental groups as well as the controls. A single-factor ANOVA indicated a significant difference between experimental and control groups ($F(3,104)=4.1898$, $p<.01$) on the specific indefinite article while post-hoc Scheffé tests indicated mildly significant differences across all learner groups ($p<.05$). As regards the non-specific indefinite article, no significant difference was found amongst the experimental groups and the controls. Comparing subjects' French and English results, for the L3 intermediate group, paired two-sample *t*-tests indicated a significant difference with respect to the specific indefinite article ($t(26)=-2.8682$, $p<.005$) and the non-specific indefinite article ($t(26)=-1.9989$, $p<.05$) but not the definite article. For the L3 advanced group, again, a significant difference was found with respect to the specific indefinite article ($t(12)=-5.0370$, $p<.0005$) and the non-specific indefinite article ($t(12)=-8.8326$, $p<.0001$) but not the definite article.

Turning to the occurrences of inappropriate article omission (see Table 4.26 below), we observe that the rates of null articles were consistently low in the French task. No significant difference was found amongst all experimental groups and the French controls with respect to the rate of total article omissions However, the L3 beginner and L3 intermediate groups omitted quite a lot of articles (both D and Num) in the English task. Still, no significant difference was found amongst all experimental groups and the English controls with respect to the rate of total article omissions. Comparing null articles in subjects' French and English, paired two-sample *t*-tests indicated a highly significant

difference for the L3 intermediate group ($t(26)$=-3.7762, p<.0005) and for the L3 advanced group ($t(12)$=-5.6341, p<.0001).

	Ungram null articles (total % out of all 18 test items)	Specific definite context	Specific indefinite context	Non-specific indefinite context	*Null Ds (% out of 12 spec def + spec indef test items)*	*Null Num (% out of 6 non-spec indefinite test items)*
L3 Beg's Fr	2.83%	0.56%	1.33%	0.94%	*2.84%*	*2.82%*
L3 Beg's Eng	12.23%	3.72%	4.87%	3.64%	*12.89%*	*10.92%*
L3 Inter's Fr	3.41%	1.42%	0.85%	1.14%	*3.41%*	*3.42%*
L3 Inter's Eng	22.72%	5.31%	9.59%	7.82%	*22.35%*	*23.46%*
L3 Adv's Fr	0%	0%	0%	0%	*0%*	*0%*
L3 Adv's Eng	7.41%	0%	5.56%	1.85%	*8.34%*	*5.55%*
Fr controls	2.05%	0.35%	0.47%	1.23%	*1.23%*	*3.69%*
Eng controls	8.81%	3.17%	2.12%	3.52%	*7.94%*	*10.56%*

Table 4.26

Mean rates of omission of articles in elicited written production task by contexts (Study VI)

4.3.4.3 Grammaticality judgement and correction task on adjective placement

	French (L3)		English (L2)	
	U	G	U	G
L3 Beginner (n=41)	33.84%	96.17%	98.78%	100%
L3 Intermediate (n=27)	61.11%	97.35%	98.61%	100%
L3 Advanced (n=13)	87.50%	100%	91.67%	100%
French controls (n=22)	95.45%	98.70%	-	-
English controls (n=27)	-	-	99.07%	100%

Table 4.27

Mean percentages of correct responses in grammaticality judgement and correction task on adjective placement (Study VI)

Results on the grammaticality judgement and correction task on adjective placement is shown in Table 4.27. We observe considerable improvement by level. A single-factor ANOVA showed a highly significant difference across experimental and control groups for the ungrammatical adjective placement items (F(3,99)=28.3417, p<.001). Post-hoc Scheffé tests indicated that the differences amongst the learner groups were highly significant (p<.0001). As for the grammatical items, a single-factor ANOVA

found no significant difference amongst all the experimental groups and the French controls. Regarding the English task, subjects' performance was native-like, although the accuracy rate of the L3 advanced group on the ungrammatical items was slightly lower than expected. A single-factor ANOVA performed on the ungrammatical items indicated a significant difference across all learner groups and the control group ($F(3,104)=8.3417$, $p<.01$). Post-hoc Scheffé tests found no significant difference between the L3 beginner and the L3 intermediate groups and the English controls but a significant difference was found between the L3 advanced group and the English controls ($p<.01$). Comparing subjects' French and English, a two-factor ANOVA with repeated measures performed on the ungrammatical items indicated a highly significant effect of group ($F(2,160)=15.6898$, $p<.0001$) and a highly significant effect of language ($F(1,80)=34.7341$, $p<.0001$) but no significant interaction.

4.3.4.4 Picture identification task on Number ([±plural])

	French (L3 / L2)			English (L2)		
	Singular	***Plural***	***Overall***	***Singular***	***Plural***	***Overall***
L3 Beginner (n=41)	96.34%	98.78%	97.56%	98.17%	99.39%	98.78%
L3 Intermediate (n=27)	100%	96.12%	98.06%	99.02%	97.74%	98.38%
L3 Advanced (n=13)	100%	100%	100%	100%	100%	100%
French controls (n=22)	100%	98.86%	99.43%	-	-	-
English controls (n=27)	-	-	-	100%	100%	100%

Table 4.28

Mean percentages of correct responses in picture identification task on Number (Study VI)

As we observe from Table 4.28, subjects' performance on the picture identification task was perfect for both singular and plural items in both the French and the English versions. As far as the overall results are concerned, no significant difference was found amongst experimental groups and the controls in the French task nor in the English task nor between intermediate subjects' performance in French and in English. Subjects' performance was native-like across proficiency levels and across test languages.

Follow-up

4.3.4.5 Multiple choice task on [±definite] on D and projection of Num

	French (L3 / L2)			English (L2)		
	Def	***Spec***	***Nonspec***	***Def***	***Spec***	***Nonspec***
L3 Beginner (n=44)	93.56%	89.05%	79.80%	99.29%	96.42%	95.40%
L3 Intermediate (n=30)	97.09%	94.47%	90.89%	99.67%	99.67%	100%
L3 Advanced (n=10)	99.00%	92.00%	99.00%	100%	99.00%	99.00%
French controls (n=30)	99.00%	99.33%	99.00%	-	-	-
English controls (n=31)	-	-	-	100%	99.35%	99.00%

Table 4.29

Mean percentages of correct responses in multiple choice task (Study VI)

(Cases of article omission are excluded – see Table 4.30)

Turning to the multiple choice task, Table 4.29 indicates that L3 intermediate and L3 advanced learners performed very accurately across article types and across languages. With respect to the overall results, a significant difference was found amongst these two experimental groups and the controls in the French task ($F(2,67)=9.6159$, $p<.0001$) but not in the English task. Paired two-sample *t*-tests showed a significant difference between the French and English overall results for the L3 intermediate ($t(29)=-5.3611$, $p<.0001$) and for the L3 advanced ($t(9)=-2.5378$, $p<.05$).

As regards article omissions in the task (see Table 4.30 below), the percentages of null articles (both null Ds and null Num) are consistently low across all experimental groups. As far as the overall rate of null articles is concerned, a significant difference was found amongst the L3 intermediate, L3 advanced and the control groups in the French task ($F(2,67)=4.7384$, $p<.05$) and in the English task ($F(2,68)=12.6175$, $p<.0001$). Paired two-sample *t*-tests showed no significant difference between the French and English rates of null articles for the L3 intermediate group and for the L3 advanced group.

	Ungram null articles (total % out of all 30 test items)	Specific definite context	Specific indefinite context	Non-specific indefinite context	*Null Ds (% out of 20 spec def + spec indef test items)*	*Null Num (% out of 10 non-spec indefinite test items)*
L3 Beg's Fr	6.95%	2.24%	2.62%	2.09%	*7.29%*	*6.27%*
L3 Beg's Eng	5.83%	0.78%	2.21%	2.84%	*4.49%*	*8.52%*
L3 Inter's Fr	3.33%	0.67%	0.99%	1.67%	*2.49%*	*5.01%*
L3 Inter's Eng	4.56%	0%	1.82%	2.74%	*2.73%*	*8.22%*
L3 Adv's Fr	0.33%	0%	0%	0.33%	*0%*	*0.99%*
L3 Adv's Eng	2.67%	0%	0.93%	1.74%	*1.40%*	*5.22%*
Fr controls	1.90%	0%	0%	1.90%	*0%*	*5.70%*
Eng controls	0.87%	0%	0%	0.87%	*0%*	*2.61%*

Table 4.30

Mean percentages of null articles in multiple choice task by contexts (Study VI)

4.3.4.6 Preference task on CL

	French (L3 / L2)			English (L2)		
	Demons	***Possess***	***Overall***	***Demons***	***Possess***	***Overall***
L3 Beginner (n=44)	93.99%	93.29%	93.64%	96.31%	97.47%	96.89%
L3 Intermediate (n=30)	99.04%	100%	99.52%	98.66%	100%	99.33%
L3 Advanced (n=10)	100%	100%	100%	100%	100%	100%
French controls (n=12)	100%	100%	100%	-	-	-
English controls (n=11)[18]	-	-	-	96.36%	100%	98.18%

Table 4.31

Mean percentages of correct responses in preference task on CL (Study VI)

Results of the preference task on CL as shown in Table 3.21 demonstrate that all experimental subjects performed in a native-like manner. As far as the overall results are concerned, no significant difference was found amongst the L3 intermediate and L3 advanced groups as well as the controls in the French task nor in the English task. Paired two-sample *t*-tests also showed no significant difference between the French and English results of the intermediate group. It is quite clear from the findings of this task that the Chinese functional category of CL must be absent in subjects' French (and English) interlanguage grammars right from the outset of L3A.

[18] Only 12 (out of 30) of the French controls and 11 (out of 31) of the English controls completed this task owing to some timing problem in experimental design and control testing.

4.3.5 Hypotheses and predictions revisited

Our findings are not compatible with FFH. The rate of null articles is very low for both the L3 intermediate and the L3 advanced groups; this, together with subjects' perfect performance on the picture identification task on Num, provides strong evidence for the presence of the functional categories of D and Num in the French (and English) interlanguage grammars of our subjects. Furthermore, the Chinese functional category of CL is not present and correct adjective placement was attained, implicating new feature strength of Num in French. One tricky point regarding the findings of this study (as in Study IV and Study V) concerns results from the feature [±definite] which do not converge across experimental tasks. The elicited oral production task has shown that while L3 intermediate and advanced subjects were native-like in the production of articles in indefinite contexts in both French and English, the performance on definite contexts was less accurate. In addition, results of the elicited written production revealed that subjects still have quite a big problem, especially in definite contexts, in both French and English, and for the L3 advanced group, a mysteriously poor performance on all three types of articles in French was observed.. However, the results of the multiple choice task demonstrated the contrary – subjects' performance on all article types was native-like in the task. All these do not provide a strong case for "failed" features. In sum, the data are not totally compatible with FFH.

