

TOWARDS AN ANALYSIS OF YORÙBÁ CONDITIONALS:  
ITS IMPLICATIONS FOR THE PHRASE STRUCTURE

by

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## Abstract:

This study presents an analysis of conditional constructions in Yorùbá, as well as its implications for language-specific phenomena which are part of the Yorùbá phrase structure.

Specifically, I propose a model for the interpretation of conditionals that is based on a tripartite quantificational structure. It is an explanatory model capturing the interdependency between meaning and form. It accounts not only for the Yorùbá data, but also for those in other languages (English, French, Italian and Polish), allowing at the same time for making cross-linguistic predictions. Crucially, the model reflects both: (i) CONDITION (restrictor)–RESULT (nuclear scope) partition of conditional constructions and (ii) existence of two situation factors: (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION, which play pivotal role in meaning-form mapping. Note that, even though both factors contribute to overall interpretation, forms attested are a direct reflection of ways in which languages manipulate these factors in the process of mapping meaning onto form. E.g.: active UNLIKELIHOOD OF SATISFACTION yields two types of conditionals (REALIS and IRREALIS) in Yorùbá, while the three forms attested in the Standard Average European languages (INDICATIVE, NON-PAST SUBJUNCTIVE and PAST SUBJUNCTIVE) result from LIKELIHOOD OF SATISFACTION and TIME OF CONDITION being equally active. The above translates further onto differences in morpho-syntactic marking of conditional forms due to the fact that (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION factors are realised on the surface as Mood and Tense respectively.

Moreover, this analysis of conditionals provides important insights into the PHRASE STRUCTURE of Yorùbá. It explains: (i) structural complexity of the future marker *yóò* which spans across the Mood, Time (Tense/Aspect) and Modal categories; (ii) meaning differences expected between the three future markers: *yóò*, *á* and *máa* (known for its aspectual readings) and based on their internal elements; (iii) the status of the High Tone Syllable – the Time (Tense/Aspect) marker; (iv) dialectal differences – future being marked by irrealis marker in *Moba*; and so on. I also argue that there exist two system-specific binary oppositions: (i) MARKEDNESS OPPOSITION(S) that specifies tonal value within each syntactic category and (ii) TONE POLARITY that determines tonal melody between adjacent syntactic categories.

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To those without access to education

## Introduction:

The following is a study of conditional constructions in Yorùbá, a Kwa language spoken in Nigeria and neighbouring countries. The main goal of this investigation is to describe and explain the conditional forms attested in the language and the various meanings that are associated with them. At first glance, Yorùbá seems to differ greatly from previously studied languages like English, French or Italian. The former displays a two-way split: REALIS CONDITIONAL versus IRREALIS CONDITIONAL, while a three-way division is attested in the latter: INDICATIVE CONDITIONAL, NON-PAST SUBJUNCTIVE CONDITIONAL and PAST SUBJUNCTIVE CONDITIONAL. Not to mention that the observed forms vary greatly from one language to another. As I will demonstrate throughout the subsequent chapters of this thesis, these surface differences are due to system-specific restrictions on the meaning-form mapping mechanisms and not to variations at the underlying level. Specifically, I will demonstrate that the two systems share the concept of conditional situations. Such conditional situations, which are defined at a more abstract level, are stable cross-linguistically. However, as every language makes use of only certain tools available in the Universal Grammar, these same system-specific limitations apply in the conditional meaning-form mapping process yielding the surface differences observed. Central to this study is a proposal of a model for the interpretation of conditionals that is based on a tri-partite quantificational structure (as in Heim (1982)). I will show that this model is superior to that proposed by Ippolito (2002) as it is more explanatory and can be applied universally – i.e. it accounts not only for the Yorùbá data, but also for those attested in the so-called Standard Average European languages (English, French, Italian), Polish and Cree (these being the only languages considered in the following study). In fact, I will prove that such model allows for making solid predictions with respect to patterns which are to be expected cross-linguistically and why, both in terms of the forms likely to be attested and the range of meanings available for each of these forms. Lastly, I will demonstrate that application of such analysis of conditional constructions has many language-internal implications, including aspectual and temporal prominence, categorial distinction with respect to modality and the phrase structure in general, especially the system of auxiliaries. The claims that I will be making are geared towards explaining patterns found in the Standard variety of Yorùbá, however, some dialectal variation (Mòba) will also be discussed.

It is to be noted that this study will present original data collected from two speakers of the Yorùbá language, both fluent in Standard Yorùbá and one of the local varieties, their mother dialects: Mòba (O.A.) and Ekiti (F.D.) to be precise. Other data includes examples from languages such as: English, French, Italian<sup>1</sup> and Polish.

Specifically, in chapter 1, I will define conditionals as a particular type of constructions found in natural languages. I will show their components, the range of available meanings as well as the surface forms attested. I will argue that there exist two situation factors: (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION of which the combined values yield four types of conditional situations: Type A, Type B, Type C and Type D that, as I will show, are equivalents of Iatridou's (2000) semantic types: Future Neutral Vivid, Future Less Vivid, Present Counterfactual and Past Counterfactual respectively. Further, I will point out that none of the languages under the scope of this study codes each of the four types of conditional situations with a unique surface form. Specifically, I will demonstrate that only two conditional forms are available in Yorùbá: REALIS CONDITIONAL and IRREALIS CONDITIONAL, while the Standard Average European languages display a three-way split on the surface: INDICATIVE CONDITIONAL, NON-PAST SUBJUNCTIVE CONDITIONAL and PAST SUBJUNCTIVE CONDITIONAL. Consequently, I will argue that such surface variation is due to the system-specific properties that influence meaning-form mapping. E.g.: in Yorùbá, UNLIKELIHOOD OF SATISFACTION turns out to be the only factor active in the meaning-form mapping process, while in the languages like English, French and Italian LIKELIHOOD OF SATISFACTION and TIME OF CONDITION are both active. I further argue that there is a correlation between the active status of LIKELIHOOD OF SATISFACTION and TIME OF CONDITION, a correlation that does not exist between TIME OF CONDITION and UNLIKELIHOOD OF SATISFACTION. I will also link this correlation to TEMPORAL versus ASPECTUAL PREDOMINANCE (respectively) in the systems themselves.

The discussion in chapter 2 will focus predominantly on the necessary meaning ingredients of conditional constructions and the tri-partite quantificational model for the interpretation of the latter. The conditional ingredients are to include: (i) MODAL QUANTIFICATION OVER POSSIBLE WORLDS, which is restricted by the restrictions on similarity of these possible worlds  $w'$  to the actual world  $w$  (SIMILARITY FUNCTION) and their accessibility from the actual world  $w$  at time

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<sup>1</sup> and works by Ippolito (2002) and (2003).

t' (ACCESSIBILITY RELATION); (ii) (UN)LIKELIHOOD OF SATISFACTION and (iii) TIME OF CONDITION. Further, I argue that these three meaning ingredients are coded in surface forms in a consistent fashion. Specifically, MODAL QUANTIFICATION OVER POSSIBLE WORLDS is coded with elements of the category of Modal (modal verb/auxiliary), while TIME OF CONDITION is coded via the category of Tense (present/past). As to LIKELIHOOD OF SATISFACTION and UNLIKELIHOOD OF SATISFACTION, they are coded by elements of the Mood category (indicative/subjunctive and realis/irrealis respectively). It will also be noted that only factors active in the meaning-form mapping process are reflected in the surface forms, even though all of them are equally important in the interpretation process. I also demonstrate that the model for the interpretation of conditionals proposed here not only accounts for the wider variety of data than that of Ippolito (2002), but also has a greater explanatory power. Consequently, it is more universal and, as examples of its application will show, can be applied cross-linguistically. I conclude the chapter by pointing out that the typology of conditionals attested in a particular language reflects general system-specific properties of its grammar.

In chapter 3, I look in greater detail into the actual forms of conditional constructions. The focus will be on the two forms found in Yorùbá, namely the REALIS CONDITIONAL and the IRREALIS CONDITIONAL. Nevertheless, some discussion of forms found in other languages will also appear. In fact, I will argue based on the particularity of Polish, a language 'in transition' from a Standard-Average-European-like system to a Yorùbá-like system, that all three ingredients of conditionals are realised in the surface forms<sup>2</sup>, even though only some elements are active in the meaning-form mapping process. Subsequently, I discuss three grammatical elements which can be identified in Yorùbá conditional forms: (i) the clause typing marker (usually *bí* 'if'), (ii) the modal auxiliary (most often *bá* and/or in some cases *yóò*, which is restricted to consequent clauses of realis conditionals only) and (iii) the marking of mood (irrealis marker (*L-tone*) or realis marker ( $\emptyset$  / *M-tone*)). Detailed discussions on the range of meanings and morpho-syntactic behaviours that these three grammatical elements display will follow.

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<sup>2</sup> Note that the Tense-marking in Yorùbá, which is an aspect-prominent language, is quite opaque due to the properties of the system itself, not ways in which conditionals are coded.

Finally, in chapter 4, I discuss the implications of the analysis of conditionals proposed throughout chapters 1, 2 and 3 for the phrase structure of the Yorùbá language and its system of auxiliaries in particular. Specifically, I will demonstrate that the very many phenomena that are part of the Yorùbá verbal domain can be explained by recognising that the two principles: (i) the MINIMAL WORD CONSTRAINT producing maximality effects on words (e.g.: verbs, auxiliaries included, are canonically monomoraic – CANONICAL WORD SIZE) as well as (ii) the cross-categorical and category-internal (including (un)markedness) variations being based on binary (tonal) oppositions. These properties are at the core of my proposal to: (i) revise the status of the *High Tone Syllable*; (ii) analyse the complex future auxiliary *yóò* and the future-marking in general (i.e. compare the three Standard Yorùbá future auxiliaries: `á, *yóò* and *máa*); (iii) propose an explanation for the many readings of the auxiliary *máa*. First, I argue that the *High Tone Syllable* should be analysed as a Time variable (in the sense of Heim (1982)) that expresses both Tense and Aspect at the same time – Yorùbá being an aspect prominent language. Second, I demonstrate that the auxiliary *yóò* is a complex lexical item composed of three separate morphemes each representing a different grammatical category. In other words, the auxiliary *yóò* spans (in the sense of Williams (2003)) across three grammatical categories which are represented by one of its monomoraic morphemes each: *y/i* (category of Mood: realis), *ó* (category of Tense/Aspect: *High Tone Syllable*) and *ò* (category of Modal: deontic). I introduce some evidence regarding the status of the category of Modal within the extended inflection projection. I demonstrate that two types of quantificational elements: (i) those that quantify over possible worlds and (ii) those that quantify over a special type of possible worlds namely inertia worlds are hosted by the Modal projection; which explains why the auxiliary *máa* yields both future (modal) and imperfective (aspectual) readings. These pieces of evidence will also play a crucial role in providing argumentation for my proposal that only the `á auxiliary of the Standard Yorùbá is a true future marker. I present a short discussion of cross-dialectal variation with respect to marking the future. It shows that the future environments are marked in Moba with irrealis Mood marker as opposed to future/futate auxiliaries like it is the case in the Standard variety. Concluding arguments and remarks will close this study.

## Chapter 1: The multiple faces of conditionals in natural language.

This chapter offers a discussion of conditionals as a particular construction type attested in natural language. I begin by asking what the necessary and sufficient conditions are for a construction to be a conditional one in terms of meaning and form. Specifically, I examine the situations which are expressed via conditionals as well as the grammatical elements which are associated with rendering such conditional situations (sections 1.1. through 1.3.). What follows is a set of in-depth descriptions of data from five languages: Italian, French and English (referred to in the literature as Standard Average European languages (e.g. Ippolito (2002)) as well as Yorùbá and Polish. Each of the descriptions concentrates on how form and meaning interact in the language in question (sections 1.4. – 1.6.).

### 1.1. Situations.

Natural languages allow speakers to express not only simple real-life situations but also to render more complex ones. For example, a sentence like (1) describes a situation in which Mary's happiness is related to/dependent on something that Olú does.

- (1) Olú makes Mary happy.  
make.happy(o,m)

Another example of a real-life situation can be the event of Olú visiting Mary. This is expressed by (2):

- (2) Olú visits Mary.  
visit(o,m)

One can easily imagine a complex situation in which making Mary happy is directly dependent on paying her a visit. In other words, for Mary to become happy Olú needs to pay her a visit. Let us look at a sentence like (3):

- (3) Olú visits Mary and makes her happy.  
 $\text{visit}(o,m) \wedge \text{make.happy}(o,m)$

In as much as (3) is true – i.e. Olú pays Mary a visit and Olú makes her happy – it fails to render that there is a dependence relation between Olú's visit and Mary's happiness. More specifically, (3) does not imply that Mary is happy only when Olú visits her. In contrast, (4) does convey this dependence:

- (4) If Olú visits Mary, he makes her happy.  
 $\text{visit}(o,m) \rightarrow \text{make.happy}(o,m)$

In (4), the speaker does not only express the two situations of Mary being happy and of Olú visiting Mary, but also specifies that Olú visiting Mary creates circumstances which make it possible for Mary to be happy – i.e. Olú's visit conditions Mary's happiness in a particular way. In other words, this complex situation is expressed by two clauses of which – as Côté (n.d.: 1) states – ‘one (...) sets up a certain situation, circumstance, or condition, and the other (...) is the result or consequence of the situation or circumstance that arises from the... [condition]’.

One can easily imagine that the situation described by the sentence in (4) is one of the very many possible complex situations in which there exists a result and a circumstance restricting it. Therefore, it is not surprising that natural languages have a special type of construction that allows speakers to render such situations, namely the conditional.