4.4 Chapter summary and conclusion

This chapter has shown that the nominal functional domain is generally acquirable in non-native language acquisition. Parameter resetting appears to be largely possible, and the results of the three studies in this chapter do not seem to be fully consistent with the FFH. Study IV investigated L2A of English DPs from the initial state to the steady state. Results supported full transfer of Chinese in the L2 initial state. In most of the tasks, significant improvement was observed amongst the intermediate learners, while advanced learners appeared to have attained native-like proficiency in most of the nominal properties concerned. This seems to be incompatible with the predictions of the FFH. Study V was a comparative study of L2 and L3 French initial states. In the L3 case, only partial transfer could be implicated; feature strength of Num was shown to be variable

(see Chapter Five for discussion). On the other hand, full transfer is strongly supported in the L2 case; all nominal features and feature strength transferred from Vietnamese to the French initial state. Besides, we observed a one-way problem of the feature [±definite] for our L3 group in the production tasks, and a two-way problem of the same feature for the L2 group across all tasks. This is strong testimony to Vietnamese transfer for the L2 group, but with the absence of Chinese CL in the (English and) French interlanguage grammars, the source of the one-way production problem for the L3 group was far from clear. Finally, Study VI looked at L3 French transitional and steady states. Again, in most of tasks, intermediate learners appeared to have improved significantly from the beginners and advanced learners' performance on most of the nominal properties seemed to be native-like. These results pose a problem for the FFH and point instead to the appropriateness of FTFA.

CHAPTER FIVE

General Discussion and Conclusion

5.0 Introduction

This chapter summarizes the findings of this work on L2A and L3A of the verbal and nominal functional domains presented in Chapter Three and Chapter Four and discusses their implications. We evaluate the extent to which the Failed Features Hypothesis and the Full Transfer Full Access model can (or fail to) capture some of the major facts concerning adult non-native language acquisition. We also address a number of interesting issues raised in our studies with respect to the functional module in interlanguage grammar. Finally, we examine the limitations of the present work and suggest possible directions for future research especially as far as L3A is concerned.

5.1 Summary of findings

The six experimental studies presented in this work have demonstrated that the verbal and nominal functional domains are generally acquirable in non-native language acquisition. There exist strong L1 transfer effects in Chinese speakers' English acquisition at the initial state but most features and feature strength that were absent in Chinese were shown to be acquirable in the L2 English steady state. These acquired features were found to transfer from the L2 English steady state to the L3 French initial state amongst the Chinese-English bilinguals; although feature strength (both verbal and nominal) was variable initially, it was, as in the case of other functional properties, ultimately acquirable towards the L3 French steady state. Similar initial state findings applied to the L2 French interlanguage of the Vietnamese monolinguals, that is, L1 features and nominal (but not verbal) feature strength transferred. It has been pointed out in previous chapters that the results on the verbal feature [±past] and the nominal feature [±definite] were slightly problematic and statements concerning their acquirability could not be totally conclusive. This bears important implications for the two competing L2 models that we invoked, to which we now turn.

5.2 Failed Features vs. Full Transfer Full Access in L*n*A

Before deciding between Failed Features and Full Transfer Full Access, a crucial question that we must first address with respect to the overall work is the following: to what extent can we equate surface morphology with abstract underlying syntactic representation in non-native language acquisition? Recall that the core issue in this thesis is the status of formal features and related properties (functional categories, feature strength) in interlanguage grammar. In principle, two types of evidence, i.e. both morphological and syntactic, are required to attest the acquirability of the functional domain in L*n*A. As one might have observed, our work deals primarily with morphology rather than syntax. The strongest evidence comes from data on morphology, with syntactic evidence serving some supplementary corroborating role. Most of the tasks were also designed to test (surface) morphology only (which may be considered a limitation of this work, see Section 5.5 below).

How then can our findings on surface morphology shed light on underlying representation (i.e. presence vs. absence of features)? There are two sides to the question. First, as hotly debated in the L2 field in the last couple of years, it is highly controversial as to whether defective morphology implies defective syntax. According to Lardiere (1998a, 1998b), Prévost & White (2000a, 2000b) and those in the "full access" or "no impairment" camp, the answer is negative. To these researchers, it is a problem with "mapping" underlying features to surface form if learners exhibit difficulty with overt morphology. More interestingly, and in fact more pertinent to our results is, however, the other side of the issue which is seldom addressed to in the literature, that is, whether perfect morphology entails perfect syntax. According to Wong & Hawkins (2000), the answer is "not necessarily". Wong & Hawkins found that their L1 Malay L2 English subjects have acquired the surface morphology related to *wh*-argument questions of the target language but not the more abstract syntactic properties. It thus appears that there exists rather strong evidence for the dissociation between overt morphology and underlying syntactic representation in interlanguage grammar, no matter whether morphology is defective or not.

As pointed out in Section 1.1.2.2 in Chapter One, our position diverges from the two competing camps which both argue for some dissociation between morphology and syntax. Recall that we subscribe to the approach of "morphology-before-syntax", which contends that acquisition of surface morphology drives abstract syntax in language acquisition. We therefore maintain that overt morphology and abstract syntax are closely linked, and that the instantiation of abstract functional properties is triggered and/or motivated by the acquisition of relevant surface morphology. To us then, correct morphology implicates the presence of the relevant morpho-syntactic features (i.e. correct surface morphology entails correct abstract morphology) in interlanguage grammars, provided we can show that the correct morphology does not result from mere learning

Yet, there indeed exist other possible explanations of our data. As pointed out above, one may argue that correct morphology is simply a result of learning the paradigms (see Herschenson 2000; Gess & Herschenson 2001; see also White 2003 Ch.6). Notice that the learning argument requires evidence that there is a high rate of morphological errors at the initial state and gradual improvement in the course of interlanguage development as learning proceeds. Our results on tense and agreement in L3 French (Study II) suggested that this is unlikely, since even beginners have native-like performance in almost all of the tasks on the various functional properties in question. Therefore, it appears that our subjects' perfect performance on morphology of both verbal and nominal functional domains shows that the features (and feature strength) concerned have indeed been acquired, as least as far as L3 French is concerned. This points to full access in the L*n* steady state, although as mentioned in Chapter Three, the factor of explicit classroom instruction cannot be ignored. What is crucial here is that none of the features or feature strength appear to have "failed" in the L2 and L3 steady states. Therefore the conclusion we have to draw from the findings of this work is that FTFA seems to be a more viable theory for non-native language acquisition, at least as far as the verbal and nominal functional domains are concerned.

5.3 The functional module in interlanguage grammar: some interesting issues

This section presents a few interesting issues and residual problems raised in our studies concerning the functional module in L2/L3/L*n* interlanguage grammar. These include the status of old L1 functional categories, the nature of variable feature strength, reverse transfer and attrition in L3A as well as the benefits of acquiring a feature a third time around.

5.3.1 Status of L1 functional categories in L2 interlanguage

One of the interesting questions that arises in our studies concerns whether old, inapplicable L1 functional categories would be discarded or whether they would remain in L2 interlanguage grammar as new, relevant L2 functional categories gradually develop. Take the Chinese AspP of the verbal functional domain in Study I. Would it be dispensed with in the L2 grammar as soon as the English TP emerges? If Chinese AspP was retained in interlanguage grammar, then the source of correct nominative Case in later stages of L2 English development would pose a tricky problem for us. The question becomes even more interesting if one considers AspP (or its variations, e.g. PerfP, ProgP; or $Asp_{habitual}$, $Asp_{completive}$ etc.) as a possible functional category in English as well (cf. for instance Cinque 1999; Radford 1997, p.103). One way to approach the problem would be to examine the interaction of tense and aspect in English and compare this with Chinese aspect which is the only syntactic device to mark temporality (aside from adverbials which are lexical) in the language, and then formulate some experimental task that could capture the cross-linguistic differences found syntactically or semantically. Word order may be a good candidate to investigate contrasts on the syntactic level, for instance, the position of negation and temporal adverbs relative to the aspectual marker and the verb. Our results on the nominal functional domain in Study IV might shed some light on the issue: assuming that Chinese noun phrases are CL(assifier)Ps and that D(eterminer) is absent in the language, it was found that CL as a Chinese category no longer exists in L2 English interlanguage by the time D emerges. It appears so far that old L1 functional categories will be discarded with the emergence of new L2 functional categories. Further evidence is necessary to support such a claim. This is clearly something that is worth pursuing in future research.

5.3.2 *Parameter setting vs. resetting: Variable vs. transferred feature strength in Ln initial state*

Recall from Study II that the verbal feature strength of T appeared to be variable in both the L2 and L3 initial states. This diverges from the results on adverb placement in Study I. The difference between Study I and Study II was that in Study I (L1 Chinese L2 English) T is a new functional category in L2 interlanguage, and the feature strength of T has not been instantiated in L1 Chinese. Thus the acquisition of adverb placement in English involved *setting* the feature strength of T, and we found that learners had no problem with this acquisition task – the feature strength of T was successfully set to weak, which is the target value of English and no variability was found (however, we had nothing to say about the initial state because adverb placement facts in Chinese and English are similar and the T category was only projected in L2 transitional states). On the other hand, in Study II, Vietnamese learners as well as Cantonese-English bilingual learners of French were to *reset* the existing feature strength of T to a new value – from weak to strong. Notice that the feature strength of T has been instantiated in L2 group's L1 Vietnamese, as well as L3 group's L2 English, which constitute the source of transfer in each group respectively.

In the nominal functional domain, variability of feature strength of Num in French interlanguage only holds for the Cantonese-English bilinguals but not the Vietnamese monolinguals (Study V). Feature strength of Num also seems to have transferred from L1 Chinese into L2 English interlanguage (Study IV). This is not inconsistent with the results obtained on the verbal functional domain. In the cases of L1 Chinese/L2 English as well as L1 Vietnamese/L2 French, the subjects' task was to *set* the feature strength of Num and no variability was found. For the Cantonese-English bilingual learners of French, however, the feature strength of Num has been instantiated in L2 English; acquiring L3 French involves *resetting* the existing weak value of feature strength of Num to the strong value. Variability is thus predicted.[1]

[1] Regarding the issue of group variability vs. individual variability, it should be pointed out that the group results reported in the experimental studies of this work reflect genuine variability. In other words, the high degree of variability found is not attributable to some peculiar performance of particular subjects.

Our results showed that in the L3 initial state (and in the case of the verbal functional domain, L2 initial state as well), there exists a stage where two word orders are accepted/produced, suggesting that the value of an existing feature strength is variable, i.e. neither weak nor strong. We speculate that this is the result of competition between L1 transfer and L2 input. Take our the Vietnamese monolingual learners of French in Study II as an example. L1 transfer suggests that the feature strength of T should be weak, while input from L2 French suggests that it should be strong. Suppose learners' L2 initial state is their L1 grammar. They have initial hypotheses about L2 French based on L1 properties, but at the same time they have to form new hypotheses in response to the L2 input they receive. Conflicting signals sent by input and transfer effects may thus lead to variability. This proposal to some extent echoes Herschensohn (1998)'s Constructionist Model (i.e. her stage (b), whereby the L1 value is being unset while L2 features are underspecified). It appears that there exists a stage in L2A where L1 categories or features are being abandoned (or values unset),[2] and then the same features which are relevant to the target L2 are re-constructed in learners' interlanguage grammar. Our conjecture is that it is this re-construction process that has led to variability of feature strength found in this work.[3]

The problem here is the existence of variability in some groups of L2 (L3) learners but not others. Thus, an important question remains: in cases where the feature strength has never been instantiated in an L1, why is no variability observed? Our conjecture is that if there is no competition or conflict between transfer and input, the phenomenon of variability may not appear, whether it is parameter *setting* (i.e. construction of categories or features) or *resetting* (i.e. *re*-construction). Furthermore, if new categories or features are not underspecified during the construction or re-

[2] This is related to the status of old L1 functional categories in L2 interlanguage grammar. See Section 5.3.1 immediately above.

[3] Note however that according to Herschensohn (1998), variability is the result of a stage of underspecification of features or categories; this argument is in the same spirit as Eubank (1993/1994; 1994)'s valueless features or "inert" feature strength. Nevertheless, as Robertson & Sorace (1998) and Schwartz (1998) pointed out, under the Minimalist Program, if features are "inert", universal principles of economy should lead L2 learners to always prefer non-movement and *not* optional movement. See also Platzack (1996) for a similar observation.

construction stage (i.e. if parameter setting or resetting occurs fast enough owing to, for instance, an abundance of input), variability may just not occur at all.

Therefore, it seems that there are four possible scenarios for the acquisition of feature strength in the L2 initial state:

(i) Setting a new L2 feature strength never instantiated in L1, but where surface facts in L1 coincide with the new L2 value (e.g. L1 Chinese L2 English adverb placement – see Study I; L1 Chinese L2 English adjective placement – see Study IV; L1 Vietnamese L2 French adjective placement – see Study V).
Prediction: no variability

(ii) Resetting an existing feature strength to a new value in L2 (e.g. L1 Vietnamese L2 French adverb placement – see Study II; L2 English L3 French adverb and adjective placement – see Studies II and V).
Prediction: variability

(iii) Setting a new L2 feature strength never instantiated in L1, and surface facts are opposite to the new L2 value (e.g. L1 French L2 Chinese adverb placement – cf. Yuan 2001 (note though that he has different theoretical assumptions for Chinese and that he does not find variability)).
Prediction: variability(?)

(iv) Maintaining the same value of an existing feature strength in L2 (e.g. L1 Vietnamese L2 English adverb placement).
Prediction: no variability

Hence, from what we have just seen, the issue of feature strength in interlanguage grammar is much more complex than what we had expected or how it has been treated in the literature to date. It would thus be a very interesting topic to pursue independently, in

L2A or non-native language acquisition in general. As far as the feature strength of T is concerned, one should also look at properties other than adverb placement, such as negation and question formation (e.g. White 1992; see Yuan 2002) which may shed more light on the issue of variable feature strength in L*n*A.

5.3.3 Reverse transfer and L2 attrition in L3A

Another interesting finding of this work is that, while we have shown that feature strength can be successfully reset at the L3 steady state, a correctly set feature strength can be susceptible to attrition in the L2 steady state owing to influence from an L3 (Study III). We have posited all along that in the L3 initial state, L2 transfer plays an important role. It turns out that in the L3 steady state, reverse transfer from L3 to the L2 steady state is equally prominent. Results on the preference task on adverb placement in Chapter Three (Section 3.3.4.4) have shed some light on the issue. We observed a very interesting trend whereby the rise of L3 proficiency level and accuracy rate in adverb placement in French is accompanied by a significant drop of L2 performance (together with a heightened degree of variability) of adverb placement in English. If we compare the advanced L2 English learners (who do not speak any L3) in Study I and also the advanced L2 English learners who are L3 French beginners (Study II) with those advanced L2 English learners who are also advanced L3 French learners (Study III), we find that effects of the acquisition of an additional language may not be exclusively beneficial. While it may be easier to acquire a similar property in a new language (for instance [±past] in L3 French, see below) if one knows more (typologically-related) languages, the new language being acquired may pose some adverse effects on those previously acquired languages with contrasting linguistic properties, leading to attrition (see Sorace 2000; Gürel 2002). Therefore, it appears that L3A can be a useful tool to look at attrition as well, given relevant contrasts between the source/target languages concerned (see Cohen 1989 for an attrition case of two L1 English/L2 Hebrew/L3 Portuguese speakers). In fact, L3A can be particularly relevant for attrition research, in a way similar to bilingual L1A cases in L1 acquisition research (see for instance Paradis & Genesee 1997) by providing paired samples of subjects (i.e. subjects who are "matched pairs" of their own) and reducing inter-subject variation and other situational factors. It

would be even more interesting to investigate in our L3 case whether there are any attrition effects on subjects' L1 Chinese as well.

5.3.4 Acquiring formal features a third time around

Finally, the differential degrees of success in the acquisition of the feature [±past] in L2 English and L3 French steady state grammars are rather intriguing. Results of the elicited written production task in Study III showed that all subjects irrespective of L3 proficiency level performed slightly better in French than in English. As regards the preference task in the same study, the accuracy rate of [±past] items of advanced L3 French learners was significantly higher in the French task (93%) than in the English task (85%). We have discussed in Study I that there appears to exist a subtle problem even for advanced L2 learners with respect the English [±past] owing to semantics and/or interaction with aspect. It appears the French [±past] did not seem to pose the same problem for our subjects. One reason may be that French has a different tense/aspect system from that of English and the problem related to the English [±past] is thus not generalizable to the French case. In the preference task of Study III, test items on the French [±past] were exclusively in the *passé composé* form (indicating simple past),[4] and in the elicited written production task, subjects mostly used *passé composé* (as opposed to *passé simple* or the *imparfait*) to denote past events. We have speculated in Chapter Three that aspect is acquired before tense in L2 interlanguage grammar. Moreover, the perfect form in French (and Romance languages) has been shown to emerge much earlier in L2 interlanguage grammar than the *imparfait* (see Bardovi-Harlig 2000, p.116 and the studies cited therein) and what we found appears to be consistent with the L2 literature to date. What puzzles us, however, is that the results on the French finiteness items in the same preference task indicated that subjects still had some problem with past participles

[4] It has been suggested that the French *passé simple* (simple past or preterite form) and *passé composé* (periphrastic perfect) are free variants depending solely on stylistic factors (see for instance Comrie 1976, C. S. Smith 1997) and according to some, the latter would soon replace the former in colloquial French (see Binnick 1991, p.30). Giorgi & Pianesi (1997) did not agree with such a view and proposed a (syntactic-) semantic account for the distribution of the two tenses in Romance. What concerns us more here is that, *passé composé* (as opposed to *passé simple*) is the (simple past) form that occurs most frequently in the input and we thus take the acquisition of *passé composé* to represent the acquisition of the past/non-past distinction in French as far as this work is concerned.

even at advanced stages, contra the results found in Study I on English past participles. This also does not converge with subjects' near-native performance on the past/non-past distinction represented by the perfect tense in French, if one considers the acquisition of the past participle to be one indicator of the acquisition of the perfect tense. Nonetheless, despite all speculations, a more simple reason for the perfect performance on the French [±past] might be that the third time around is always better than the second time around – our subjects might have been more sensitive to a past/non-past distinction in a new language given that they had already gone through the acquisition of an L2 requiring such a distinction and the learning task was simply easier for the acquisition of any L3, irrespective of the role of aspect and its interaction with tense in the target language. Nonetheless, our work also demonstrates that acquiring the nominal functional domain a third time around does not seem to differ too much from acquiring it in a previous language the second time (Study VI) (see for instance the results on [±definite]). One reason might be that French and English are more similar (both structurally and pragmatically) with respect to definiteness/specificity (in terms of overt determiners) than to tense/aspect. Future work could look at other features (e.g. mood in the verbal domain, count/mass distinction in the nominal domain) and compare L2 and L3 differential rates of success in this respect.

5.4 Limitations and prospects

As pointed out in various places throughout the thesis, a major weakness of the present work concerns methodology. Ideally, to offset the metalinguistic task effects, we would need some on-line and comprehension/interpretation tasks which would be more reliable in tapping interlanguage competence. This is true particularly for the nominal feature [±definite] on which the results were very mixed (see Chapter Four). We would also need more syntactic evidence to establish the presence of functional categories and formal features in L*n* underlying representations in addition to (surface) morphological evidence. Moreover, aside from the issues that were raised in Section 5.3 above that might be worth pursuing in future research, as pointed out in Chapter Three, it might be interesting to conduct an experimental task to target specifically finiteness markers other than lexical verbs such as modals and auxiliaries, perhaps in conjunction with aspect and

mood/modality and see how finiteness/tense interact with these two relatively less-studied properties. An oral production task (elicited or spontaneous) may also be useful to look more closely at finiteness/agreement/past tense morphology in L2 interlanguage – it would be particularly interesting to examine the extent to which its results converge with those that were being reported in the monolingual or bilingual L1/L2 literature to date (largely spontaneous oral production data) and also those that we already obtained from the elicited written production task and the preference task in Studies I, II and III. Future work from the Failed Features perspective should also benefit from oral production data that might offer a different picture of the L2/L3 cases at hand.

As far as L3A is concerned, our specific case of L1 Chinese-L2 English-L3 French could be made stronger by having a group of monolingual Chinese learners of French as controls. This would be possible given enough time and resources to locate and test subjects in various places in Mainland China and in France. In addition, this work has looked at the morphosyntactic aspect of L3 interlanguage, i.e. the verbal and nominal functional domains. Another aspect worth investigating is also functional but more pragmatic in nature, such as topics/topicalization (the clausal domain) where Chinese and French share similar facts – see for instance Hendriks (2000) for an interesting study on topic marking in child L1 Chinese and L1 French as well as adult Chinese speakers' L2 French. Most certainly, from a global point of view, the field also needs L3 cases that involve various language combinations (i.e. L1=L2 type vs. L2=L3 type vs. L1=L3 type)[5] before a comprehensive theory of L3A particularly one with a special emphasis on the role of transfer can be advanced.