### 1.1.1. From forms to situations.

Since there are many possible conditional situations given the complexity of the world we live in, there must exist various types of conditional forms. This variation would be due in part to differences within the situations themselves and partly to grammatical variation in natural languages. In fact, the linguistic literature mentions many different types of conditionals ranging from *generic*, *realis*, *irrealis* and *counterfactual* conditionals (as in Côté's analysis of Ojibwe (n.d.)) to *mismatched past subjunctive* and *inverted past subjunctive* conditionals (as discussed by Ippolito (2003) for Standard Average European languages). Most authors (Anderson (1951), Lewis (1973), Dudman (1984), Kratzer (1981), von Stechow (1998) and (2001), Iatridou (2000) and Ippolito (2002) amongst others) agree that Standard Average European languages (like English, French and Italian) distinguish at least three types of conditional forms: indicative conditionals, non-past subjunctive conditionals and past subjunctive conditionals. What strikes one immediately is that the classification of conditionals is based on terminology used for grammatical elements found elsewhere in these languages: subjunctive mood, past tense and so on. These terms reflect the fact that these conditionals contain such grammatical elements, as will be discussed in more detail below. One, therefore, expects that other natural languages might distinguish different types of conditional constructions based on the grammatical elements that are used to mark them. This raises the question of whether variation in terminology has any consequences for the meaning-form mapping. I return to this question shortly. First, let's look at some data from Yorùbá and other languages that have been discussed in the literature: English, French and Italian, to establish what, if any, differences are observed between the two systems in terms of form.

First, compare Yorùbá examples in (5) and (6) with the French (Standard Average European language) examples in (7) through (9) where we observe a difference between two conditional forms with respect to (past) tense marking in the antecedent clauses. In examples (5) through (9), each conditional form is given along the kinds of situations that it describes. For the purposes of the present discussion, there are four relevant situations – notated as A, B, C and D. I return below to a more detailed discussion of these situations (section 1.1.3.).

▪ GENERALISATION I: DEPLOYMENT OF PAST TENSE: MARKING TIME.

YORÙBÁ, UNLIKE STANDARD AVERAGE EUROPEAN LANGUAGES, DOES NOT EMPLOY PRESENT/PAST TENSE MORPHOLOGY (WHICH SPECIFIES THE TIME OF CONDITION) TO DISTINGUISH BETWEEN DIFFERENT FORMS OF CONDITIONALS. IN STANDARD AVERAGE EUROPEAN LANGUAGES ONE CONDITIONAL FORM CONTAINS PAST TENSE (WHICH PUTS THE TIME OF CONDITION INTO THE PAST) AND THE TWO OTHER FORMS ARE MARKED FOR PRESENT TENSE (ELSEWHERE CONDITION: “NON-PAST”).

(5) *Bí Olú bá lẹ́ kí Meri (lọ́la), yóò mú inú rẹ̀ dùn.*

if Olú MOD **go** greet Mary (tomorrow), FUT-MOD make stomach PRO.3SG sweet  
= (A) ‘If Olú visits Mary tomorrow, he will make her happy.’

[It is likely that Olú will visit Mary.]

= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

(6) *Bí Olú bá lẹ́ kí Meri (lánà/lọ́la), ì bá mú inú rẹ̀ dùn.*

if Olú MOD **go** greet Mary (yesterday/tomorrow), IRR-MOOD MOD make stomach PRO.3SG sweet

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

(7) *Si Olú **rends** visite à Marie (demain), il la rendra heureuse.*

if Olú pay.PRES.3SG visit PREP Mary (tomorrow), he her make.FUT/MOD.3SG happy

= (A) ‘If Olú visits Mary (tomorrow), he will make her happy.’

[It is likely that Olú will visit Mary.]

- (8) *Si Olú **rendait** visite à Marie (demain), il la rendrait heureuse.*  
 if Olú pay.IMP.3SG visit PREP Mary (tomorrow), he her make.PRES-COND.3SG happy  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
- (9) *Si Olú **avait rendu** visite à Marie (hier), il l’aurait rendue heureuse.*  
 if Olú have.IMP.3SG pay.PAST.PART visit PREP Mary (yesterday), he her have.PRES-COND.3SG make.PAST.PART happy  
 = (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’  
 [At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

Now, compare these Yorùbá forms ((10) - (11)) with those found in Italian ((12) – (14))<sup>3</sup>.

- (10) *Bí Olú bá lọ kí Meri (lọ́la), **yóò** mú inú rẹ̀ dùn.*  
 if Olú MOD go greet Mary (tomorrow), **REAL-FUT-MOD** make stomach PRO.3SG  
 sweet  
 = (A) ‘If Olú visits Mary tomorrow, he will make her happy.’  
 [It is likely that Olú will visit Mary.]  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

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<sup>3</sup> Unless specified otherwise, the Italian data comes from D’Andreagiovanni (p.c., 2006).

- (11) *Bí Olú bá lọ kí Meri (lánà/lọla), ì bá mú inú rẹ dùn.*  
 if Olú MOD go greet Mary (yesterday/tomorrow), **IRR-MOOD** MOD make stomach  
 PRO.3SG sweet  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú  
 will do so.]  
 = (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’  
 [At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]
- (12) *Se Olú visita Maria domani, la fara felice.*  
 if Olú visit.PRES-IND.3SG Mary tomorrow, pro her do.FUT/MOD.3SG happy  
 = (A) ‘If Olú visits Mary (tomorrow), he will make her happy.’  
 [It is likely that Olú will visit Mary.]
- (13) *Se Olú visitasse Maria (domani), la farebbe felice.*  
 if Olú visit.IMP-SUBJ.3SG Mary (tomorrow), pro her do.PRES-COND.3SG happy  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not  
 (totally) unlikely that Olú will visit Mary.]  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú  
 will do so.]
- (14) *Se Olú avesse visitato Maria (ieri), l'avrebbe fatta felice.*  
 if Olú have.IMP-SUBJ.3SG visit.PAST.PART Mary (yesterday), pro her have.PRES-  
 COND.3SG do.PAST.PART happy  
 = (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’  
 [At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

Based on the above, the following two generalisations with respect to the marking of mood (both subjunctive and irrealis) can be made.

▪ GENERALISATION II: DEPLOYMENT OF MOOD: MARKING LIKELIHOOD.

YORÙBÁ DISTINGUISHES THE TWO FORMS OF CONDITIONALS BY MARKING THEM WITH IRREALIS MOOD (EXPRESSING THE UNLIKELIHOOD) OR REALIS MOOD (CONSISTENT WITH THE “FAILS TO BE UNLIKELY” INTERPRETATIONS (ELSEWHERE CONDITION)). IN CONTRAST, THE STANDARD AVERAGE EUROPEAN LANGUAGES MARK ONE OF THEIR CONDITIONAL FORMS WITH INDICATIVE MOOD (EXPRESSING LIKELIHOOD) AND THE OTHER TWO FORMS WITH SUBJUNCTIVE MOOD (CONSISTENT WITH “FAILS TO BE LIKELY” INTERPRETATIONS (ELSEWHERE CONDITION)).

Third, observe the difference between the Yorùbá example (15) and the English sentence in (16) with respect to the use of modal verbs.

(15) *Bí Olú bá lọ kí Meri (lánà/lọ́la), ì bá mú inú rẹ̀ dùn.*

if Olú **MOD** go greet Mary (yesterday/tomorrow), IRR-MOOD **MOD** make stomach  
PRO.3SG sweet

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

(16) *If Olú had visited Mary (yesterday), he **would** have made her happy.*

if Olú have.PAST.3SG visit.PAST.PART Mary (yesterday), he PAST-**MOD**.3SG have.AUX  
make.PAST.PART her happy

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

Considering the above, the following generalisation comes to mind.

▪ GENERALISATION III: DEPLOYMENT OF MODALS: MARKING POSSIBILITY.

A MODAL IS PRESENT IN BOTH THE ANTECEDENT AND THE CONSEQUENT OF YORÙBÁ CONDITIONALS. IN STANDARD AVERAGE EUROPEAN SYSTEMS MODAL SEEMS TO SURFACE ONLY IN THE CONSEQUENT.

In Yorùbá, reading B is coded with a different conditional form (the same surface form as for reading A) then the one used to code reading C (the same surface form as for reading D). In contrast, the languages like English, French and Italian use the same surface form to code readings B and C of conditionals. That is to say that forms like (19) through (21) are ambiguous in terms of their meaning.

(17) *Bí Olú bá lọ kí Meri (lọla), yòò mú inú rẹ̀ dùn.*

if Olú MOD go greet Mary (tomorrow), FUT/MOD make stomach PRO.3SG sweet

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

(18) *Bí Olú bá lọ kí Meri (lánà/lọla), ì bá mú inú rẹ̀ dùn.*

if Olú MOD go greet Mary (yesterday/tomorrow), IRR-MOOD MOD make stomach PRO.3SG sweet

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

- (19) *Si Olú rendait visite à Marie (demain), il la rendrait heureuse.*  
 if Olú visit.IMP.3SG Mary (tomorrow), he her make.PRES-COND.3SG happy  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
- (20) *Se Olú visitasse Maria (domani), la farebbe felice.*  
 if Olú visit.IMP-SUBJ.3SG Mary (tomorrow), pro her do.PRES-COND.3SG happy  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
- (21) *If Olú visited Mary (tomorrow), he would make her happy.*  
 if Olú visit.PAST.3SG Mary (tomorrow), he PAST-WOLL.3SG make her happy  
 = (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]  
 = (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
 [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

This leads to the following generalisation.

▪ GENERALISATION IV: LANGUAGE SPECIFIC MEANING-FORM MAPPING.

ONLY TWO CONDITIONAL FORMS ARE FOUND IN YORÙBÁ. IN ENGLISH, FRENCH AND ITALIAN (AT LEAST) THREE DIFFERENT FORMS OF CONDITIONALS ARE DISTINGUISHED. THEREFORE (UNDER THE ASSUMPTION THAT THE CONDITIONAL SITUATIONS ARE STABLE CROSS-LINGUISTICALLY), IT MUST BE THAT YORÙBÁ CODES SUCH CONDITIONAL MEANINGS USING DIFFERENT MEANING-FORM MAPPING STRATEGY THAN THE ONE EMPLOYED IN ENGLISH, FRENCH AND ITALIAN.

The above indicates that cross-linguistic variation in terms of mapping meaning of conditionals onto form is observed in natural languages. The question that remains is which parameters allow for the observed meaning differences.

1.1.2. Factors of the antecedent.

It is important to note that regardless of the number of surface forms attested in particular languages four very distinctive situations are attested cross-linguistically. Those are equivalent to the four readings that I marked above as A, B, C and D. Although, to my knowledge, no one has defined all possible members of the set of conditional situations as such, several observations have been made with respect to different readings available for each of the conditional forms in languages like English, French and Italian. Most recently, Iatridou (2000) defined these forms as four different types of conditionals. It turns out that the four readings A, B, C and D map in a one-to-one relation onto the four types she distinguishes. This is shown in (22) through (29) based on the conditional structure of type  $p \rightarrow q$ , where  $p$  is the condition clause and  $q$  is the result clause.

▪ FUTURE NEUTRAL VIVID = CONDITIONAL SITUATION A:

[IATRIDOU (2000: 234): the actual world is likely to become a p-world]

(22) If John comes to the party (and I think he will), we will have a great time.

[CURRENT STUDY: it is likely that p at a non-past reference time]

- (23) If Olú visits Mary (tomorrow), he will make her happy.  
[It is likely that Olú will visit Mary.]

▪ FUTURE LESS VIVID = CONDITIONAL SITUATION B:

[IATRIDOU (2000: 234): the actual world is more likely to become a ¬p-world than a p-world]

- (24) If John came to the party (<sup>#</sup>and I think he will), we would have a great time.

[CURRENT STUDY: it is more likely that ¬p than that p, but not unlikely that p, at a non-past reference time]

- (25) If Olú visited Mary (tomorrow), he would make her happy.  
[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

▪ PRESENT COUNTERFACTUAL = CONDITIONAL SITUATION C:

[IATRIDOU (2000: 232): the condition p and the result q do not hold at present]

- (26) If he were smart (which he isn't), we would be rich (but he isn't).

[CURRENT STUDY: it is unlikely that p at a non-past reference time]

- (27) If Olú visited Mary (tomorrow), he would make her happy.  
[Given the present circumstances Olú will not visit Mary. / It is unlikely that Olú will do so.]

▪ PAST COUNTERFACTUAL = CONDITIONAL SITUATION D:

[IATRIDOU (2000: 232): the condition p and the result q did not hold at a particular time in the past (it is neutral with respect to the status of p and q at present)]

- (28) If he had been smart (which he wasn't), we would have been rich (but he wasn't).

[CURRENT STUDY: it is unlikely that p at a past reference time]

(29) If Olú had visited Mary (yesterday), he would have made her happy.

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

The four situations above differ from one another with respect to two aspects of meaning which – as the generalisations I and II indicate – are also coded in their surface forms<sup>4</sup>: (i) the time at which the condition is to be met ((22) - (27) versus (28/29)) and (ii) the (un)likelihood of satisfaction of the imposed condition ((22) and (23) versus (24) and (25) versus (26) through (29)). Note that the likelihood of satisfaction may express both the speaker's attitude towards the assumption that the condition might actually be met ((22) and (23) versus (24) through (29)) as well as the speaker's perception based on the state of the actual world as to how likely it is that the condition might be satisfied ((22)-(25) versus (25)-(29).) This is hardly surprising if the felicity and truth value of any sentence in natural languages depend largely on the actual state of affairs, the time at which the particular state of affairs holds, the speaker's knowledge of the world, and so on.

Given that conditionals render complex situations which can be decomposed into condition and result components, one may expect that their overall felicity and truth value depend equally on those two components. Nevertheless, conditional situations are not a simple sum of two sub-situations (as in (30)). Rather, they are in a dependence relationship with the result being directly dependent on the circumstance (as in (31)).

(30) Olú visits Mary and makes her happy.

$\text{visit}(o,m) \wedge \text{make.happy}(o,m)$

(31) If Olú visits Mary, he makes her happy.

$\text{visit}(o,m) \rightarrow \text{make.happy}(o,m)$

Therefore, it must be that calculation of the felicity and truth value of conditionals reflects this dependence in a certain way – by giving additional prominence to the condition as a necessary

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<sup>4</sup> I explain the claim in greater detail in chapter 2 of this study.

circumstance for the result. In fact, it appears that the meaning variations observed within conditional situations are based on two aspects of the condition: (i) the time at which the condition is to be met and (ii) the relative (and often subjective) likelihood of its satisfaction.

I refer to these two aspects of the circumstance as situation factors of the condition imposed. They are defined in the following terms.

- TIME OF CONDITION.

THE TIME  $t'$  AT WHICH THE CONDITION  $c$  HOLDS IS AT/AFTER THE TIME  $t$ , WHICH IS THE REFERENCE TIME (RT), OR PRIOR TO  $t$ .

In other words the time-of-condition establishes whether the condition refers to a non-past reference time or to a past reference time.

[TIME OF CONDITION = NON-PAST or PAST]

- (UN)LIKELIHOOD OF SATISFACTION.

THIS FACTOR DETERMINES HOW LIKELY OR UNLIKELY IT IS THAT THE CONDITION  $c$  MIGHT BE SATISFIED IN SOME POSSIBLE WORLD ACCESSIBLE AT A DEFINED REFERENCE TIME  $t$ . (PRAGMATIC INFORMATION SUCH AS THE ACTUAL STATE OF AFFAIRS IN THE ACTUAL WORLD, THE SPEAKER'S BELIEFS, KNOWLEDGE OF THE WORLD AND TAKE ON THE SITUATION BEING OF IMPORTANCE IN DETERMINING THE (UN)LIKELIHOOD OF SATISFACTION).

In other words, this factor establishes how likely or unlikely, from the speaker's point of view and according to his/her knowledge, it is that the condition be satisfied. Being an abstract and somewhat subjective notion, the (UN)LIKELIHOOD OF SATISFACTION factor forms a spectrum (scale) of values ranging from extremely LIKELY to extremely UNLIKELY. However there exist certain norms accepted by particular linguistic communities for the purposes of successful communication that allow for establishing boundaries within the spectrum that allow for a three-way discrimination of what is likely, neither likely nor unlikely (unvalued) and unlikely.

[LIKELIHOOD OF SATISFACTION = LIKELY; UNVALUED or UNLIKELY]

If conditional situations differ from one another with respect to these two situation factors (TIME OF CONDITION and (UN)LIKELIHOOD OF SATISFACTION) and such variation is the main force driving the typology of conditionals, then this raises the question of how many possible conditional situations there are and how many surface patterns of conditionals might exist. I tackle this issue in the next sections.

### 1.1.3. Combining different values of the two factors: six logically possible conditional situations.

Conditional situations are evaluated with respect to two situation factors: TIME OF CONDITION and (UN)LIKELIHOOD OF SATISFACTION. While the TIME OF CONDITION factor has two values (NON-PAST, PAST), the (UN)LIKELIHOOD OF SATISFACTION factor has three values (LIKELY, UNVALUED, UNLIKELY). Thus, there should exist six possible combinations of factors and their values. This is based on purely mathematical calculation – combination of each of the values of the first factor with each of the values of the second factor: 2 times 3 = 6. The implication is that even though we have so far seen only four different conditional situations so far, there are as many as six logically possible conditional situations (as in table 1.1.3.1).

Table 1.1.3.1: Conditional situations and the situation factors that allow for their distinction.

Attested?	Situation:	Situation factors:	
		TIME OF CONDITION: (Does the condition refer to a non-past reference time RT?)	(UN)LIKELIHOOD OF SATISFACTION: (How likely is it that the condition might be satisfied?)
√	A	NON-PAST	LIKELY
√	B	NON-PAST	UNVALUED
√	C	NON-PAST	UNLIKELY
√	D	PAST	UNLIKELY
*	E	PAST	UNVALUED
*	F	PAST	LIKELY

Only situations A through D are actually attested. Situations E and F are unattested in languages under the scope of this study and, in fact, are unlikely to be attested at all in natural languages. This is because there exists a correlation between the time of condition being a past time and the unlikelihood of satisfaction of such a condition. Specifically, if the condition refers to a past time  $t'$  prior to RT, speakers seem to associate it automatically with an UNLIKELY value on the LIKELIHOOD OF SATISFACTION SCALE. Unfortunately, I am not able to provide an in-depth discussion as to why it may be the case. However, I would like to point out that it might be possible that speakers judge all the past conditions as unlikely due to their inaccessibility.

#### 1.1.4. The four conditional situations attested.

Taking into account the two situation factors and their values, the four conditional situations attested in natural languages have the following meanings.

- CONDITIONAL SITUATION A (FUTURE NEUTRAL VIVID CONDITIONAL):

THE CONDITION REFERS TO A **NON-PAST** (USUALLY FUTURE) TIME AND, THEREFORE, IT MIGHT AND IS VERY **LIKELY TO BE MET** AT SOME TIME  $t'$ , WHERE  $t'$  IS AFTER THE REFERENCE TIME (RT), GIVEN THE STATE OF THE ACTUAL WORLD AND SPEAKER'S BELIEFS.

(32) If Olú visits Mary (tomorrow), he will make her happy.

- CONDITIONAL SITUATION B (FUTURE LESS VIVID CONDITIONAL):

THE CONDITION REFERS TO A **NON-PAST** TIME AND, THEREFORE, IT MIGHT BE MET AT SOME TIME  $t'$ , WHERE  $t'$  IS AFTER THE REFERENCE TIME (RT). GIVEN THE STATE OF THE ACTUAL WORLD AND SPEAKER'S BELIEFS, **THE LIKELIHOOD THAT THE CONDITION WILL BE MET IS UNVALUED** (LESS THAN LIKELY BUT NOT UNLIKELY).

(33) If Olú visited Mary (tomorrow), he would make her happy.

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

▪ CONDITIONAL SITUATION C (PRESENT COUNTERFACTUAL):

THE CONDITION REFERS TO A **NON-PAST** TIME AND, THEREFORE, IT MIGHT BE MET AT SOME TIME  $t'$ , WHERE  $t'$  IS AFTER THE REFERENCE TIME (RT). GIVEN THE STATE OF THE ACTUAL WORLD AND SPEAKER'S BELIEFS, IT IS VERY **UNLIKELY THAT THE CONDITION BE MET.**

(34) If Olú visited Mary (tomorrow), he would make her happy.

[Given the present circumstances Olú will not visit Mary. / It is unlikely that Olú will do so.]

▪ CONDITIONAL SITUATION D (PAST COUNTERFACTUAL):

THE CONDITION REFERS TO A **PAST** TIME  $t'$  PRIOR TO RT AND, THEREFORE, TO A (POSSIBLE) WORLD  $w'$  THAT WAS ACCESSIBLE ONLY AT THE TIME  $t'$ . GIVEN THE STATE OF THE ACTUAL WORLD AND SPEAKER'S BELIEFS, IT IS **IMPOSSIBLE THAT THE CONDITION BE MET.**

(35) If Olú had visited Mary (yesterday), he would have made her happy.

#### 1.1.5. Logically possible versus attested meaning-form mapping patterns.

These four attested conditional situations: A, B, C and D differ from one another with respect to values of the two situation factors: the time at which the condition is met (TIME OF CONDITION) and its relative likelihood of whether the condition can be met ((UN)LIKELIHOOD OF SATISFACTION). I have argued that natural languages distinguish different types of conditional constructions based on the grammatical elements that are used to mark them. Based on the above, one may expect these grammatical elements to reflect the two situation factors that

allow for distinguishing conditional situations. If this were the case, then variation in form would reflect variation in meaning and vice versa. More specifically, how a language manipulates the two situation factors would determine: (i) how many types of conditionals are attested in it, (ii) how each attested surface form differs morpho-syntactically from the other(s) and (iii) what the readings are for each of the surface forms.

Even though each situation factor is equally important as far as the meaning is concerned, if languages vary with respect to the relevance of each of the situation factors, then only some situation factors will be employed in the process of meaning-form mapping. In fact, as will be shown below, languages differ in ways that the relative likelihood of satisfaction ((UN)LIKELIHOOD OF SATISFACTION factor) is interpreted for purposes of meaning-form mapping, with some languages focusing on the relative LIKELIHOOD of satisfaction ([LIKELY] value of the (UN)LIKELIHOOD OF SATISFACTION factor (Standard Average European)) and others, like Yorùbá, on the relative UNLIKELIHOOD of satisfaction ([UNLIKELY] value of the (UN)LIKELIHOOD OF SATISFACTION factor).

Under the assumption that factors (and their prominent values) can combine freely, seven possible surface patterns are predicted (see appendix A for details). However, only two patterns are attested in languages under the scope of this study. In latter parts of this study, I argue that actually only the two patterns that are attested in the sample of languages provided here are likely to be attested cross-linguistically. These are presented below.



### 1.1.6. Role of the consequent.

So far, I have only mentioned factors that allow for differentiation of conditional situations based on the condition clause. Given the principle of compositionality – according to which the meaning of the phrase  $\gamma$  composed of the two lexical items  $\alpha$  and  $\beta$  is directly derived from the meaning of lexical items and the way in which they combine (Heim and Kratzer (1998)) – we expect the result clause to influence the conditional situation as well. Nevertheless, as sentences in (36) through (39) below show, the result clause has little impact on the conditionality of the entire situation; rather it specifies the situational particularities of the result.

(36) If he had taken arsenic, he would be showing symptoms by now.

(37) If he had gone to medical school just after college, he would be a doctor now.

What is particular about the two situations above (let's call them D') is that their conditions are in the past and, thus, unlikely; while their results refer to the present and continue to be unlikely – i.e. these are past counterfactuals with present results.

(38) If mom were to come now, we are in trouble.

[non-past/less-than-likely condition (B or C) and non-past/likely result (A)]

In this situation (let's call it B' or C' depending on the speaker's assumptions about the likelihood of the antecedent), the condition is in the present and is less-than-likely (unvalued (B) or unlikely (C)); while its result is likely and continues to refer to the present – i.e. it is a non-past subjunctive conditional/counterfactual with likely (indicative) result.

- (39) If he had stolen my car, I will report him to the police.  
[past/unlikely condition (D) and non-past/likely result (A)]

The above situation (let's call it D'') consists of a past and, thus, unlikely condition; and a likely result that refers to the present – i.e. it is a past counterfactual with likely (indicative) result.

Many speakers consider such situations to be variations of the ones in A through D, whereas others plainly reject such statements as logically awkward. Because of that, I abstain from discussing potential semantic/pragmatic factors that are at play in result clauses and refrain from further discussion of conditionals that render such sub-situations.

In addition, there exists a special sub-set of situations which from the perspective of the meaning factors correspond to situation A. An example is shown in (40).

- (40) Every time/whenever Olú visits Mary, he makes her happy.

What is particular about this situation (let's call it A') is that its events (both condition and result) re-occur together – i.e. it is a habitual conditional situation. Since situations A' are a sub-set of situations A with an extra semantic layer on top (namely habitual), I will not be discussing them as a separate set in this study (on parallel with situations like those in (36) through (39)). I now turn to a central question for the current analysis, namely how these four semantic types of conditional situations are morpho-syntactically coded.

## 1.2. The form itself.

From the structural point of view, conditionals are complex sentences composed of two clauses: a result clause and a condition clause (Côté et al. (1987)). This is shown in (41).

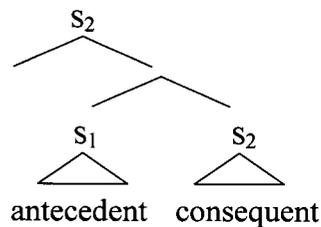
- (41) [CONDITION CLAUSE If Olú visits Mary (tomorrow)], [RESULT CLAUSE he will make her happy].

Given that first studies of conditionals were done based on Standard Average European languages such as English, in which the condition clause is always introduced by *if* and the result clause often contains *then*, many linguists refer to the two clauses as *if-clause* and *then-clause* respectively (Lewis (1973)). Most recent linguistic literature (Ippolito (2002) amongst others) refers to the two entities as the *antecedent* (in reference to the condition clause) and the *consequent* (to mean the result clause) as in (42).

(42) [ANTECEDENT If Olú visits Mary (tomorrow)], [CONSEQUENT he will make her happy].

In addition, the consequent is always a main clause and the antecedent acts as a dependent/subordinate clause that restricts the former.<sup>6</sup> This dependency is directly reflected in the morpho-syntactic structure as well, as will be discussed in later parts of this study (chapter 3 in particular). For now, it is important to remember the basic generalisations – i.e. the fact that conditionals are bi-clausal (antecedent plus consequent) and that the antecedent is subordinate with respect to the consequent. This is illustrated in (43).

(43)



In the following sub-sections I take a closer look at few natural languages (including Yorùbá) and examine in greater detail how the four conditional situations identified based on semantic/pragmatic factors are represented in the morpho-syntax. More specifically, the question that I will be asking is whether there is a one-to-one mapping between the conditional situations A, B, C, D and the morpho-syntactic forms of conditional sentences in these languages.