5.5 Final conclusion

To conclude the whole thesis, we have seen that the goals set out at the outset of this work have been largely fulfilled. The thesis has contributed original data to both the verbal and nominal functional domains in non-native language acquisition from the same

[5] The "=" sign stands for "sharing the same property in question". Our case falls into the second type, i.e. L2=L3 (English=French) with respect to the verbal and nominal functional domains, so does Vinnitskaya, Flynn, Foley (2002) on L1 Kazakh-L2 Russian-L3 English relative clauses. Lozano (2002) deals with the third type, i.e. L1=L3 (Greek=Spanish) in his investigation of the *pro*-drop parameter in L3A.

L2/L3 population. It has also successfully demonstrated that L3A is different from L2A in some interesting ways. We hope that this work has achieved the important mission of calling for attention from researchers in the mother field of (theoretical) second language acquisition to the study of L3s. It is our wish that people will no longer dismiss L3A as merely another case of L2A and neglect the fact that L3s require and indeed are worth serious independent treatment. It must be stressed once again that L3A is a potentially very challenging and exciting field to pursue in its own right.

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APPENDIX A

T&Agr – Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

(adapted from Herschensohn 1998)

English version

1. Eat / an / apple
   Martin: 7 times / week

   Martin.....apple.

2. Go / out / to / dinner
   You: 0 time / month

   You.....dinner.

3. Drink / orange / juice
   I: 20 times / week

   I.....juice.

4. Go / to / the / cinema
   Jane: 3 times / month

   Jane.....cinema.

5. Listen / to / the / radio
   We: 6 times / month

   We.....radio.

6. Hang / out / with / friends
   Marc and Pete: 15 times / month

   Marc and Pete.....friends.

7. Fall / sick
Arnold: 0 time / year

Arnold.....sick.

8. Play / the / piano
Monica: 7 times / week

Monica.....piano.

9. Write / letters / to / friends
You: 0 time / year

You.....friends.

10. Read / a / book
Jeff: 1 time / week

Jeff.....book.

11. Visit / our / grandparents
We: 1 time / month

We..... grandparents.

12. Study / in / the / library
Christine: 8 times / month

Christine.....library.

APPENDIX B

T&Agr – Elicited written production task II: Sentence completion on adverb placement and agreement/finiteness

(adapted from Herschensohn 1998)

French version

1. Sortir / avec / des / amis
   Vous: 1 fois / mois

   Vous.....amis.

2. Boire / du / lait
   Je: 20 fois / semaine

   Je.....lait.

3. Aller / au / cinéma
   Marc et Pierre: 3 fois / mois

   Marc et Pierre.....cinéma.

4. Ecouter / la / radio
   Nous: 6 fois / mois

   Nous.....radio.

5. Venir / au / centre / ville
   Martin et Bruno: 7 fois / semaine

   Martin et Bruno.....ville.

6. Utiliser / l'ordinateur
   Nous: 15 fois / mois

   Nous.....l'ordinateur.

7. Recevoir / de / cadeaux
Je: 0 fois / an

Je.....cadeaux.

8. Avoir / des / cours / de / piano
Vous: 7 fois / semaine

Vous.....piano.

9. Ecrire / de / lettres / aux / amis
Jeanette et Florence: 0 fois / an

Jeanette et Florence.....amis.

10. Lire / des / livres
Je: 1 fois / semaine

Je.....livre.

11. Rendre / visite / à / nos / parents
Nous: 1 fois / mois

Nous..... parents.

12. Perdre / des / documents
Vous: 8 fois / mois

Vous.....documents.

APPENDIX C

T&Agr – Grammaticality preference task I on nominative Case, finiteness, agreement and [±past]

English version

Nominative Case

1. (a) The workers fear that them may lose their jobs.
   (b) The workers fear that they may lose their jobs.

2. (a) The soldiers hope that they can go back home soon.
   (b) The soldiers hope that them can go back home soon.

3. (a) My students think that them will pass the exam.
   (b) My students think that they will pass the exam.

4. (a) My parents hope that they will see me again soon.
   (b) My parents hope that them will see me again soon.

5. (a) My brother thinks that him can come visit me next week.
   (b) My brother thinks that he can come visit me next week.

6. (a) The worker hopes that he can earn more money.
   (b) The worker hopes that him can earn more money.

7. (a) The soldier believes that him will not die.
   (b) The soldier believes that he will not die.

8. (a) My father thinks that he will retire soon.
   (b) My father thinks that him will retire soon.

9. (a) My sister thinks that she can open a restaurant.
   (b) My sister thinks that her can open a food shop.

10. (a) The girl believes that her will enjoy the Japanese class.
    (b) The girl believes that she will enjoy the Japanese class.

11. (a) The student hopes that she will get a new computer.
    (b) The student hopes that her will get a new computer.

12. (a) My mother believes that her will get well soon.
    (b) My mother believes that she will get well soon.

Finiteness, agreement, [±past]

Type I: Finiteness ([±tensed])

A. Present participle/gerund

1. (a) He meets many interesting people every day.
   (b) He meeting many interesting people every day.

2. (a) Every student coaching a sports class in their final year.
   (b) Every student coaches a sports class in their final year.

3. (a) She usually comes to school by bus.
   (b) She usually coming to school by bus.

4. (a) I always telling my daughter not to watch too much TV.
   (b) I always tell my daughter not to watch too much TV.

5. (a) She never talks when she eats.
   (b) She never talks when she eating.

6. (a) Calvin listening to music every night.
   (b) Calvin listens to music every night.

B. Irregular past participles

7. (a) Every summer she taken Yoga with me.
   (b) Every summer she takes Yoga with me.

8. (a) Samuel writes to David once in a while.
   (b) Samuel written to David once in a while.

9. (a) Violet goes on a trip every month.
   (b) Violet gone on a trip every month.

10. (a) I forgotten unhappy things easily.
    (b) I forget unhappy things easily.

11. (a) We go to school by bus every day.
    (b) We gone to school by bus every day.

12. (a) They show their works to their art teacher every now and then.
    (b) They shown their works to their art teacher every now and then.

Type II: Agreement (Phi-features – person and number)

A. No –s on 3rd person singular

1. (a) Thomas eats a lot of fruits and vegetables every day.
   (c) Thomas eat a lot of fruits and vegetables every day.

2. (a) Martin love listening to music and writing songs.
   (b) Martin loves listening to music and writing songs.

3. (a) Monica use milk to wash her face twice a day.
   (b) Monica uses milk to wash her face twice a day.

B. –s on 3rd person plural

4. (a) Athletes drink more water than other people do.
   (b) Athletes drinks more water than other people do.

5. (a) New-born babies sleeps almost 24 hours a day.
   (b) New-born babies sleep almost 24 hours a day.

6. (a) Many young people work out in this gym.
   (b) Many young people works out in this gym.

C. –s on 1st person singular

7. (a) Every night I prepares dinner for myself.
   (b) Every night I prepare dinner for myself.

8. (a) I feel tired all the time these days.
   (b) I feels tired all the time these days.

9. (a) I gives my parents a call whenever I have time.
   (b) I give my parents a call whenever I have time.

D. –s on 1st person plural

10. (a) Lily and I shares a lot of interests.
    (b) Lily and I share a lot of interests.

11. (a) Normally we hangs out together in the weekends.
    (b) Normally we hang out together in the weekends.

12. (a) My parents and I go on a trip every summer.
(b) My parents and I goes on a trip every summer.

Type III: [±past]

A. [+past]

1. (a) My brother and his wife visited my uncle in Vancouver last summer.
(b) My brother and his wife visit my uncle in Vancouver last summer.

2. (a) Yesterday I meet John on campus and we went to lunch together.
(b) Yesterday I met John on campus and we went to lunch together.

3. (a) We sent a parcel to our parents last month for their anniversary.
(b) We send a parcel to our parents last month for their anniversary.

4. (a) After studying for the whole week, Tom decided to take a break yesterday.
(b) After studying for the whole week, Tom decides to take a break yesterday.

5. (a) Alicia told us that she has a lot of fun at the party last night.
(b) Alicia told us that she had a lot of fun at the party last night.

6. (a) Suzanne was cooking dinner when her friend arrived.
(b) Suzanne was cooking dinner when her friend arrives.

B. [-past]

7. (a) Whenever he has any doubts about life, he talked to the pastor of his church.
(b) Whenever he has any doubts about life, he talks to the pastor of his church.

8. (a) A lot of people practise Yoga these days.
(b) A lot of people practised Yoga these days.

9. (a) If I finished my homework this afternoon, I will join you at the concert.
(b) If I finish my homework this afternoon, I will join you at the concert.

10. (a) The house that I am now living in faced north. That is why it is always very cold inside.
(b) The house that I am now living in faces north. That is why it is always very cold inside.

11. (a) We will go out to play hockey when the rain stops.
(b) We will go out to play hockey when the rain stopped.

12. (a) Elaine will be much happier after she gets married.
(b) Elaine will be much happier after she got married.

DISTRACTORS ("both right" or "both wrong")

"Both wrong"

1. (a) The woman not is jumping into the water.
(b) The woman is jumping into the water not.

2. (a) The sunlight not falls into the kitchen.
(b) The sunlight falls not into the kitchen.

3. (a) The man has taken his son to the doctor not.
(b) The man not has taken his son to the doctor.

4. (a) My brother not has driven to the new theatre.
(b) My brother has driven to the theatre new not.

5. (a) Not he has given the shirt to his son.
(b) He has given the shirt to his son not.

6. (a) The waiter has broken the glasses on the tray not.
(b) Not the waiter has broken the glasses on the tray.

"Both right"

7. (a) I will be leaving for Korea with my boyfriend next week.
(b) Next week, I will be leaving for Korea with my boyfriend.

8. (a) According to Anna, Jim can speak many languages.
(b) Jim can speak many languages according to Anna.

9. (a) For his birthday, I think I am going to give him a tie.
(b) I think I am going to give him a tie for his birthday.

10. (a) Yesterday, Martin and I went to see a horror movie.
(b) Martin and I went to see a horror movie yesterday.

11. (a) Everyone in the class passed the exam, according to the professor.
(b) According to the professor, everyone in the class passed the exam.

12. (a) She is going to tell him the whole story tomorrow.
(b) Tomorrow she is going to tell him the whole story.

APPENDIX D

T&Agr – Grammaticality preference task I on nominative Case, finiteness, agreement and [±past]

French version

Nominative Case

1. (a) J'espère qu'ils vont réussir à l'examen.
   (b) J'espère que les vont réussir à l'examen.

2. (a) Les soldats pensent que les peuvent retourner chez eux bientôt.
   (b) Les soldats pensent qu'ils peuvent retourner chez eux bientôt.

3. (a) Mes parents croient qu'ils vont me revoir demain.
   (b) Mes parents croient que les vont me revoir demain.

4. (a) Mes soeurs sont sûres que les vont gagner le concours.
   (b) Mes soeurs sont sûres qu'elles vont gagner le concours.

5. (a) Les filles pensent qu'elles vont aimer le cours de français.
   (b) Les filles pensent que les vont aimer le cours de français.

6. (a) Mes tantes croient que les peuvent me rendre visite la semaine prochaine.
   (b) Mes tantes croient qu'elles peuvent me rendre visite la semaine prochaine.

7. (a) L'homme m'a dit qu'il veut gagner plus d'argent.
   (b) L'homme m'a dit que le veut gagner plus d'argent.

8. (a) Le soldat croît que le ne va pas mourir.
   (b) Le soldat croît qu'il ne va pas mourir.

9. (a) Mon père pense qu'il va prendre sa retraite bientôt.
   (b) Mon père pense que le va prendre sa retraite bientôt.

10. (a) Ma soeur m'a dit que la veut ouvrir un restaurant.
    (b) Ma soeur m'a dit qu'elle veut ouvrir un restaurant.

11. (a) L'étudiante pense qu'elle va acheter un nouvel ordinateur.
    (b) L'étudiante pense que la va acheter un nouvel ordinateur.

12. (a) Ma mère croit que la va se remettre vite.
    (b) Ma mère croit qu'elle va se remettre vite.

Finiteness, agreement, [±past]

Type I: Finiteness ([±tensed])

A. Infinitives

1. (a) Nous lisons beaucoup de romans pour la classe de littérature anglaise.
   (b) Nous lire beaucoup de romans pour la classe de littérature anglaise.

2. (a) Elle venir de Hong Kong et elle est étudiante en musique.
   (b) Elle vient de Hong Kong et elle est étudiante en musique.

3. (a) Tout le monde dit que je dors beaucoup.
   (b) Tout le monde dit que je dormir beaucoup.

4. (a) Ils faire le devoir ensemble à la maison.
   (b) Ils font le devoir ensemble à la maison.

B. Present participles/gérondif

5. (a) Je rencontre beaucoup de monde chaque jour.
   (b) Je rencontrant beaucoup de monde chaque jour.

6. (a) Martin travaillant dans un restaurant à temps partiel.
   (b) Martin travaille dans un restaurant à temps partiel.

7. (a) Il écrivant une lettre par jour à sa petitie amie.
   (b) Il écrit une lettre par jour à sa petite amie.

8. (a) Vous sortez ici, Marie vous attend au dehors.
   (b) Vous sortant ici, Marie vous attend au dehors.

C. Past participles

9. (a) Charles boit beaucoup d'eau quand il fait du sport.
   (b) Charles bu beaucoup d'eau quand il fait du sport.

10. (a) J'obtenu un renseignement de mes collègues chaque mois.
    (b) J'obtiens un renseignement de mes collègues chaque mois.

11. (a) On voit souvent Caroline et Daniel ensemble.
    (b) On vu souvent Caroline et Daniel ensemble.

12. (a) Michel lit les feuilles du dossier noir.
(b) Michel lu les feuilles du dossier noir.

Type II: Agreement (Phi-features – person and number)

A. Number: 1st person singular vs. plural

1. (a) Je mange beaucoup de fruits et légumes chaque jour.
(b) Je mangeons beaucoup de fruits et légumes chaque jour.

2. (a) J'aimons écouter de la musique classique.
(b) J'aime écouter de la musique classique.

3. (a) Je bois du lait trois fois par jour.
(b) Je buvons du lait trois fois par jour.

4. (a) Nous sais que Monique va se marier la semaine prochaine.
(b) Nous savons que Monique va se marier la semaine prochaine.

5. (a) Nous avons besoin de beaucoup d'eau quand nous faisons du sport.
(b) Nous ai besoin de beaucoup d'eau quand nous faisons du sport.

6. (a) Nous dormons 12 heures par jour!
(b) Nous dors 12 heures par jour!

B. Person: 1st person plural vs. 3rd person plural

7. (a) Nous visitons Paris au moins une fois par an.
(b) Nous visitent Paris au moins une fois par an.

8. (a) Nous aident le nouvel étudiant à faire son devoir.
(b) Nous aidons le nouvel étudiant à faire son devoir.

9. (a) Nous préparons le dîner ensemble.
(b) Nous préparent le dîner ensemble.

10. (a) Elles achètent toujours des robes rouges.
(b) Elles achetons toujours des robes rouges.

11. (a) Ils me donnons un gros cadeau pour mon anniversaire chaque année.
(b) Ils me donnent un gros cadeau pour mon anniversaire chaque année.

12. (a) Ils téléphonent à leurs parents deux fois par mois.
(b) Ils téléphonons à leurs parents deux fois par mois.

Type III: [±past]

A. [+past]

1. (a) Nous avons rendu visite à notre ami à Toronto l'été dernier.
   (b) Nous rendons visite à notre ami à Toronto l'été dernier.

2. (a) Hier je rencontrer Jean près de la librairie.
   (b) Hier j'ai rencontré Jean près de la librairie.

3. (a) Nous avons envoyé un paquet à nos parents la semaine dernière.
   (b) Nous envoyons un paquet à nos parents la semaine dernière.

4. (a) Après avoir étudié depuis cinq jours, hier Pierre décide de prendre une pause.
   (b) Après avoir étudié depuis cinq jours, hier Pierre a décidé de prendre une pause.

5. (a) Sophie a beaucoup parlé à la réunion hier soir.
   (b) Sophie parle beaucoup à la réunion hier soir.

6. (a) Les amis arrivent soudainement pendant que Katherine faisait la cuisine.
   (b) Les amis sont soudainement arrivés pendant que Katherine faisait la cuisine.

B. [-past]

7. (a) Quand il a des questions sur la religion, il a demandé à Marie.
   (b) Quand il a des questions sur la religion, il demande à Marie.

8. (a) Beaucoup d'enfants jouent du piano en ce moment.
   (b) Beaucoup d'enfants ont joué du piano en ce moment.

9. (a) Chaque jour j'ai fini mes devoirs et puis je joue avec mes amis.
   (b) Chaque jour je finis mes devoirs et puis je joue avec mes amis.

10. (a) Ma maison fait face au nord; donc il fait très froid pendant l'hiver.
    (b) Ma maison a fait face au nord; donc il fait très froid pendant l'hiver.

11. (a) Maintenant, beaucoup de femmes ont aimé pratiquer le yoga.
    (b) Maintenant, beaucoup de femmes aiment pratiquer le yoga.

12. (a) Ma soeur sort maintenant avec un homme riche.
    (b) Ma soeur est sortie maintenant avec un homme riche.

DISTRACTORS ("both right" or "both wrong")

"Both wrong"

1. (a) La femme ne tombe amoureuse de l'homme pas.
   (b) La femme ne pas tombe amoureuse de l'homme.

2. (a) Il n'y a de soleil pas aujourd'hui.
   (b) Il n'y a de soleil aujourd'hui pas.

3. (a) L'homme n'a pris son petit déjeuner pas.
   (b) L'homme ne pas a pris son petit déjeuner.

4. (a) Mon frère ne pas est allé au cinéma.
   (b) Mon frère n'est allé pas au cinéma.

5. (a) Il n'a donné la robe à sa fille pas.
   (b) Il n'a donné pas la robe à sa fille.

6. (a) Le garçon n'a cassé les verres dans la cuisine pas.
   (b) Le garçon n'a cassé pas les verres dans la cuisine.

"Both right"

7. (a) Tu es allé en Chine l'année dernière?
   (b) L'année dernière, tu es allée en Chine?

8. (a) Selon Anna, Jean peut parler beaucoup de langues.
   (b) Jean peut parler beaucoup de langues, selon Anna.

9. (a) Pour son anniversaire, je vais lui donner une chemise.
   (b) Je vais lui donner une chemise pour son anniversaire.

10. (a) Hier l'homme n'a pas tué son fils.
    (b) L'homme n'a pas tué son fils hier.

11. (a) Tout le monde a réussi l'examen selon le professeur.
    (b) Selon le professeur, tout le monde a réussi l'examen.

12. (a) Elle va lui dire demain qu'elle l'aime.
    (b) Demain elle va lui dire qu'elle l'aime.

APPENDIX E

T&Agr – Grammaticality preference task II on adverb placement (adapted from White 1991a, 1991b)

English versions

Version A1

1. a. Frank works at night often.
   b. Frank works often at night.

only a is right | only b is right | both right | both wrong | not sure

2. a. The girl eats quickly the Big Mac.
   b. The girl eats the Big Mac quickly.

only a is right | only b is right | both right | both wrong | not sure

3. a. Lisa has a large very car.
   b. Lisa has a large car very.

only a is right | only b is right | both right | both wrong | not sure

4. a. The old man tells the story slowly.
   b. The old man slowly tells the story.

only a is right | only b is right | both right | both wrong | not sure

5. a. Mary quickly opens the letter.
   b. Mary opens quickly the letter.

only a is right | only b is right | both right | both wrong | not sure

6. a. Superman saves people always.
   b. Superman saves always people.

only a is right | only b is right | both right | both wrong | not sure

8. a. Jill eats always at 6:00 P.M.
b. Jill eats at 6:00 P.M. always.

only a is right only b is right both right both wrong not sure

10. a. Sometimes Susan plays the piano.
b. Susan plays sometimes the piano.

only a is right only b is right both right both wrong not sure

11. a. Quickly the children leave the school.
b. The children leave quickly the school.

only a is right only b is right both right both wrong not sure

12. a. Charles cuts carefully the paper.
b. Carefully Charles cuts the paper.

only a is right only b is right both right both wrong not sure

15. a. Slowly the train leaves the station.
b. The train slowly leaves the station.

only a is right only b is right both right both wrong not sure

16. a. Linda takes always the metro.
b. Linda always takes the metro.

only a is right only b is right both right both wrong not sure

18. a. The students quietly write the test.
b. Quietly the students write the test.