<sup>6</sup> This is hardly surprising considering the semantic contribution that each of the clauses makes to the sentence expressing a conditional situation like A, B, C or D.

### 1.3. Mapping meaning onto form.

Natural languages use different strategies to render meaning through form. The obvious strategy is to use different strings of phonemes to represent different meanings – this strategy is predominantly employed and gives rise to the very many existing lexical items.<sup>7</sup> Given that phonological inventories of natural languages are finite and that they are further bound by phonotactic constraints, it is impossible to assign different strings of phonemes to each entity of meaning. This is why languages exploit other mechanisms available within the system. Therefore, mapping of complex real-life situations, such as conditional situations, onto form requires a combination of different mechanisms, in particular morpho-syntactic ones. In fact, under the assumptions of the principle of compositionality, it is always the case that the form not only contributes to the interpretation of complex semantic entities, but more importantly allows for rendering of a particular complexity in meaning. A good example of coding such complexity is the mapping of conditional situations onto particular structures. Within a conditional situation the condition that restricts the result (i.e. the felicity and truth value of the result depend on those of the condition) is formally equated with a subordinate/main clause distinction. This meaning dependency is not only reflected by the dependency within the form, but more importantly it is likely that rendering such a dependency without the form materialising is impossible.

The issue of mapping meaning onto form recurs throughout this study due to its importance for evaluating the plausibility of any linguistic analysis. Sections below show how meaning of conditional situations is mapped onto form in Italian, French, English, Yorùbá and Polish.

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<sup>7</sup> I abstain here from discussing phenomena such as homophony or polysemy as they have no bearing on the present discussion.

## 1.4. Conditional forms attested in Italian, French and English (SAE).

The vast majority of published materials discussing the meanings and forms of conditionals are based on examining these constructions in languages like English, French or Italian (these are often referred to as the Standard Average European languages). This does not mean, however, that patterns found in these languages are the only patterns existing cross-linguistically. In fact, as will be shown shortly, the Standard Average European languages code the four conditional situations (A, B, C and D) with only three morpho-syntactic forms (Ippolito (2002) amongst others): indicative conditional (situation A), non-past subjunctive conditional (situations B and C) and past subjunctive conditional (situation D) – it is not a one-to-one mapping. Since natural languages allow such discrepancy between structure and meaning, it is to be expected that not all natural languages will display it in the same way as Standard Average European. But, there must nevertheless exist some rule(s) or pattern(s) that ensure consistency in such imperfect meaning-structure mappings. Before any generalisations can be made in this respect, one ought to consider the range of actual cross-linguistic variations. I start by introducing data from Italian, French and English as they constitute a reference set against which other patterns can be compared.

### 1.4.1. Italian.

Three conditional forms are observed in Italian: the indicative conditional, the non-past subjunctive conditional and the past subjunctive conditional.

- INDICATIVE CONDITIONAL:

Consider first the so-called indicative conditional in (44). Observe that both the antecedent and the consequent are in the indicative mood, with the antecedent being in the present indicative (*visita*) and the consequent in the future/modal indicative (*fara felice*). This form is felicitous when the time of condition is non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A).

(44) *Se Olú visita Maria domani, la fara felice.*

if Olú visit.PRES-IND.3SG Mary tomorrow, pro her do.FUT-MOD.3SG happy

FORM:

ANTECEDENT: [PRESENT-INDICATIVE [if [φ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ NON-PAST SUBJUNCTIVE CONDITIONAL:

Another form found in Italian is the non-past subjunctive conditional, as in (45). In such forms, the antecedent is in the imperfect subjunctive mood (*visitasse*), while the consequent is in the present conditional (*farebbe felice*). This form is felicitous in two contexts: (i) where the time of condition is non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B) and (ii) where the time of condition is non-past but the speaker judges that it is unlikely that the situation will be satisfied (situation C).

(45) *Se Olú visitasse Maria (domani), la farebbe felice.*

if Olú visit.IMP-SUBJ.3SG Mary (tomorrow), pro her do.PRES-COND.3SG happy

FORM:

ANTECEDENT: [IMPERFECT-SUBJUNCTIVE [if [ $\varphi$ ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ PAST SUBJUNCTIVE CONDITIONAL:

Lastly, consider the so-called past subjunctive conditional form as in (46). Observe that the antecedent is in the plus-quam-perfect subjunctive mood (*avesse visitato*), while the consequent is in the past conditional (*avrebbe fatta felice*). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

- (46) *Se Olú avesse visitato Maria (ieri), l'avrebbe fatta felice.*  
if Olú have.IMP-SUBJ.3SG visit.PAST.PART Mary (yesterday), pro her have.PRES-  
COND.3SG do.PAST.PART happy

FORM:

ANTECEDENT: [PLUS-QUAM-PERFECT-SUBJUNCTIVE [if [ $\phi$ ]]]

CONSEQUENT: [PAST-CONDITIONAL [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

To sum up, in terms of the morpho-syntactic components that each of the structures contain in Italian, several observations can be made. First, all three forms of conditionals have their antecedents marked with the conditional clause-type marker (*se* ‘if’). Second, the antecedent of the indicative conditional is marked for present indicative (*-a*) and its consequent contains a future/modal morpheme (*-ra*). In contrast, two other types of conditionals have their antecedents marked for subjunctive mood (*-asse, -esse*) and their consequents marked with the conditional (*-rebbe*). Given the above, one can easily see why the two latter types of conditionals are referred to as *subjunctive* and the former type as *indicative*. An additional difference is observed between the two forms of subjunctive conditionals. Both the antecedent and the consequent of the conditionals representing situation D have their main verb in a past participle form and the auxiliary *avere* ‘have’ or *essere* ‘be’ in the subjunctive/conditional. Such verb forms are considered to be imperfect subjunctive in the past – i.e. plus-quam-perfect subjunctive (*congiuntivo plus-quam-perfecto*) and past conditional (*condizionale passato*) forms. It is also possible to think of such forms as imperfective subjunctive/conditional forms with an additional layer of tense, past tense (this will become relevant once the morpho-syntax of conditional constructions in other Standard Average European languages is considered).

Hence, given that the conditional situations are classified with respect to their morpho-syntactic forms, the name that this type of conditional construction receives is *past subjunctive conditional*. In contrast, the form that renders situations B and C is referred to as *non-past subjunctive conditional*.

Observe that the same morpho-syntactic structure, namely the non-past subjunctive conditional, is used to represent two semantic situations: B and C. In this respect, it seems like Italian takes into account two situation factors when mapping meaning of conditionals onto morpho-syntactic structure: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION (or its lack 'fails-to-be-LIKELY'). The UNLIKELIHOOD OF SATISFACTION seems to be of no importance in the language as far as the surface forms are concerned. If it were, situations B and C could not have the same surface form, as only the situation C has the [UNLIKELY] value and situation B is said to be [UNVALUED] – i.e. it 'fails-to-be-UNLIKELY' and 'fails-to-be-LIKELY'. In contrast, situations A and D are mapped onto form as a unique morpho-syntactic structure each: indicative conditional and past subjunctive conditional respectively. In other words, meaning of conditional situations is mapped onto form in Italian based on the LIKELY pattern.

In addition to the three types shown above, two less frequent types of conditional structures have also been identified in Italian (Ippolito (2002)): mismatched past subjunctive conditionals (47) and inverted past subjunctive conditionals (48). (For many Italian speakers such constructions are completely unacceptable or often judged as marginal Old Italian structures.)<sup>8</sup>

- MISMATCHED PAST SUBJUNCTIVE CONDITIONAL:

Consider the first special case of a past subjunctive conditional form as in (47). Observe that the antecedent is in the plus-quam-perfect subjunctive mood (*avesse fatto l'esame*) that is accompanied by an overt future time adverbial (*domani*), while the consequent is in the past conditional (*avrebbe passato*). This form is a special case of situation D.

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<sup>8</sup> The data presented here comes from works of Ippolito (2002) and (2003); the grammaticality judgements and comments are based on D'Andreagiovanni (2006: p.c.).

(47) *Se Olú avesse fatto l'esame di italiano domani, lo avrebbe passato.*

if Olú have.IMP-SUBJ.3SG do.PAST.PART DET exam PREP Italian tomorrow, pro her  
 have.PRES-COND.3SG do.PAST.PART happy

[SPEAKER'S COMMENT: What you mean by it? He is to take it tomorrow, but you already know he didn't take it? I am confused. I think you mean 'if he took it tomorrow, he would pass it'.]

FORM:

ANTECEDENT: [PLUS-QUAM-PERFECT-SUBJUNCTIVE [if [ $\phi$  (FUTURE TIME ADVERBIAL)]]]

CONSEQUENT: [PAST-CONDITIONAL [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú takes the Italian test tomorrow, he will pass it.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had taken the Italian test <i>tomorrow</i> , he would have passed it.

▪ INVERTED PAST SUBJUNCTIVE CONDITIONAL:

Now consider another special case of the past subjunctive conditional form as in (48). Observe that the antecedent is in the plus-quam-perfect subjunctive mood (*avesse fatto l'esame*) with the auxiliary verb being spelled-out before the subject like in an inverted question, while the consequent is in the past conditional (*avrebbe passato*). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D). (Iatridou and Embick (1993) present an in-depth discussion of the contribution that such a conditional inversion brings to the meaning of forms like (48).)

(48) *Avesse Olú fatto l'esame di italiano ieri, lo avrebbe passato.*

have.IMP-SUBJ.3SG Olú do.PAST.PART DET exam PREP Italian yesterday, pro it  
 have.PRES-COND.3SG pass.PAST.PART

[SPEAKER'S COMMENT: Who speaks like that anyhow, people in the past century?]

FORM:

ANTECEDENT: [P-Q-P-SUBJUNCTIVE [INVERSION [ $\phi$ ]]]

CONSEQUENT: [PAST-CONDITIONAL [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú takes the Italian test tomorrow, he will pass it.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had taken the Italian test yesterday, he would have passed it.

Due to limited data available as well as the questionable well-formedness of the above types of conditionals I abstain from elaborating further on the cross-linguistic discussion of the mismatched and inverted past subjunctive conditionals, which in any case seem to be special cases of forms mapping situation D. A good source of information about these types of conditionals is the work of Ippolito (2003). The following table summarises the types of conditional constructions in Italian.

Table 1.4.1.1.: Types of conditionals in Italian.

Situation:	Morpho-syntactic type of construction:
A	INDICATIVE CONDITIONAL
B	NON-PAST SUBJUNCTIVE CONDITIONAL
C	
D	PAST SUBJUNCTIVE CONDITIONAL (%) MISMATCHED PAST SUBJUNCTIVE CONDITIONAL (%) INVERTED PAST SUBJUNCTIVE CONDITIONAL

#### 1.4.2. French.

French is another language which follows the LIKELY pattern. It shares with Italian the three-way distinction as far as the forms of conditionals are concerned. Namely, all three core forms attested in Italian are also found in French: indicative conditional, non-past subjunctive conditional and past subjunctive conditional.

- INDICATIVE CONDITIONAL:

Consider first the so-called indicative conditional in (49). Observe that both the antecedent and the consequent are in the indicative mood, with the antecedent being in the present indicative (*rend visite*) and the consequent in the future/modal indicative (*rendra heureuse*). This form is felicitous when the time of condition is non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A).

- (49) *Si Olú rend visite à Marie demain, il la rendra heureuse.*  
 if Olú pay.PRES-IND.3SG visit PREP Mary tomorrow, he her make.FUT-MOD.3SG  
 happy

FORM:

ANTECEDENT: [PRESENT-INDICATIVE [if [ $\phi$ ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ NON-PAST SUBJUNCTIVE CONDITIONAL:

Further, consider the non-past subjunctive conditional form, as in (50). Its antecedent is in the imperfect of the indicative mood (*rendait visite*), while the consequent is in the present conditional (*rendrait heureuse*). This form is felicitous in two contexts: (i) where the time of condition is non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B) and (ii) where the time of condition is non-past but the speaker judges that it is unlikely that the situation will be satisfied (situation C).

(50) *Si Olú rendait visite à Marie (demain), il la rendrait heureuse.*

if Olú pay.IMP.3SG visit PREP Mary (tomorrow), he her make.PRES-COND.3SG happy

FORM:

ANTECEDENT: [IMPERFECT [if [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ PAST SUBJUNCTIVE CONDITIONAL:

Lastly, consider the so-called past subjunctive conditional form in French, as in (51). Observe that the antecedent is in the plus-quam-perfect of the indicative mood (*avait rendu visite*), while the consequent is in the past conditional (*aurait rendu heureuse*). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

(51) *Si Olú avait rendu visite à Marie (hier), il l'aurait rendue heureuse.*

if Olú have.IMP.3SG pay.PAST.PART visit PREP Mary (yesterday), he her have.PRES-COND.3SG make.PAST.PART happy

FORM:

ANTECEDENT: [PLUS-QUAM-PERFECT [if [ $\phi$ ]]]

CONSEQUENT: [PAST-CONDITIONAL [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

In summary, several observations can be made in terms of the morpho-syntactic components that each of the structures contain in French. First, all three types of conditionals have their antecedents marked with the conditional clause-type marker (*si* 'if'). Second, the antecedent of the indicative conditional is marked for present indicative (*-e*) and its consequent contains a future/modal morpheme (*-ra*). In contrast, two other types of conditionals have their antecedents marked with the imperfect (*imparfait*) marker (*-ait*). Their consequents are marked by presence of the conditional (*conditionnel*), often referred to as the future in the past – i.e. its form is a combination of future/modal (*-ra*) with imperfect (*-ait*) yielding (*-rait*). An additional difference is observed between the two subtypes of subjunctive conditionals. Both the antecedent and the consequent of the forms representing situation D have their main verb in a past participle form and only an auxiliary *avoir* 'have' or *être* 'be' in the imperfect and conditional forms respectively. The former form of verb is often referred to as plus-quam-perfect (*plus que parfait*) and the latter as past conditional (*conditionnel passé*). It is, therefore, possible to think of such forms as imperfect and conditional forms with an additional layer of past tense.

Observe that, as in Italian, in French the same morpho-syntactic form is used to represent the two semantic situations B and C, namely the non-past subjunctive conditional.<sup>9</sup> Therefore, it must also be the case that in French two situation factors are taken into account when mapping meaning of conditionals onto form: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION. The UNLIKELIHOOD OF SATISFACTION factor seems to be of no importance in the language as far as the surface forms are concerned. In contrast, situations A and D are mapped onto a unique morpho-syntactic structure each: indicative conditional and past subjunctive conditional respectively.

I would also like to mention one additional type of conditional construction observed in French: past subjunctive conditional 2<sup>nd</sup> form, as in (52).

▪ PAST SUBJUNCTIVE CONDITIONAL (2<sup>ND</sup> FORM):

Speakers easily understand such structure, but prefer to use (51) at all times claiming that it is more modern – (52) is considered the high register/literary version of (51). Given that (52) is used to render conditional situations D (just like (51) does), I refer to it as past subjunctive conditional. In fact, the form in (52) is a true past subjunctive conditional from the morpho-syntactic point of view. More specifically, it is the only construction in French that still contains markers of the plus-quam-perfect subjunctive mood (*subjonctif plus-que-parfait / conditionnel passé 2<sup>ème</sup> forme* – a.k.a. imperfect subjunctive in the past or past conditional 2<sup>nd</sup> form). This verbal form surfaces in both the antecedent (*eût rendu visite*) and the consequent clauses (*eût rendue heureuse*).

- (52) *Si Olú eût rendu visite à Marie (hier), il l'eût rendue heureuse.*  
 if Olú have.IMP-SUBJ.3SG pay.PAST.PART visit PREP Mary (yesterday), he her  
 have.IMP-SUBJ.3SG make.PAST.PART happy

---

<sup>9</sup> I refer to this construction as the non-past subjunctive conditional on parallel with its Italian equivalent, partly to avoid confusion, but mainly because of the particularity of the subjunctive in French that I will comment on shortly.

FORM:

ANTECEDENT: [PLUS-QUAM-PERFECT-SUBJUNCTIVE [if [ $\phi$ ]]]

CONSEQUENT: [PLUS-QUAM-PERFECT-SUBJUNCTIVE [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

It is due to the existence of this particular surface form of conditionals that I believe the use of the term *subjunctive* for conditional structures referring to situations D is justified for French as well. As I mentioned before, such terminology is even more appropriate for Italian, where *congiuntivo* (the subjunctive mood) surfaces in both past and non-past subjunctive conditionals. In contrast, French seems to have lost subjunctive mood marking in non-past subjunctive conditionals (50) and is currently losing it in past subjunctive conditionals (51) versus (52). Instead, imperfect (*imparfait*) forms are used in the antecedent. The above may be due to the fact that French is currently losing the shifted (or *-in-the-past*) forms of the subjunctive mood in general (*subjonctif imparfait* and *subjonctif plus-que-parfait*). More specifically, as the imperfect and plus-quam-perfect subjunctive forms are being lost, other elements are introduced to compensate for the loss. In French such a compensatory strategy seems to be responsible for the occurrences of imperfect and plus-quam-perfect (imperfect in the past) of the indicative mood (*imparfait* and *plus-que-parfait de l'indicatif*) in antecedents of conditionals. It is obviously not the case in Italian, where subjunctive is still productive, which is why the subjunctive mood is still present in conditional sentences. Based on the above, I argue that the Italian classification into indicative and subjunctive conditionals holds in French

as well. Moreover, given that both languages behave identically with respect to the presence of the extra layer of past tense in constructions rendering situations type D, allowing for a further division of subjunctive conditionals into non-past and past, one must agree that French displays the same types of conditionals as Italian does: indicative conditionals, non-past subjunctive conditionals and past subjunctive conditionals. Table (1.4.2.1) below summarises these findings.

Table 1.4.2.1: Types of conditionals in French.

Situation:	Morpho-syntactic type of construction:
A	INDICATIVE CONDITIONAL
B	NON-PAST SUBJUNCTIVE CONDITIONAL
C	
D	PAST SUBJUNCTIVE CONDITIONAL (2 forms)

Finally, I would like to note that the strategy observed in French, namely the compensatory substitution of indicative for subjunctive mood, is not a phenomenon unique to this language only. In fact, as we shall now see, English is an excellent example of a system where subjunctive mood marking has been replaced by the morphological occurrence of indicative past tense.

### 1.4.3. English.

English is yet another Standard Average European language in which three types of constructions are used to render four semantic conditional situations: A, B, C and D. Based on the data from Italian and French, which are also classified as members of the same language group, one expects in English situation A to be coded as indicative conditional, situations B and C to be mapped onto a single structure, namely non-past subjunctive conditional and

situation D take a surface form of a past subjunctive conditional. Examples in (53) through (55) show that this is exactly the case in the language.

▪ INDICATIVE CONDITIONAL:

Consider first the so-called indicative conditional in (53). Observe that both the antecedent and the consequent are in the indicative mood, with the antecedent being in the present indicative (*visits*) and the consequent in the future/modal indicative (*will make happy*). This form is felicitous when the time of condition is non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A).

(53) *If Olú visits Mary tomorrow, he will make her happy.*

if Olú visit.PRES-IND.3SG Mary tomorrow, he FUT-MOD.3SG make her happy

FORM:

ANTECEDENT: [PRESENT-INDICATIVE [if [ $\phi$ ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ NON-PAST SUBJUNCTIVE CONDITIONAL:

Further, consider the non-past subjunctive conditional form, as in (54). Its antecedent is in the Past Simple of the indicative mood (*visited*), while its consequent is in the future/modal-in-the-

past form (*would make happy*). This form is felicitous in two contexts: (i) where the time of condition is non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B) and (ii) where the time of condition is non-past but the speaker judges that it is unlikely for the situation to be satisfied (situation C).

(54) *If Olú visited Mary (tomorrow), he would make her happy.*

if Olú visit.PAST-IND.3SG Mary (tomorrow), he PAST-FUT-MOD.3SG make her happy

FORM:

ANTECEDENT: [PAST-SIMPLE [if [φ]]]

CONSEQUENT: [FUTURE/MODAL-IN-THE-PAST [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ PAST SUBJUNCTIVE CONDITIONAL:

Lastly, consider the so-called past subjunctive conditional form found in English, as in (55). Observe that the antecedent is in the Past perfect of the indicative mood (*had visited*), while the consequent is in the future/modal-in-the-past-perfect (*would have made happy*). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

(55) *If Olú had visited Mary (yesterday), he would have made her happy.*

if Olú have.PAST-IND.3SG visit.PAST.PART Mary (yesterday), he PAST-FUT-MOD.3SG  
have.AUX make.PAST.PART her happy

FORM:

ANTECEDENT: [PAST-PERFECT [if [ $\phi$ ]]]

CONSEQUENT: [FUTURE/MODAL-IN-THE-PAST-PERFECT [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

Morpho-syntactically, in English, all three types of conditionals have their antecedents marked with the conditional clause-type marker ‘if’. Second, the antecedent of the indicative conditional is marked for present-indicative (-s) and its consequent contains a future/modal (also referred to as present tense of the modal WOLL) morpheme (*will*). In contrast, two other types of conditionals have their antecedents marked with the (simple) past tense marker (-ed) and their consequents contain a future/modal-in-the-past marker (*would*, also referred to as past tense of the modal WOLL). An additional difference is observed between the two subtypes of subjunctive conditionals. Both the antecedent and the consequent of the structure representing situations D have their main verb in a past participle form and either the auxiliary verb *have* (antecedent) or *would* – the future/modal-in-the-past marker – (in the consequent) respectively. The former form of verb is often referred to as *past-perfect* and the latter as *future-perfect* (future-in-the-past-perfect). It is, therefore, possible to think of such forms as simple past and future-in-the-past forms with an additional layer of past tense. Notice that English is similar to

French, which as mentioned above, is currently losing its subjunctive mood. Specifically, no subjunctive mood marking is observed in English conditionals either.

The meaning-form mapping in English, like in Italian and French, takes into account only two factors: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION. The UNLIKELIHOOD OF SATISFACTION factor seems to be of no importance in the language as far as the surface forms are concerned. In contrast, situations A and D are mapped onto form as a unique morpho-syntactic structure each: indicative conditional and past subjunctive conditional respectively. Given the above, one can state that the English pattern is the same as the pattern attested in Italian and French, namely the LIKELY pattern.

Further, recall the discussion of the form of Italian conditionals, in which I demonstrated that Italian uses: (i) (imperfect) subjunctive mood to distinguish surface forms of conditionals A from those of situations B, C and D and (ii) past tense to further differentiate situations D from the B/C conditionals which share the surface form. The question that arises is why English, which is also a Standard Average European language and displays the same meaning-form mapping properties of conditional situations A, B, C and D, does not parallel Italian as far as the internal morpho-syntactic make-up of surface forms is concerned. More specifically, why is the indicative/subjunctive mood distinction not employed? The answer to this question becomes clearer in light of the fact that English has essentially lost its subjunctive mood marking. Rather, most of the environments in which subjunctive is expected to appear (wishes, regrets, etc...) are instead marked by occurrence of a bare form of the verb or past tense morphology (see (56) and (57) below).

(56) The judge ordered that the accused be kept in jail.

(57) I regret she was not there to console me.

Nevertheless, some remnants of the subjunctive can still be found in the language. One does not even have to go as far as search through high-register written materials to find it. In fact, some speakers of modern English still make use of it in their speech – it seems to be restricted, however, to the high-frequency verb *to be*. Compare the form of the verb ‘to be’ in (58) without the subjunctive environment with that in (59) where the environment is subjunctive.

(58) I was there for you when you needed advice.

(59) I wish [I were there for you at this difficult time.]

The presence versus absence of specific subjunctive mood marking in English and French, and Italian on the other hand, may seem of moderate relevance for the current discussion, except for the author trying to find reasons for which the three types of conditional structures found in English should still be referred to as indicative (situation A), non-past subjunctive (situations B and C) and past subjunctive (situation D) conditionals. I would like to assure the reader that these issues will be raised again in Chapters 2 and 3 where they will largely contribute to the discussion of the semantic model for interpretation of conditional sentences and to the analysis of the meaning-form mapping of conditionals that yields attested morpho-syntactic structures.

At the end, I would like to point out that two less frequent types of conditional structures, in addition to the three types shown above (see examples (53) – (55)), have also been identified for English (see: Iatridou et al. (1994), Iatridou (2000) and Ippolito (2002)): mismatched past subjunctive conditionals and inverted past subjunctive conditionals. From the form-/situation-internal point of view, they are variations of the past subjunctive conditional – same has been said for Italian. I present these two conditional structures in (60) and (61) below. (Note that speakers of English are divided as to whether such constructions are grammatical in the language at all: many find them completely unacceptable, others judge them as marginal.)

▪ MISMATCHED PAST SUBJUNCTIVE CONDITIONAL:

Consider the first special case of a past subjunctive conditional form as in (60). Observe that the antecedent is in the Past Perfect of the indicative mood (*had taken*) that is accompanied by an overt future time adverbial (*tomorrow*), while the consequent is in the future/modal-in-the-past-perfect (*would have passed*). This form is a special case of situation D.

(60) *If Olú had taken the Italian test tomorrow, he would have passed it.*

if Olú have.PAST-IND.3SG take.PAST.PART the Italian test tomorrow, he PAST-FUT-  
MOD.3SG have.AUX pass.PAST.PART it

FORM:

ANTECEDENT: [PAST-PERFECT [if [ $\phi$  (FUTURE TIME ADVERBIAL)]]]

CONSEQUENT: [FUTURE/MODAL-IN-THE-PAST-PERFECT [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú takes the Italian test tomorrow, he will pass it.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had taken the Italian test tomorrow, he would have passed it.

▪ INVERTED PAST SUBJUNCTIVE CONDITIONAL:

Now consider another special case of the past subjunctive conditional form as in (61). Observe that the antecedent is in the Past perfect of the indicative mood (*had taken*) with the auxiliary verb being spelled-out before the subject like in an inverted question, while the consequent is in the future/modal-in-the-past-perfect (*would have passed*). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D). (Refer to work of Iatridou and Embick (1993) for an in-depth discussion of such conditionals.)

(61) *Had Olú taken the Italian test yesterday, he would have passed it.*

have.PAST-IND.3SG Olú take.PAST.PART the Italian test yesterday, he PAST-FUT-MOD.3SG have.AUX pass.PAST.PART it

FORM:

ANTECEDENT: [PAST-PERFECT [INVERSION [ $\phi$ ]]]

CONSEQUENT: [FUTURE/MODAL-IN-THE-PAST-PERFECT [ $\psi$ ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú takes the Italian test tomorrow, he will pass it.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had taken the Italian test yesterday, he would have passed it.

Just like in Italian, (60) implies a certain shift in semantics (reference to future time is introduced, hence the mismatch of past and future in the same clause) and (61) implies a structure internal syntactic change (inversion). Due to limited data available as well as the questionable well-formedness of the above types of conditionals I refrain from any further discussion of the mismatched and inverted past subjunctive conditionals in English.