only a is right only b is right both right both wrong not sure

19. a. Helen visits often her grandmother.
b. Helen visits her grandmother often.

only a is right only b is right both right both wrong not sure

20. a. Tom to work drives a motorcycle.
b. Tom a motorcycle drives to work.

only a is right only b is right both right both wrong not sure

21. a. David watches television sometimes.
b. David sometimes watches television.

only a is right only b is right both right both wrong not sure

22. a. To visit New York John wants.
b. John wants to visit New York.

only a is right only b is right both right both wrong not sure

23. a. Jack usually drinks Coke.
b. Jack drinks Coke usually.

only a is right only b is right both right both wrong not sure

24. a. Alice brushes carefully her hair.
b. Alice carefully brushes her hair.

only a is right only b is right both right both wrong not sure

25. a. Tony often forgets his homework.
b. Tony forgets often his homework.

only a is right only b is right both right both wrong not sure

26. a. Peter quietly closes the door.
b. Peter closes the door quietly.

only a is right only b is right both right both wrong not sure

27. a. Pierre speaks usually French.
b. Usually Pierre speaks French.

only a is right only b is right both right both wrong not sure

28. a. Anna drives her new car carefully.
b. Anna drives carefully her new car.

only a is right only b is right both right both wrong not sure

29. a. Often Mary loses her books.
b. Mary often loses her books.

only a is right only b is right both right both wrong not sure

30. a. Angela always washes the dishes.
b. Always Angela washes the dishes.

only a is right only b is right both right both wrong not sure

31. a. Carole hates the smell of cigarettes.
b. Carole the smell of cigarettes hates.

only a is right only b is right both right both wrong not sure

Version B1

33. a. Children hate homework usually.
b. Children hate usually homework.

only a is right only b is right both right both wrong not sure

34. a. Carole hates the smell of cigarettes.
b. Carole the smell of cigarettes hates.

only a is right only b is right both right both wrong not sure

37. a. The children leave the school quickly.
b. The children quickly leave the school.

only a is right only b is right both right both wrong not sure

38. a. The girls read the books quietly.
b. The girls read quietly the books.

only a is right only b is right both right both wrong not sure

39. a. Lisa has a large very car.
b. Lisa has a large car very.

only a is right only b is right both right both wrong not sure

40. a. The old man slowly tells the story.
b. The old man tells slowly the story.

only a is right only b is right both right both wrong not sure

41. a. Often Tony forgets his homework.
b. Tony forgets often his homework.

only a is right only b is right both right both wrong not sure

44. a. Jill always eats at 6:00 P.M.
b. Jill eats always at 6:00 P.M.

only a is right only b is right both right both wrong not sure

45. a. To visit New York John wants.
b. John wants to visit New York.

only a is right only b is right both right both wrong not sure

46. a. Slowly the train leaves the station.
b. The train leaves slowly the station.

only a is right only b is right both right both wrong not sure

47. a. Superman always saves people.
b. Superman saves people always

only a is right only b is right both right both wrong not sure

48. a. Quickly the girl eats the Big Mac.
b. The girl quickly eats the Big Mac.

only a is right only b is right both right both wrong not sure

49. a. Linda takes always the métro.
b. Always Linda takes the métro.

only a is right only b is right both right both wrong not sure

50. a. Charles carefully cuts the paper.
b. Carefully Charles cuts the paper.

only a is right only b is right both right both wrong not sure

51. a. Susan plays sometimes the piano.
b. Susan plays the piano sometimes.

only a is right only b is right both right both wrong not sure

52. a. Mary loses her books often.
b. Mary often loses her books.

only a is right only b is right both right both wrong not sure

54. a. David sometimes watches television.
b. David watches sometimes television.

only a is right only b is right both right both wrong not sure

55. a. Jack drinks usually Coke.
b. Jack usually drinks Coke.

only a is right only b is right both right both wrong not sure

56. a. Anna carefully drives her new car.
b. Anna drives her new car carefully.

only a is right only b is right both right both wrong not sure

57. a. Frank works often at night.
b. Frank often works at night.

only a is right only b is right both right both wrong not sure

58. a. Sometimes Alexandra cleans her room.
b. Alexandra sometimes cleans her room.

only a is right only b is right both right both wrong not sure

59. a. The students write quietly the test.
b. Quietly the students write the test.

only a is right only b is right both right both wrong not sure

60. a. Pierre usually speaks French.
b. Usually Pierre speaks French.

only a is right only b is right both right both wrong not sure

61. a. Tom to work drives a motorcycle.
b. Tom a motorcycle drives to work.

only a is right only b is right both right both wrong not sure

62. a. Peter closes quietly the door.
b. Peter quietly closes the door.

only a is right only b is right both right both wrong not sure

63. a. The girls finish slowly their work.
b. The girls finish their work slowly.

only a is right only b is right both right both wrong not sure

APPENDIX F

T&Agr – Grammaticality preference task II on adverb placement (adapted from White 1991a, 1991b)

French versions

Version A1

1. a. Il travaille en soirée souvent.
   b. Il souvent travaille en soirée.

only a is right only b is right both right both wrong not sure

2. a. Elle rapidement finit le repas.
   b. Elle finit le repas rapidement.

only a is right only b is right both right both wrong not sure

3. a. Nathalie a une grande très voiture.
   b. Nathalie a une grande voiture très.

only a is right only b is right both right both wrong not sure

4. a. Ils racontent l'histoire lentement.
   b. Ils racontent lentement l'histoire.

only a is right only b is right both right both wrong not sure

5. a. Elle écrit rapidement la lettre.
   b. Elle rapidement écrit la lettre.

only a is right only b is right both right both wrong not sure

6. a. Vous aidez les autres parfois.
   b. Vous parfois aidez les autres.

only a is right only b is right both right both wrong not sure

8. a. Nous parfois mangeons à 19h.
b. Nous mangeons à 19h parfois.

only a is right only b is right both right both wrong not sure

10. a. Souvent elle joue du piano.
b. Elle souvent joue du piano.

only a is right only b is right both right both wrong not sure

11. a. Rapidement ils partent de l'école.
b. Ils rapidement partent de l'école.

only a is right only b is right both right both wrong not sure

12. a. Nous prudemment coupons le papier.
b. Prudemment nous coupons le papier.

only a is right only b is right both right both wrong not sure

15. a. Lentement le train quitte la gare.
b. Le train quitte lentement la gare.

only a is right only b is right both right both wrong not sure

16. a. Je parfois prends le bus.
b. Je prends parfois le bus.

only a is right only b is right both right both wrong not sure

18. a. Elles font tranquillement le test.
b. Tranquillement elles font le test.

only a is right only b is right both right both wrong not sure

19. a. Je souvent rends visite à ma grand-mère.
b. Je rends visite à ma grand-mère souvent.

only a is right only b is right both right both wrong not sure

20. a. Martin au bureau va en voiture.
b. Martin en voiture va au bureau.

only a is right only b is right both right both wrong not sure

21. a. Tu regardes la télé souvent.
b. Tu souvent regardes la télé.

only a is right only b is right both right both wrong not sure

22. a. Voyager à Shanghai Jean voudrait.
b. Jean voudrait voyager à Shanghai.

only a is right only b is right both right both wrong not sure

23. a. Il boit parfois du lait.
b. Il boit du lait parfois.

only a is right only b is right both right both wrong not sure

24. a. Je prudemment nettoie les verres.
b. Je nettoie prudemment les verres.

only a is right only b is right both right both wrong not sure

25. a. Tu oublies souvent ton devoir.
b. Tu souvent oublies ton devoir.

only a is right only b is right both right both wrong not sure

26. a. Il ferme tranquillement la porte.
b. Il ferme la porte tranquillement.

only a is right only b is right both right both wrong not sure

27. a. Elle parfois parle avec Marcel en français.
b. Parfois elle parle en français avec Marcel.

only a is right only b is right both right both wrong not sure

28. a. Il met son nouveau manteau prudemment.
b. Il prudemment met son nouveau manteau.

only a is right only b is right both right both wrong not sure

29. a. Souvent elle perd ses livres.
b. Elle perd souvent ses livres.

only a is right only b is right both right both wrong not sure

30. a. Je lave parfois mes vêtements.
b. Parfois je lave mes vêtements.

only a is right only b is right both right both wrong not sure

31. a. Carole aime le goût des pommes.
b. Carole le goût des pommes aime.

only a is right only b is right both right both wrong not sure

Version B1

33. a. Ils jouent avec des poupées parfois.
b. Ils parfois jouent avec des poupées.

only a is right only b is right both right both wrong not sure

34. a. Carole aime le goût des pommes.
b. Carole le goût des pommes aime.

only a is right only b is right both right both wrong not sure

37. a. Ils partent de l'école rapidement.
b. Ils partent rapidement de l'école.

only a is right only b is right both right both wrong not sure

38. a. Elles lisent les livres tranquillement.
b. Elles tranquillement lisent les livres.

only a is right only b is right both right both wrong not sure

39. a. Nathalie a une grande très voiture.
b. Nathalie a une grande voitures très.

only a is right only b is right both right both wrong not sure

40. a. Il raconte lentement l'histoire.
b. Il lentement raconte l'histoire.

only a is right only b is right both right both wrong not sure

41. a. Souvent tu oublies ton devoir.
b. Tu souvent oublies ton devoir.

only a is right only b is right both right both wrong not sure

44. a. Nous mangeons parfois à 19h.
b. Nous parfois mangeons à 19h.

only a is right only b is right both right both wrong not sure

45. a. Voyager à Shanghai Jean voudrait.
b. Jean voudrait voyager à Shanghai.

only a is right only b is right both right both wrong not sure

46. a. Lentement le train quitte la station.
b. Le train lentement quitte la station.

only a is right only b is right both right both wrong not sure

47. a. Vous aidez parfois les autres.
b. Vous aidez les autres parfois.

only a is right only b is right both right both wrong not sure

48. a. Rapidement elle finit le repas.
b. Elle finit rapidement le repas.

only a is right only b is right both right both wrong not sure

49. a. Je parfois prends le bus.
b. Parfois je prends le bus.

only a is right only b is right both right both wrong not sure

50. a. Nous coupons prudemment le papier.
b. Prudemment nous coupons le papier.

only a is right only b is right both right both wrong not sure

51. a. Elle souvent joue du piano.
b. Elle joue du piano souvent.

only a is right only b is right both right both wrong not sure

52. a. Elle perd ses livres souvent.
b. Elle perd souvent ses livres.

only a is right only b is right both right both wrong not sure

54. a. Tu regardes souvent la télé.
b. Tu souvent regardes la télé.