Table 1.4.3.1: Types of conditionals in English.

Situation:	Morpho-syntactic type of construction:
A	INDICATIVE CONDITIONAL
B	NON-PAST SUBJUNCTIVE CONDITIONAL
C	
D	PAST SUBJUNCTIVE CONDITIONAL (%) MISMATCHED PAST SUBJUNCTIVE CONDITIONAL (%) INVERTED PAST SUBJUNCTIVE CONDITIONAL

### 1.5. Yorùbá conditional sentences are different.

We have seen that when mapping meaning (conditional situations A, B, C and D) onto form the Standard Average European languages employ the pattern based on two out of the three situation factors, namely: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION. As a result three conditional structures are attested with situations B and C being coded in the same way (LIKELY pattern)<sup>10</sup>. In contrast, only two forms of conditionals are attested in Yorùbá: realis conditionals and irrealis conditionals.

▪ REALIS CONDITIONAL:

Consider first the so-called realis conditional in (62). Observe that both the antecedent and the consequent contain a modal (*bá* and *yóò* respectively), with the consequent being optionally marked for the realis mood (*M-tone* on *y* of the *yóò*). The antecedent is additionally marked with a clause-typing marker (*bí*). This form is felicitous in two contexts: (i) where the time of condition is the non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A) and (ii) where the time of condition is the non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B).

(62) *Bí Olú bá lọ kí Meri (lọla), yóò mú inú rẹ̀ dùn.*

if Olú MOD go greet Mary (tomorrow), FUT-MOD make stomach PRO.3SG sweet

FORM:

ANTECEDENT: [MODAL [bí [φ]]]

CONSEQUENT: [(REALIS MOOD)-FUTURE/MODAL [ψ]]

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<sup>10</sup> Or as some may view it, the non-past subjunctive conditional form in languages such as English, French and Italian is ambiguous between the B and C readings.

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

As (62) shows, the first semantic factor for which these situations share a common value is TIME OF CONDITION. In addition, both of the situations are alike in that they have value other than [UNLIKELY] within the LIKELIHOOD OF SATISFACTION SCALE (they share the lack of the UNLIKELIHOOD) – situation A is [LIKELY] and situation B is [UNVALUED]. As was pointed out before, situations B and C also have the same value for the time of condition factor. In fact, the time of condition factor can be used only to set apart situations D, which is clearly not the case in Yorùbá. Moreover, unlike in the Standard Average European languages, the LIKELIHOOD OF SATISFACTION cannot be of importance in Yorùbá as far as the surface forms are concerned, given that it sets apart situation A from three other situations (B, C and D). If it were, the same morpho-syntactic form could not be used to render meaning of both situations (A and B) at the same time. Consequently, the UNLIKELIHOOD OF SATISFACTION is the only element remaining to be considered. Situations A and B both imply that the condition might (or at least ‘fails-to-be-UNLIKELY’ to) be met given the state of the actual world and speaker’s take on the situation in contrast to situations C and D which share the UNLIKELIHOOD. One can say that the value of the LIKELIHOOD OF SATISFACTION SCALE factor other than [UNLIKELY] renders at least minimal reality of the condition, which the counterfactuals (C and D) lack. The latter fact combined with the consideration of the morpho-syntactic make-up of the form coding situations A and B in the language – i.e. (optional) marking for the realis mood – allow me to refer to this form as *realis conditional*.

The second form of conditionals in Yorùbá codes situations C and D. This type of conditional is an irrealis conditional, as demonstrated in (63).

▪ IRREALIS CONDITIONAL:

Observe that in the irrealis conditionals found in Yorùbá both the antecedent and the consequent contain a modal (*bá*), with the consequent being obligatorily marked for the irrealis mood (*L-tone i*). The antecedent is additionally marked with a clause-typing marker (*bí*). This form is felicitous in two contexts: (i) where the time of condition is non-past but the speaker judges that it is unlikely for the situation to be satisfied (situation C) and (ii) where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

(63) *Bí Olú bá (ti)<sup>11</sup> lẹ́ kí Meri (lánà/lọ́la), ì bá (ti) mú inú rẹ̀ dùn.*

if Olú MOD (PERF) go greet Mary (yesterday/tomorrow), IRR-MOOD MOD (PERF)  
make stomach PRO.3SG sweet

FORM:

ANTECEDENT: [MODAL (PERFECTIVE) [bí [φ]]]

CONSEQUENT: [IRREALIS MOOD - MODAL (PERFECTIVE) [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

<sup>11</sup> The optional use of *ti* (the perfective marker/adverb 'already') in these constructions needs further investigation, but it does not seem to have any bearing on the interpretation of the conditionals per se.

To sum up, from the morpho-syntactic perspective, several observations can be made. First, both types of conditionals have their antecedents marked with the conditional clause-type marker (*bi* 'if'). Second, the antecedents of both realis and irrealis conditionals contain the modal verb (*bá*). The consequent of realis conditional contains a future/modal marker (*yóò*<sup>12</sup>) or any modal other than *bá* with optional realis mood marking. In contrast, irrealis conditional has its consequent marked for irrealis mood (*i*)<sup>13</sup>, hence the name for this construction.

Meaning-wise, again, the only factor which sets situations C and D apart from situations A and B is the UNLIKELYHOOD OF SATISFACTION, more specifically they share the [UNLIKELY] value for the LIKELIHOOD OF SATISFACTION. For situation C the actual state of affairs implies that the condition is unlikely to be satisfied, condition in situation D is not only unlikely to be satisfied but also refers to no longer accessible possible worlds which were only available as extensions of the actual world at a past time. Moreover, this unlikelihood of satisfaction of the condition provided the state of the actual world is marked by occurrence of the irrealis mood in Yorùbá. For that reason I label this type of construction *irrealis conditional*.

The meaning-form mapping of Yorùbá conditionals is shown in the table below.

Table 1.5.1: Types of conditionals in Yorùbá.

Situation:	Morpho-syntactic type of construction:
A	REALIS CONDITIONAL
B	
C	IRREALIS CONDITIONAL
D	

To conclude, the meaning-form mapping pattern employed in Yorùbá is the one based on the UNLIKELYHOOD OF SATISFACTION only, namely the UNLIKELY pattern.

<sup>12</sup> In Chapter 4, I will argue that *yóò* is a complex lexical item which contains the realis mood (*y-*). Such mood marking is, however, optional as supported by the free alternation of the *yóò* and *óò* allomorphs.

<sup>13</sup> In section 3.6.2, I show independent evidence for this claim – i.e. I show that the L-tone (*i*) marks the irrealis mood in the language.

## 1.6. Polish is a system ‘in transition’.

At first glance, the Yorùbá system may appear to be unconventional in that it does not follow the meaning-form mapping pattern found in other languages (as exemplified by the Standard Average European group). However, it is not the only natural language which distinguishes only two instead of three morpho-syntactic forms of conditionals.<sup>14</sup> In fact, a Yorùbá-like pattern (the UNLIKELY pattern) of such constructions is attested in modern Polish, a Slavic language from the Indo-European family. Although the three-way division, along the lines of that found in the Standard Average European languages, is still present in the written language – i.e. law and administration, high-register press and literature, and so on – it is currently being reanalysed as a two-way split. The latter tendency is attested in informal discourse, especially in the spoken language. What I mean here by ‘is currently being reanalysed’ is that speakers are capable of freely moving back and forth between both the old and the new system(s), without necessarily associating them with a particular register. In fact, it is common that a speaker will use the ‘old’ form to make sure that his/her utterance is understood in the way it is intended; even though the primary conditional rule of his grammar is that observed in systems like Yorùbá which exhibit only a two-way distinction of conditional constructions: realis versus irrealis conditionals. The following two subsections show ‘old’ and modern patterns in Polish respectively.

### 1.6.1. The Standard Average European (LIKELY) pattern in Polish.

One pattern observed in Polish is that found in Standard Average European languages within which three types of conditionals are distinguished, namely: indicative conditionals, non-past subjunctive conditionals and past subjunctive conditionals, as in (64) through (66) below.

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<sup>14</sup> One may argue that treating the morpho-syntactic pattern of conditionals found in the Standard Average European languages as conventional is a fallacy – I agree. For one thing, neither the latter nor Yorùbá display a 1 to 1 meaning-form mapping; for another, in what sense employing one strategy (using 2 semantic factors) is better than employing another (using only 1 such factor).

▪ INDICATIVE CONDITIONAL:

Consider first the so-called indicative conditional in (64). Observe that both the antecedent and the consequent are in the indicative mood and that both are marked for the future/modal (*odwiedzi* and *sprawi przyjemność* respectively). This form is felicitous in where the time of condition is the non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A).

- (64) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*  
 if Olú visit.FUT-MOD.3SG Mary tomorrow, cause. FUT-MOD.3SG her pleasure

FORM:

ANTECEDENT: [FUTURE/MODAL<sup>15</sup> [jeśli [φ]]]

CONSEQUENT: [FUTURE/MODAL [ψ]]

---

<sup>15</sup> Note that as many other Slavic languages Polish is said to be an aspect-driven system. This property surfaces in the Tense/Aspect distinctions in the language. Specifically, Polish distinguishes two types of past and two future tenses: perfective and imperfective past and perfective and imperfective future. Present tense in Polish is said to be imperfective. However, if one considers the future tense forms, s/he will notice that the perfective future form and the (imperfective) present tense form differ from one another in the same way as the perfective and imperfective past forms do.

- |       |                 |                  |
|-------|-----------------|------------------|
| (i)   | <u>robię</u>    | do.IMP-PRES.1SG  |
| (ii)  | <u>zrobię</u>   | do.PERF-FUT.1SG  |
| (iii) | <u>robiłem</u>  | do.IMP-PAST.1SG  |
| (iv)  | <u>zrobiłem</u> | do.PERF-PAST.1SG |

In contrast, the imperfective future form is quite similar to the futurate constructions found in Indo-European languages: English *going to* + *infinitive*, French *aller à* + *infinitive*, and so on. Namely, it is composed of the future tense of the verb *być* 'be' – i.e. *będzie, będziesz, będzie,...* and the imperfective past form of main verb marked for number/gender only (not for person).

- |       |                       |                                  |
|-------|-----------------------|----------------------------------|
| (v)   | <i>będę robił</i>     | be.PERF-FUT.1SG do.IMP-PAST.SG.M |
| (vi)  | <i>będziesz robił</i> | be.PERF-FUT.2SG do.IMP-PAST.SG.M |
| (vii) | <i>będą robili</i>    | be.PERF-FUT.3PL do.IMP-PAST.PL.M |

In fact, Miodunka (2005) notes that many Poles currently use the future tense of the verb *być* 'be' + *infinitive* form instead, which may suggest that this construction becomes more and more similar to its equivalents in the Standard Average European languages.

- |        |                       |                        |
|--------|-----------------------|------------------------|
| (viii) | <i>będziesz robić</i> | be.PERF-FUT.2SG do.INF |
| (ix)   | <i>będą robić</i>     | be.PERF-FUT.3PL do.INF |

Regardless of its actual form, I will refer hereafter to the Polish imperfective future as the futurate and to the perfective future forms as future/modal along the lines of Standard Average European systems.

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ NON-PAST SUBJUNCTIVE CONDITIONAL:

Further, consider the non-past subjunctive conditional form, as in (65). Both its antecedent and its consequent are in the present conditional form (*odwiedziłby* and *sprawiłby przyjemność* respectively). This form is felicitous in two contexts: (i) where the time of condition is the non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B) and (ii) where the time of condition is non-past but the speaker judges that it is unlikely for the situation to be satisfied (situation C).

(65) *Jeśli Olú odwiedziłby Marie (jutro), sprawiłby jej przyjemność.*

if Olú visit.PRES-COND.3SG Mary (tomorrow), cause.PRES-COND.3SG her pleasure

FORM:

ANTECEDENT: [PRESENT-CONDITIONAL<sup>16</sup> [jeśli [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

<sup>16</sup> Polish present conditional forms are composed of (perfective or imperfective) past tense forms (marked only for number/gender) and modal/hypothetical *-by* (with person/number/gender marking).

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ PAST SUBJUNCTIVE CONDITIONAL:

Lastly, consider the so-called past subjunctive conditional form in Polish, as in (66). Observe again that both the antecedent and the consequent are in the past conditional form (*byłby odwiedził* and *byłby sprawił przyjemność* respectively). This form is felicitous in contexts where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

- (66) *Jeśli Olú byłby odwiedził Marie (wczoraj), byłby sprawił jej przyjemność.*  
if Olú be.PAST-COND.3SG visit.PERF.3SG Mary (yesterday), be.PAST-COND.3SG  
cause.PERF.3SG her pleasure

FORM:

ANTECEDENT: [PAST-CONDITIONAL<sup>17</sup> [jeśli [φ]]]

CONSEQUENT: [PAST-CONDITIONAL [ψ]]

<sup>17</sup> Polish past conditional forms are composed of past tense forms of the auxiliary verb *być* 'to be' (marked only for number/gender) to which the modal/hypothetical *-by* (with person/number/gender marking) is attached and the past tense form of the main verb (usually perfective, although in some cases imperfective form is grammatical as well). It can be thought of as the present conditional in the past or combination of double past (plus-quam-perfect) with the modal/hypothetical *-by*. Also note that the auxiliary *być* 'to be' does not seem to display the perfective/imperfective distinction at all.

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

Several observations about the form of these constructions can be made. First, all three types of conditionals have their antecedents marked with the conditional clause-type marker (*jeṣli* ‘if’). Second, it is always the case that the verb form of the antecedent is the same as the verb form in the consequent – this is quite a particularity given what has been observed for both the Standard Average European languages and Yorùbá.<sup>18</sup> More precisely, the indicative conditional is marked for the future/modal (*-i*). In contrast, the subjunctive conditionals have both their antecedents and their consequents marked by a conditional form (*-by*) – it seems to be a combination of modal with the past form of the verb. An additional difference is observed within the subjunctive conditionals: the predicates within the form representing situations D are composed of the auxiliary verb *byé* ‘to be’ in conditional form and the past form of the main verb, forms representing situations B and C lack the auxiliary and have the conditional morphology attached to the main predicate. As the next subsection will show, this last morpho-syntactic form of conditional is currently being lost in the language due to a reanalysis of the system.<sup>19</sup> Consequently, one will admit that this meaning-form mapping pattern must be based on the same situation criteria as these employed in the Standard Average European languages (LIKELY pattern), namely TIME OF CONDITION and LIKELIHOOD OF SATISFACTION factors.

<sup>18</sup> This particularity will become highly relevant in chapter 3.

<sup>19</sup> One may argue that it is actually the loss of the past conditional form that is causing the reanalysis and not vice versa. In fact, this option seems much more plausible given the fact that the past conditional forms (used to mark this type) are practically never used in the spoken language anymore.

### 1.6.2. The Yorùbá (UNLIKELY) pattern in Polish.

Another pattern of conditionals is attested in modern Polish. The ‘new’ system makes only a two-way distinction in terms of conditional forms: realis conditional versus irrealis conditional.

▪ REALIS CONDITIONAL:

Consider first the so-called realis conditional in (67). Observe that the antecedent and the consequent are in the indicative mood and that both clauses are marked for the future/modal (*odwiedzi* and *sprawi przyjemność* respectively). This form is felicitous in two contexts: (i) where the time of condition is the non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A) and (ii) where the time of condition is the non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B).

(67) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if Olú visit.FUT-MOD.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

FORM:

ANTECEDENT: [FUTURE/MODAL [jeśli [φ]]]

CONSEQUENT: [FUTURE/MODAL [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
√	A	If Olú visits Mary tomorrow, he will make her happy.
√	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
*	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
*	D	If Olú had visited Mary (yesterday), he would have made her happy.

▪ IRREALIS CONDITIONAL:

The other conditional form found in modern Polish is the irrealis conditional, as in (68). Morpho-syntactically, both its antecedent and its consequent are in the present conditional form (*odwiedziłby* and *sprawiłby przyjemność* respectively). This form is felicitous in two contexts: (i) where the time of condition is non-past but the speaker judges that it is unlikely for the situation to be satisfied (situation C) and (ii) where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

- (68) *Jeśli Olú odwiedziłby Marie (wczoraj/jutro), sprawiłby jej przyjemność.*  
 if Olú visit.PRES-COND.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG her  
 pleasure

FORM:

ANTECEDENT: [PRESENT-CONDITIONAL [jeśli [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

MEANING:

Felicitous?	Situation:	Possible meanings:
*	A	If Olú visits Mary tomorrow, he will make her happy.
*	B	If Olú visited Mary (tomorrow), he would make her happy. [It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]
√	C	If Olú visited Mary (tomorrow), he would make her happy. [Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]
√	D	If Olú had visited Mary (yesterday), he would have made her happy.

As the examples above show, the first type of conditional constructions in modern Polish codes two situations: A and B, while the second type codes situations C and D. The [UNLIKELY] value for the LIKELIHOOD OF SATISFACTION sets situations C and D apart from situations A and B without implying any further divisions – i.e. situations A and B ‘fail-to-be-UNLIKELY’. That is

why I refer to these morpho-syntactic types of conditionals found in Polish in the same way as to those attested in Yorùbá, namely as *realis* and *irrealis conditionals* respectively.

Taking into account the surface forms of these two types of conditionals, the following observations can be made. First, the modern Polish *realis* conditionals are identical in form to indicative conditionals found in the other pattern of Polish conditionals. Similarly, the *irrealis* conditionals have forms identical to those of non-past subjunctive conditionals found in ‘old’ Polish (or Polish ‘before’). The past subjunctive morpho-syntactic structure is no longer an attested type of conditional in modern Polish.

The shift that is currently taking place in Polish involves changes on two separate but related plains. On one hand the morpho-syntactic structure of the language changes – i.e. the double past is being lost – making the form of past subjunctive conditionals no longer available. On the other hand (most likely due to the former shift) the importance of the TIME OF CONDITION factor decreases and the prominence for the LIKELIHOOD OF SATISFACTION changes from [LIKELY] to [UNLIKELY] – i.e. UNLIKELIHOOD becomes the active factor in meaning-form mapping while LIKELIHOOD becomes inactive. This might be considered a compensatory strategy to make up for the elimination of the TIME OF CONDITION from the mechanism driving the meaning-from mapping process.

The table below summarises the two patterns of conditional constructions observed in Polish.

Table 1.6.1: Types of conditionals in ‘old’ Polish and modern Polish.

Situation:	Morpho-syntactic type of construction:	
	<u>‘old’ Polish:</u> (Standard Average European pattern)	<u>modern Polish:</u> (Yorùbá pattern)
A	INDICATIVE CONDITIONAL	REALIS
B	NON-PAST SUBJUNCTIVE CONDITIONAL	CONDITIONAL
C		IRREALIS
D	PAST SUBJUNCTIVE CONDITIONAL	CONDITIONAL

## 1.7. From meaning to form and from form to meaning: what conditionals really are.

In this chapter, I defined four conditional situations {A, B, C, D} and illustrated how they are coded morpho-syntactically in Yorùbá, Standard Average European languages (English, French and Italian) as well as Polish. In addition, I argued that even though, mathematically, there are six possible situations only four are actually attested due to logical restrictions. As the PAST TIME OF CONDITION implies UNLIKELIHOOD OF SATISFACTION – see section 1.1.3. for details – the situations E and F are eliminated making the set above an exhaustive list. The same cannot be said, however, about the list of morpho-syntactic realisations – especially that languages seem to differ with respect to both the number of situation factors which they use and the importance that they accord to each such factor (or its particular value) when mapping meaning onto form. In fact, only five natural languages have been taken into account in this discussion making the sample rather small for any cross-linguistic generalisations. However, a combination of semantic information and the two patterns discussed do allow me to identify parameters of possible cross-linguistic variation.

First, let me recall the two semantic factors that are inherent to the condition imposed on the consequent: (i) TIME OF CONDITION (whether condition refers to a non-past or past reference time (RT)) and (ii) the scalar LIKELIHOOD OF SATISFACTION (in other words, what the speaker's point of view and the state of actual world are; specifically, whether it is likely that the condition might be satisfied: LIKELY; UNVALUED or UNLIKELY). Based on the possible combinations of the values of the two factors and provided that in some cases a particular value of one factor is logically incompatible with a certain value of the other factor, four conditional situations have been identified (see the table below).

Table 1.7.1: Situation factors and conditional situations they form.

Situation:	Situation factors:	
	<u>TIME OF CONDITION:</u> (Does the condition refer to a non-past reference time RT?)	<u>(UN)LIKELIHOOD OF SATISFACTION:</u> (How likely is it that the condition might be satisfied?)
A	NON-PAST	LIKELY
B	NON-PAST	UNVALUED
C	NON-PAST	UNLIKELY
D	PAST	UNLIKELY

Another point that I have made was that neither Yorùbá nor the Standard Average European languages code each of the conditional situations with a unique morpho-syntactic form. In fact, only two forms of conditional constructions are attested in Yorùbá: realis conditionals (A/B) and irrealis conditionals (C/D). This two-way distinction differs from that found in Standard Average European languages in which three<sup>20</sup> forms of conditional sentences were identified: indicative conditionals (A), non-past subjunctive conditionals (B/C) and past subjunctive conditionals (D). More specifically, Yorùbá codes situations A and B with the same morpho-syntactic form in opposition to situations C and D which are coded with another surface form in the language. In contrast, the Standard Average European languages (Italian, French and English) use the same morpho-syntactic form to convey situations B and C which sets them apart from situations A and D each of which is coded with a separate and unique surface form. I also mentioned that there exist languages in which both patterns are attested – Polish is one of them. This particularity of Polish is due to the fact that a shift from the Standard Average European-like system to the Yorùbá-like system has not yet been completed. The table below illustrates the identified patterns.

<sup>20</sup> See Ippolito (2002) and (2003), Iatridou (2000) and Iatridou et al. (1994) for more details and extensive discussions of the peripheral types of conditional constructions in these languages.

Table 1.7.2: Two morpho-syntactic patterns of conditionals attested in natural languages.

Situation:	Morpho-syntactic type of construction:	
	<u>Standard Average European languages:</u> (and 'old' Polish)	<u>Yorùbá:</u> (and modern Polish)
A	INDICATIVE CONDITIONAL	REALIS CONDITIONAL
B	NON-PAST SUBJUNCTIVE CONDITIONAL	
C		IRREALIS CONDITIONAL
D	PAST SUBJUNCTIVE CONDITIONAL	

One may wonder why particular languages divide the meaning-form mapping labour among only certain semantic factors and/or their particular values and not the others. A possible answer might lay in the morpho-syntactic particularities of these systems, especially with respect to marking of certain grammatical categories that – as I will demonstrate in chapter 2 – are instantiations of the values of these factors. In order to be able to identify such links between grammatical categories and particular situation factors at play in conditionals, it is important that key morpho-syntactic elements within the constructions are identified. The table below summarises structural properties of conditionals in both types of systems discussed here: Standard Average European languages (and 'old' Polish) and Yorùbá (and modern Polish). Even though Yorùbá differs significantly from the Standard Average European languages in terms of the distinctions it makes within the conditional system, there exists some overlap as to morpho-syntactic elements used to encode such distinctions and, by extension, at least some of the ingredients of conditionals (Mood and Modal specifically) are attested in both types of languages.

Table 1.7.3: Necessary ingredients of conditionals in SAE languages, Polish and Yorùbá.

Necessary ingredients:		Indicative/Subjunctive Conditional:				Realis/Irrealis Cond.:	
		Italian	French	English	Polish		Yorùbá
					'old'	modern	
A N T E C E D E N T	Clause typing	<i>se</i>	<i>si</i>	<i>if</i>	<i>jeśli</i>	<i>jeśli</i>	<i>bí</i>
	Modal	∅ IF.MOD	∅ IF.MOD	∅ IF.MOD	<i>-by</i> FUTURE/ HYPOTH.	<i>-by</i> FUTURE/ HYPOTH.	<i>bá</i> MODAL
	Mood in SAE subjunctive cond. & Yorùbá irrealis conditionals	<i>-esse</i> IMP-SUBJ	<i>-ait</i> IMP	<i>-ed</i> PAST	<i>-l</i> PAST	<i>-l</i> PAST	NO — ?√ (IRR)
	Double past (Perfect) in past subjunctive cond.	<i>-ato</i> P-PART	<i>-é</i> P-PART	<i>-en</i> P-PART	<i>był...-l</i> DOUBLE PAST (P-Q-P)	NO —	NO —
C O N S E Q U E N T	Modal	<i>-ra</i> FUTURE/ MODAL	<i>-ra</i> FUTURE/ MODAL	<i>will</i> FUTURE/ MODAL (PRES + WOLL)	<i>-by</i> FUTURE/ HYPOTH.	<i>-by</i> FUTURE/ HYPOTH.	<i>yóò</i> FUT-MOD or <i>bá</i> MODAL
	Mood in SAE subj. cond. & Y. irrealis cond.	<i>-esse</i> IMP-SUBJ	<i>-ait</i> IMP	<i>-ed</i> PAST	<i>-l</i> PAST	<i>-l</i> PAST	<i>ì</i> IRREALIS
	Double past (Perfect) in past subjunctive conditionals	<i>-ato</i> P-PART	<i>-é</i> P-PART	<i>-en</i> P-PART	<i>był...-l</i> DOUBLE PAST (P-Q-P)	NO —	NO —

Several questions arise in light of the semantic and morpho-syntactic particularities of conditional constructions in the systems described above. The four most important ones are:

- (i) Why do only certain semantic factors (or even their specific values) drive the structural divisions?
- (ii) Which morpho-syntactic elements code which situation factor (and/or its value)?
- (iii) What is the mechanism of the meaning-form mapping from conditional situations A, B, C and D onto the conditional structures within both the indicative/subjunctive and realis/irrealis systems?
- (iv) Why does a modal surface in the antecedent clause in languages like Yorùbá (and 'modern' Polish) and why is it absent in Standard Average European systems?

I tackle these issues in chapter 2, which concentrates on the semantic basis of conditionals, and in chapter 3, which is devoted to the morpho-syntax of conditional forms attested in Yorùbá and other languages under the scope of this study.

## Chapter 2: The meaning behind the forms of Yorùbá conditionals.

This chapter presents a model for the interpretation of conditionals within which the particularities of the two types of conditionals in Yorùbá are explained. The core structure of the model is a tri-partite quantificational structure as defined by Heim (1982), a structure which was applied by Ippolito (2002) to account for the conditional forms found in the so-called Standard Average European languages: Italian and English. However, unlike the model of Ippolito (2002), the proposal developed here accounts for a range of data in both Yorùbá and other languages under the scope of this study. In fact, it makes predictions with respect to the range of cross-linguistic variation to be expected. Specifically, the current analysis takes into account: (i) the two situation factors that drive the division of conditionals into four types: A, B, C and D (as defined in chapter 1), namely the (UN)LIKELIHOOD OF SATISFACTION and the TIME OF CONDITION as well as (ii) the hypothesis that surface variation across the systems is due to language-specific constraints on and differences in meaning-form mapping. I propose that the three necessary ingredients of conditional meanings are realised by specific morpho-syntactic elements, as in the table below.