only a is right only b is right both right both wrong not sure

55. a. Il parfois boit du lait.
b. Il boit parfois du lait.

only a is right only b is right both right both wrong not sure

56. a. Il met prudemment son nouveau manteau.
b. Il met son nouveau manteau prudemment.

only a is right only b is right both right both wrong not sure

57. a. Il souvent travaille en soirée.
b. Il travaille souvent en soirée.

only a is right only b is right both right both wrong not sure

58. a. Souvent elle écoute la radio.
b. Elle écoute souvent la radio.

only a is right only b is right both right both wrong not sure

59. a. Elles tranquillement font le test.
b. Tranquillement elles font le test.

only a is right only b is right both right both wrong not sure

60. a. Elle parle parfois avec Marcel en français.
b. Parfois elle parle avec Marcel en français.

only a is right only b is right both right both wrong not sure

61. a. Martin au bureau va en voiture.
b. Martin en voiture va au bureau.

only a is right only b is right both right both wrong not sure

62. a. Il tranquillement ferme la porte.
b. Il ferme tranquillement la porte.

only a is right only b is right both right both wrong not sure

63. a. Elles lentement finissent leur travail.
b. Elles finissent leur travail lentement.

only a is right only b is right both right both wrong not sure

APPENDIX G

DP – Elicited written production task on [±definite] on D and the projection of Num

(adapted from Schafer & De Villiers 2000)

English version

I. Familiar-*the*

1. Calvin had two pets, a pig and a crocodile. He decided to sell one of them. Which one do you think it was?

   ANS: The pig

2. Grace has three animals at home, a dog, a cat and a tortoise. She wants one of them to guard the house for her. Which one do you think it is?

   ANS: The dog

3. Tommy just bought two new pieces of furniture, a desk and a sofa. He likes sitting on one of them. Which one do you think it is?

   ANS: The sofa

4. Monica bought two things yesterday in a boutique, an evening gown and a sports jacket. She is going to a party tonight and will put one of them on. Which one do you think it will be?

   ANS: The evening gown

5. Steve bought two Christmas gifts: a ring and a watch. He is going to give one of them to his girlfriend. Which one do you think it will be?

   ANS: The watch OR The ring

6. Bella has had very bad luck recently. She bought a computer and a VCR not long ago but last week both of them broke. Her essay is due next week and she only has time to get one of the items repaired. Which one do you think it will be?

   ANS: The computer

II. Specific-*a*

1. You probably have something on your desk in your room at home. What is it?

   ANS: A lamp / a computer / a pen / …

2. I am sure you have something in your kitchen at home that you put frozen food into. What is it?

   ANS: A fridge / a freezer / …

3. You probably have one very thick book at home that you look up telephone numbers in. What is it?

   ANS: A telephone directory

4. You probably have something in your bathroom that you have to use every morning. What is it?

   ANS: A towel / a toothbrush / …

5. I am sure you have something in your dining room. What is it?

   ANS: A dining table / a pot of flowers / …

6. I am sure you have something on your bed. What is it?

   ANS: A blanket / a doll / a pillow …

III. Non-referential-*a*

1. Cindy is going to the pond. She wants to catch some fish. What will she need?

   ANS: A fishing rod

2. You are going to the cinema. You want to watch a movie on your own. What will you need to buy at the cinema?

   ANS: A ticket

3. Patrick is in the examination room but all of a sudden he finds out that he has forgotten to bring his pencil case. So he has to ask the invigilator if he can borrow something. What will he borrow?

   ANS: A pen

4. There is a large bottle of seven-up in the fridge. Kenneth wants to drink some. What does he need?

   ANS: A glass / a cup

5. You are now in a restaurant. You have ordered a beef steak but the waiter forgot to bring you something. You cannot cut the steak without it. What will you ask the waiter to bring you?

   ANS: A knife

6. You are now in the photocopy centre. You have just xeroxed a large pile of notes. What will you need to staple them together?

   ANS: A stapler

APPENDIX H

DP – Elicited written production task on [±definite] on D and the projection of Num

(adapted from Schafer & De Villiers 2000)

French version

I. Familiar-*le/la*

1. Françoise a deux animaux, un cochon et un cheval. Elle a décidé de vendre un des deux. Lequel?

   ANS: Le cheval OR le cochon

2. Marie a trois animaux chez elle—un chien, un chat, et un poisson rouge. Elle veut que l'un des trois puisse attraper des rats pour elle. Lequel?

   ANS: Le chat

3. Jean vient d'acheter deux meubles, une table and une étagère. Il va mettre un pot de fleurs sur une des deux. Laquelle?

   ANS: La table OR l'étagère

4. Les amies d'Annabelle lui ont donné deux cadeaux pour son anniversaire, une veste et un manteau. Il fait très froid aujourd'hui. Donc Annabelle a décidé de porter un des deux. Lequel?

   ANS: Le manteau

5. Pièrre a acheté deux cadeaux: une cravate et un collier. Il va donner un des deux à sa mère. Lequel?

   ANS: Le collier

6. Michelle a deux enfants, une fille et un garçon. Un des deux aime jouer avec des poupées. Lequel?

   ANS: La fille

II. Specific-*un/une*

1. Je suis sûr que vous avez quelque chose dans votre chambre sur quoi vous dormez. Qu'est-ce que c'est?

   ANS: Un lit

2. Vous avez probablement quelque chose chez vous que vous utilisez pour faire la cuisine. Qu'est-ce que c'est?

   ANS: Une casserole / une poêle ....

3. Je suis sûr que vous avez quelque chose à lire sur votre étagère. Qu'est-ce que c'est?

   ANS: Un livre / un roman / ...

4. Vous avez probablement quelque chose dans votre garde-robe à porter quand il fait froid. Qu'est-ce que c'est?

   ANS: Un manteau / ...

5. Je suis sûr que vous avez quelque chose de grand dans votre salle de séjour. Qu'est-ce que c'est?

   ANS: Une télévision / un sofa / ...

6. Je suis sûr que vous avez quelque chose sur votre bureau. Qu'est-ce que c'est?

   ANS: Un ordinateur / une horloge / ...

III. Non-referential-*un/une*

1. Christine est dans la rue. Il pleut à verse. Qu'est-ce qu'elle doit acheter?

   ANS: Un parapluie

2. Demain Fiona partira pour la Russie où il fait très froid. Qu'est-ce qu'elle devrait emmener?

   ANS: Un manteau / ...

3. Vous avez un examen à 9h. Il est déjà 8h45 mais vous êtes toujours chez vous. Qu'est-ce que vous devez prendre pour arriver à l'heure?

ANS: Un taxi

4. Vous êtes devant le cinéma et vous voulez voir un film. Qu'est-ce que vous devez acheter?

   ANS: Un billet

5. Marco est dans un restaurant. Il veut commander mais il ne sait pas quels genres de plats sont offerts. Il a besoin de quelque chose avant de pouvoir commander. Qu'est-ce que c'est?

   ANS: Un menu

6. Vous êtes à la banque. Il faut signer un formulaire. Mais vous n'avez rien pour écrire. Qu'est-ce que vous devez emprunter à la caissière?

   ANS: Un stylo

APPENDIX I

DP – Grammaticality judgement and correction task on adjective placement

English version

I. Singular definite

1. I really like *the coat red but I cannot afford it.
2. *The dress expensive did not look good on me.
3. Jimmy liked the spicy meal he had at the Thai restaurant last night.
4. The hot weather in Hong Kong during summer is really unbearable.

II. Singular indefinite

5. Have you got *a pen black? I forgot to bring my pencil case today.
6. I want to get *a necklace golden for my sister.
7. I just got a new car. Would you like to go for a ride?
8. Every morning I buy a black coffee on my way to school.

III. Plural definite

9. *The girls little singing in the church choir are very cute.
10. Could you help me carry *the boxes heavy?
11. The beautiful models up on the stage are very charming.
12. The headmaster has already punished the naughty pupils.

IV. Plural indefinite

13. Hannah bought *some shirts white at the department store yesterday.
14. When we were in New York, we went to try *restaurants famous from time to

time.

15. I have to go to the supermarket to get some fresh apples.

16. I love travelling, especially to exotic places.

APPENDIX J

DP – Grammaticality judgement and correction task on adjective placement

French version

I. Singular definite

1. Tout me plaît à Montréal, sauf *le froid climat.
2. Je n'aime plus *la rouge robe que j'ai achetée hier.
3. Voyez-vous le garçon asiatique là-bas? Il est si beau!
4. Ma soeur aime beaucoup la bague dorée que je lui ai donnée.

II. Singular indefinite

5. Je viens d'acheter *une noire voiture.
6. Pièrre a commandé *un piquant plat dans un restaurant hier.
7. Est-ce que tu as un stylo bleu? J'ai perdu le mien.
8. Je vais prendre seulement une boisson chaude. Je n'ai pas faim.

III. Plural definite

9. Isabelle n'aime pas les hommes avec *les longs cheveux.
10. J'ai besoin d'un grand sac pour *les remplis questionnaires.
11. Voyez-vous les costumes blancs là-bas? Ils doivent coûter très cher.
12. ~~On n'aime pas beaucoup les garçons vilains dans la classe.~~

IV. Plural indefinite

13. J'aime essayer *des exotiques cuisines. (PL indef U1)
14. Je vais aller à l'épicerie pour acheter *des fraîches pommes.

15. Ma tante a des enfants adorables.

16. Marie a acheté des pull-overs verts dans un magasin hier.

APPENDIX K

DP – Picture identification task on Number ([±plural])

English version

I. Singular

1. You can put all your things on the table.
2. I like the bird that Samuel keeps at home.
3. The dog sitting over there is very cute.
4. Do you like the carpet that I put inside the bathroom?
5. Please turn on the lamp. It is so dark in here.
6. I have found the folder that was missing from our office last week.
7. I like the coat you bought yesterday.
8. Is the briefcase over there yours?

II. Plural

9. I have washed the plates we used last night.
10. The carrots you bought yesterday are not very fresh.
11. I think nobody is there since the doors are all closed.
12. The books on display in the library are very interesting.
13. The clocks inside the train station are all broken.
14. I like the cats in that pet shop.
15. You can throw the typewriters away.
16. The handbags we bought yesterday were not too expensive.

APPENDIX L

DP – Picture identification task on Number ([±plural])

French version

I. Singular

1. Je ne peux pas ouvrir cette porte avec la clé.
2. Tu peux utiliser la tasse que j'ai lavée.
3. La bague est jolie mais trop chère.
4. La voiture que Doris a achetée le mois dernier a cassé.
5. Je ne peux pas trouver le livre que mon professeur a mentionné.
6. J'ai emprunté le parapluie de Daniel.
7. Winnie aime beaucoup le chien qu'elle a acheté il y a 3 mois.
8. Le lit est trop petit pour Vincent qui est vraiment grand.

II. Plural

9. Mes frères ont mangé les pommes que j'ai achetées hier.
10. C'est Betty qui a acheté les verres.
11. Les chaises que Wilson a achetées à IKEA sont très confortables.
12. Ne perdez pas les portefeuilles.
13. Les oranges que Marie m'a données sont très amères.
14. J'ai laissé les dossiers au bureau.
15. Les boîtes là-bas sont pour l'emballage.
16. Les paquets de Paris sont finalement arrivés ce matin.

APPENDIX M

DP – Multiple choice task on [±definite] on D and the projection of Num

English version

Type I: Specific definite *the*

Ungrammatical

1. I saw a very romantic movie last night. The name of *a movie is *Bounce*.

2. When you turn onto Rachel Street, you will see two houses. I live in *a bigger one.

3. Martin bought two Christmas gifts yesterday, a diamond ring and a gold ring. He is going to give *a diamond one to his girlfriend.

4. This morning I read a magazine and a newspaper, but now I don't know where I have put *a newspaper.

5. I bought a very interesting book yesterday. The author of *a book is the winner of this year's Pulitzer Prize.

Grammatical

6. Bruno and Nathalie went try out a French restaurant in New York. The restaurant is famous for its seafood.

7. Marc went to see his doctor this morning for a headache. The doctor wrote a prescription for him to get medication.

8. Kathy just bought two new pieces of furniture, a desk and a sofa. She likes sitting on the sofa a lot.

9. Jessica bought two things yesterday from a boutique, an evening gown and a sports jacket. She is going to a party tonight and will wear the evening gown.

10. Calvin has three animals at home, a dog, a cat and a tortoise. The dog guards the house for him.

Type II: Specific indefinite *a*

Ungrammatical

1. I have *the big freezer at home so I usually buy a lot of frozen food when I do grocery shopping.

2. Arnold has *the sister who is very sportive. She likes all kinds of sports.

3. Grace went to England last summer. She took *the picture with Queen Elizabeth.

4. Amy was very excited yesterday. She met *the very handsome guy.

5. Charles is very happy these days. His wife has just given birth to *the new baby.

Grammatical

6. I will be moving out of town next week. That is why I only have a desk and two chairs left in my place.

7. Yesterday when I walked down the street, I saw a police officer chasing your dog.

8. I saw a beautiful woman standing outside my house yesterday. She seemed to be French.

9. My hair was wrapped in a towel when you came in because I had just taken a shower.

10. We used to have a hound but last summer my parents decided to give it to our aunt.

Type III: Non-specific indefinite *a*

Ungrammatical

~~1. Cindy is going to the pond. She wants to catch *the fish.~~

2. If you want to buy *the new car, consider buying a small one. Small cars usually cost less.

3. If he wants to become *the lawyer, he should study hard.

4. Margaret wants to find *the new boyfriend. She feels very lonely all the time.

5. I don't know anyone who wants to become *the professional singer.

Grammatical

6. Mike just xeroxed a large pile of notes in the photocopy store but he could not find a stapler to staple them together.

7. Felicia is making fruit salad for dessert. She has to buy an apple and two bananas for it at the supermarket.

8. We are trying to find a more direct route to the top of the mountain.

9. When I was small, my ideal was to become a doctor.

10. We all need a balanced diet, quality sleep and lots of exercise to keep ourselves healthy.

APPENDIX N

DP – Multiple choice task on [±definite] on D and the projection of Num

French version

Type I: Specific definite *le/la*

Ungrammatical

1. J'ai regardé un bon film hier soir. Le nom d'*un film est *Yiyi.*

2. Quand vous serez sur la rue Peel, vous verrez deux maisons, une maison verte et une maison rouge, et j'habite dans *une maison rouge.

3. Marco a acheté deux cadeaux hier, une bague de diamant et une bague en or, et il va donner *une bague de diamant à sa petite amie.

4. Ce matin j'ai lu un magazine et un journal, mais maintenant je ne sais pas où j'ai mis *un magazine.

5. J'ai acheté un livre très intéressant la semaine dernière. L'auteur d'*un livre s'appelle Saul Bellow.

Grammatical

6. Isabelle et Joyce ont essayé un restaurant à Paris. Le restaurant est connu pour son steak.

7. Samuel est allé chez un médecin ce matin. Le médecin est un ami de son père.

8. Stéphan a acheté deux meubles hier, une chaise et une table. La chaise était un peu plus chère.

9. Marie a trois animaux chez elle, un chien, un chat, et un poisson rouge. Le chat attrape des rats pour elle.

10. Françoise a deux animaux, un cochon et un cheval. Elle a décidé de donner le cheval à son ami.

Type II: Specific indefinite *un/une*

Ungrammatical

1. J'ai *le grand frigo chez moi. Donc je peux garder beaucoup de viandes et de légumes.

2. Martin a *la soeur qui est très sportive. Elle aime pratiquer beaucoup de sports.

3. Thérese est allée au couronnement de la reine l'année dernière. Elle a pris *la photo de la reine.

4. Stéphanie était très excitée hier. Elle a rencontré *le très bel homme.

5. Pierre est très heureux ces jours-ci. Sa femme Simone vient de donner naissance à *la bébé-fille.

Grammatical

6. Michelle a seulement une étagère et deux chaises dans son bureau maintenant.

7. J'ai rencontré une très belle femme dans la rue hier soir. Elle m'a demandé où était la station métro.

8. Je gardais un chien chez moi mais la semaine dernière je l'ai donné à Daniel.

9. Il a une maison ici à Montréal mais puisqu'il va partir pour la France bientôt, il a décidé de la vendre.

10. Nous avons une grande table chez nous et nous invitons souvent nos amis à dîner ensemble.

Type III: Non-specific indefinite *un/une*

Ungrammatical

1. On dit que si vous mangez *la pomme par jour, vous resterez en bonne santé.

2. Si vous voulez acheter *la nouvelle voiture, considerez acheter un petit modèle. C'est souvent moins cher.

3. Christine est dans la rue. Il pleut à verse. Donc elle a besoin d'acheter *le parapluie dans n'importe quel magasin.

4. Tommy va acheter *le nouveau manteau de n'importe quelle couleur pour sa femme comme cadeau d'anniversaire.

5. Je ne connais personne qui veux devenir *le chanteur professionel.

Grammatical

6. Il y a très longtemps que je n'ai pas contacté Denis. Je vais lui écrire une lettre ce soir.

7. Même si vous connaissez les artistes du concert, il faut un billet pour entrer.

8. On essaie de trouver une route plus directe pour aller au sommet de la montagne.

9. Quand j'étais petite, mon idéal était d'acheter une très grande maison en Italie.

10. Je vais déménager, alors j'ai besoin de louer un camion, quelle qu'en soit la couleur.

APPENDIX O

DP – Preference task on CL

English version

Demonstrative

1a. *I want to talk to this the new professor from China.
1b. I want to talk to the new professor from China.

2a. Mary saw the white cat again yesterday.
2b. *Mary saw that the white cat again yesterday.

3a. *Here are the newest models of these the computers.
3b. Here are the newest models of the computers.

4a. Did you see the movies shown on TV last week?
4b. *Did you see those the movies shown on TV last week?

5a. *Jessica is going to marry that the guy we saw last Sunday.
5b. Jessica is going to marry the guy we saw last Sunday.

Possessive

6a. The new teacher graduated from the University of Hong Kong.
6b. *His the new teacher graduated from the University of Hong Kong.

7a. *Her the Thai restaurant located on King's Road is the best in town.
7b. The Thai restaurant located on King's Road is the best in town.

8a. *His the book on public health is very interesting.
8b. The book on public health is very interesting.

9a. The big dog died last week.
9b. *Their the big dog died last week.

10a. *Their the top students from CityU visited our school last month.
10b. The top students from CityU visited our school last month.

APPENDIX P

DP – Preference task on CL

French version

Demonstrative

1a. *Je veux parler à cette la nouveau étudiante d'anglais.
1b. Je veux parler à la nouveau étudiante d'anglais.

2a. Jean a encore vu la jolie femme hier.
2b. *Jean a encore vu cette la jolie femme hier.

3a. *J'ai acheté cette la table rouge l'an dernier.
3b. J'ai acheté la table rouge l'an dernier.

4a. J'ai regardé le film chinois.
4b. *J'ai regardé ce le film chinois.

5a. *Marie va se marier avec ce le jeune homme de Hong Kong demain.
5b. Marie va se marier avec le jeune homme de Hong Kong demain.

Possessive

6a. Le nouvel étudiant vient du Canada.
6b. *Son le nouvel étudiant vient du Canada.

7a. *Son le restaurant vietnamien sur la rue Sherbrooke est le meilleur à Montréal.
7b. Le restaurant vietnamien sur la rue Sherbrooke est le meilleur à Montréal.

8a. *Son le livre sur l'informatique est très intéressant.
8b. Le livre sur l'informatique est très intéressant.

9a. Le professeur habite à Ottawa.
9b. *Leur le professeur habite à Ottawa.

10a. *Leurs les bagages sont arrivés à Hong Kong la semaine dernière.
10b. Les bagages sont arrivés à Hong Kong la semaine dernière.

APPENDIX Q
Ethics certificate

McGill

Research Ethics Board Office
McGill University

Research Ethics Board II
Certificate of Ethical Acceptability of Research Involving Humans

Project Title: Functional Categories in Second and Third Language Acquisition: A Cross-Linguistic Study of the Acquisition of English and French by Chinese and Vietnamese Speakers

Applicant's Name: Yan-kit Ingrid Leung Department: Linguistics

Undergraduate Student? (Y or N): N If yes, Course #:

Graduate Student? (Y or N): Y

Supervisor's Name (if applicable): Dr. Lydia White

This project was approved on April 17 2001 by:

Departmental Review_____ Expedited Review _____ Full Review ✓

The signatures below indicate that the project as described in this application is acceptable on ethical grounds.

1. _____
Dr. Blaine Ditto, Psychology

2. _____
Dr. Linda Davies, Social Work

3. _____
Dr. Eleanor Stubley, Music Theory

4. _____
Dr. Charles Boberg, Linguistics

5. _____
Dr. Mark Baldwin, Psychology

✓ Dr. Ann Gamsa, External

7. _____
Departmental representative (for projects suitable for departmental review)

This approval is valid for a period of one year.