Table 2.1.: Ingredients of conditionals and their instantiations in the form.

Necessary ingredients of conditionals:	Grammatical categories that code them:
(UN)LIKELIHOOD OF SATISFACTION	Mood
TIME OF CONDITION	Tense
QUANTIFICATION OVER POSSIBLE WORLDS/ MODAL	Modal

I conclude the chapter by discussing implications of this model for the range of typological variation to be expected in natural languages; the conditional structures attested being a reflection of system-specific particularities such as TENSE- versus ASPECT-PROMINENCE which drive the variation in meaning-form mapping.

## 2.1. The revised semantic model of conditionals.

The model for the interpretation of conditionals adopted here is consistent with two claims: (i) semantic properties of elements such as MOOD, TENSE and MODAL are equivalent across languages and (ii) there is a direct dependency between MEANING and FORM. As discussed in Appendix B, attempts to apply the Ippolito (2002) model to languages other than English and Italian or French are unsuccessful and always result in violations of these two requirements. In contrast, the current model not only incorporates these two claims, but actually makes them its driving force. The current proposal contrasts with that of Ippolito (2002) as follows: whereas the latter takes the PERFECT to be a necessary component of conditionals, the current analysis invokes distinctions of MOOD, TENSE and MODALITY as crucial. Before I turn to the discussion of the model, I take a closer look at the English Simple Past and Past Perfect (Ippolito (2002) PERFECT in disguise) as well as at the French imperfect (*imparfait*) and plus-quam-perfect (*plus-que-parfait*).

### 2.1.1. The PAST/PERFECT of a subjunctive.

Ippolito (2002) claims that, in English, both the antecedent and the consequent of the non-past subjunctive conditional are marked for Simple Past tense (-*ed*) which is in fact PAST (PERFECT in disguise).

- NON-PAST SUBJUNCTIVE CONDITIONAL:

(69) *If Olú visited Mary (tomorrow), he would make her happy.*

if Olú visit.PAST-IND.3SG Mary (tomorrow), he PAST-FUT-MOD.3SG make her happy

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

At first glance, it looks like Ippolito (2002) has independent reasons to claim that PAST actually occurs in both clauses. Recall, however, our discussion of the disappearing subjunctive mood in English. It was said that some speakers still maintain the difference between the past indicative tense and subjunctive while others use past tense only to mark both environments. A particular example where subjunctive marking is still attested are occurrences of the auxiliary verb *be* in subjunctive environments. Verifying what form this verb takes in non-past subjunctive conditionals is very revealing.

▪ NON-PAST SUBJUNCTIVE CONDITIONAL:

(70) *If Olú were nice to Mary (tomorrow), he would make her happy.*

if Olú be.PRES-SUBJ.3SG nice to Mary (tomorrow), he PAST?-FUT-MOD.3SG make her happy

= (B) ‘If Olú were nice to Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not be nice to Mary than that Olú will be it, but it is not (totally) unlikely that Olú will be nice to Mary.]

= (C) ‘If Olú were nice to Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not be nice to Mary. I.e.: it is unlikely that Olú is/will be nice to her.]

The example (70) shows that the verb form that is attested is the subjunctive form of the verb *be* (*were*) and not the past tense form (*was*). This raises a question about the presence of the past tense in the consequent. Unfortunately, one cannot test the form directly as the modal WOLL cannot be replaced by the auxiliary *be* without rending the entire construction ill-formed or non-conditional. To the rescue here comes the argument made by Ippolito (2002) – she argues that PAST is copied to both the antecedent and the consequent. If PAST is actually SUBJUNCTIVE, it must be the case that both the antecedent and the consequent are marked for SUBJUNCTIVE here.

What about the PERFECT (in disguise of the Simple Past) or Past Perfect for that matter? Keeping in mind that PAST is actually a SUBJUNCTIVE, the idea that these forms might be a PERFECT in disguise becomes even more far-fetched than one may think based on the ill-formedness of examples such as (71).

- (71) \**If Olú **has visited** Mary (tomorrow), he will have made her happy.*  
 if Olú have.PRES-PERF visit.PAST-PART Mary (tomorrow), he PRES-FUT-MOD  
 have.AUX make.PAST-PART her happy

The presence of Present Perfect verb forms makes the sentences ill-formed. This is surprising if such forms actually call for PERFECT (as claimed by Ippolito (2002)). In fact, why would a completely productive form such as Present Perfect ever have to be disguised as something else? Yes, it is true that the SUBJUNCTIVE takes the form of PAST tense, but it is not disguised – it is a compensatory strategy for the morpho-syntactic neutralisation of the SUBJUNCTIVE. The Present Perfect is highly productive, widely used by speakers and, therefore, there is no need to disguise it contra Ippolito (2002).

Given the above and provided that the Past Perfect is a PERFECT in the past, the obvious conclusion is that the Past Perfect in conditionals is actually a SUBJUNCTIVE in the past (PAST SUBJUNCTIVE). Some may argue that playing with the terminology proves nothing – I would be inclined to agree. Nevertheless, if this terminological difference is further supported by an inherent property of the form discussed, not many will call it accidental. Specifically, as Comrie (1976) points out, one of the many occurrences of the English Past Perfect can be analysed as the Latin plus-quam-perfect or ‘double past’ (also known as past-in-the-past) as in (72) and (73).

- (72) When Olú **arrived** to Mary’s house, she **had** already **left** for Lagos.

PAST PAST w.-r.-t. the PAST

- (73) I **missed** my train. By the time I **got** to the station, it **had departed**.

PAST PAST PAST w.-r.-t. the PAST

Keeping in mind that the Past Perfect is actually a PAST + PAST and that the PAST is actually a SUBJUNCTIVE, then the purported Past Perfect found in conditional forms is actually a PAST SUBJUNCTIVE. This claim becomes even more plausible once one considers the difference in meaning between forms in which SUBJUNCTIVE (morpho-syntactically Simple Past) and PAST SUBJUNCTIVE (morpho-syntactically Past Perfect) are used, i.e. non-past and past subjunctive conditionals respectively.

Table 2.1.1.1: Situation factors driving the forms of Standard Average European conditionals.

Situation:	Situation factors:		Morpho-syntactic type of construction:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	[LIKELY]	NON-PAST	INDICATIVE CONDITIONAL
B	[UNVALUED]	NON-PAST	NON-PAST SUBJUNCTIVE
C	[UNLIKELY]	NON-PAST	CONDITIONAL
D	[UNLIKELY]	PAST	PAST SUBJ. CONDITIONAL

As the table above shows the non-past subjunctive conditional (situations B and C) differs from the past subjunctive conditional (situation D) with respect to the value of the TIME OF CONDITION factor. In situations B and C the time of condition is non-past, in situation D the time of condition is past. This accounts for why the past subjunctive conditionals have an extra layer of PAST (TENSE) in comparison with the non-past subjunctive forms.

A similar argument can be made for French where the plus-quam-perfect has replaced the plus-quam-perfect subjunctive and the imperfect replaced the imperfect subjunctive due to the loss of the morpho-syntactic forms of the two subjunctives. Observe that the plus-quam-perfect subjunctive is still attested in written language to mark conditionals normally marked with plus-quam-perfect of indicative (compare (74) and (75)).

▪ PAST SUBJUNCTIVE CONDITIONAL:

(74) *Si Olú avait rendu visite à Marie (hier), il l'aurait rendue heureuse.*

if Olú have.IMP.3SG pay.PAST.PART visit PREP Mary (yesterday), he her have.PRES-COND.3SG make.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

▪ PAST SUBJUNCTIVE CONDITIONAL (2<sup>ND</sup> FORM):

(75) *Si Olú eût rendu visite à Marie (hier), il l'eût rendue heureuse.*

if Olú have.IMP-SUBJ.3SG pay.PAST.PART visit PREP Mary (yesterday), he her

have.IMP-SUBJ.3SG make.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

[At some point in the past (yesterday), it was unlikely that Olú would visit Mary.]

For another, the plus-quam-perfect is said to be a PAST in the past. This, given that imperfect is the present/habitual in the past, implies one degree of temporal separation between plus-quam-perfect and imperfect – one layer of PAST. And since the plus-quam-perfect indicative is actually marking plus-quam-perfect SUBJUNCTIVE, it is possible that the imperfect indicative actually marks the imperfect SUBJUNCTIVE. This is confirmed on exactly the same grounds as for English. Specifically, situations B and C (which map onto the non-past subjunctive form) differ from situation D (which maps onto the past subjunctive form) with respect to the time of condition: non-past and past respectively. Hence, it is likely that what makes the two forms different is the presence of the extra layer of PAST in the latter form.

Moreover, notice that the plus-quam-perfect subjunctive has been replaced in consequents of French past subjunctive conditionals with a past conditional form of verb (see the examples (74) and (75)). Since the CONDITIONAL forms in French are a combination of FUTURE/MODAL and IMPERFECT (as in (76)), it might be that CONDITIONAL is a combination of FUTURE/MODAL and SUBJUNCTIVE, which is expressed by the imperfect.

(76)	<i>rendrait</i>	→	<i>rend</i>	+	<i>r</i>	+	<i>ait</i>
	'would.make.3SG'		STEM		FUT/MOD		IMP.3SG

Given the above, one can conclude that the past conditional form is actually CONDITIONAL in the past (i.e. a combination of FUTURE/MODAL and SUBJUNCTIVE in the past).

Three core elements of the conditional forms have been identified: TENSE (present or past), MOOD (indicative or subjunctive) and MODAL. The CONDITIONAL form which also surfaces in this type of construction is the morpho-syntactic realisation of both SUBJUNCTIVE (MOOD) and

MODAL and the Past Perfect is the morpho-syntactic realisation of PAST (TENSE) and SUBJUNCTIVE (MOOD) marked by the Simple Past due to the lack of proper subjunctive forms in these systems.

2.1.2. Three ingredients of conditionals and the tri-partite structure.

Conditional situations are complex situations composed of a result and condition that restricts it. I also showed that conditional situations differ with respect to factors such as TIME OF CONDITION and (UN)LIKELIHOOD OF SATISFACTION. The combination of these two factors yields six possible conditional situations. However, only four of these situations are logically possible and attested. This reflects the fact that while the non-past time of condition maybe likely (A), unvalued (B), or unlikely (C), a past time of condition may only be unlikely (D). Thus, situations where past time of condition is unvalued (E) or likely (F) are ruled out for pragmatic reasons. This is because if one is considering a past condition, it is necessarily the case that it is unlikely to be satisfied.

Table 2.1.2.1: Conditional situations and the situation factors that allow for their distinction.

Attested?	Situation:	Situation factors:	
		(UN)LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY' OR UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)
√	A	[LIKELY]	NON-PAST
√	B	[UNVALUED]	NON-PAST
√	C	[UNLIKELY]	NON-PAST
√	D	[UNLIKELY]	PAST
*	E	UNVALUED	PAST
*	F	LIKELY	PAST

Based on data from Standard Average European languages (Italian, French and English) as well as Yorùbá, I showed that natural languages differ with respect to the situation factors that they employ when mapping the meaning of conditional situations onto form. Specifically, I showed that not all situation factors or their particular values are equally relevant for each natural language as far as meaning-form mapping is concerned. For example Standard Average European languages use two situation factors (LIKELIHOOD OF SATISFACTION and TIME OF CONDITION), whereas Yorùbá uses only one factor (UNLIKELIHOOD OF SATISFACTION). Moreover, there exist languages that are in-transition from one system to another as was exemplified based on Polish. Specifically, Polish used to have forms parallel to those found in Italian, French and English, but is currently shifting towards a Yorùbá-like pattern.

In the Standard Average European languages three forms that render four situations. Based on the analysis of meanings and forms, I claimed that this discrepancy reflects the fact that these languages take into account two situation factors: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION. Since situations B and C do not differ from one another with respect to TIME OF CONDITION, a single form is used to render them; hence, three conditional forms are attested in the Standard Average European systems: indicative conditional, non-past subjunctive conditional and past subjunctive conditional (see below).

Table 2.1.2.2: Situation factors employed by the SAE languages and the three conditional forms they yield.

Situation:	Situation factors:		Morpho-syntactic type of construction:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	[LIKELY]	NON-PAST	INDICATIVE CONDITIONAL
B	[UNVALUED]	NON-PAST	NON-PAST SUBJUNCTIVE CONDITIONAL
C	[UNLIKELY]	NON-PAST	
D	[UNLIKELY]	PAST	PAST SUBJ. CONDITIONAL

In contrast, only two forms of conditionals are attested in Yorùbá: realis and irrealis conditionals. Provided that both situations A and B are mapped onto the same form (realis) which contrasts with the second form rendering situations C and D (irrealis), it must mean that situations A and B on one hand and C and D on another must share the values of the situation factors employed in meaning-form mapping process in Yorùbá. It turns out that there is only one such factor, namely UNLIKELYHOOD OF SATISFACTION, as in the table below.

Table 2.1.2.3: The situation factor(s) and forms of Yorùbá conditionals.

Situation:	Situation factor:	Morpho-syntactic type of construction:
	UNLIKELYHOOD OF SATISFACTION: (UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')	
A	[LIKELY]	REALIS CONDITIONAL
B	[UNVALUED]	
C	[UNLIKELY]	IRREALIS CONDITIONAL
D	[UNLIKELY]	

Notice that a single situation factor suffices to derive a binary distinction. This is because each factor<sup>21</sup> splits the set of possible conditional situations {A, B, C, D} into two subsets. The UNLIKELYHOOD OF SATISFACTION, the situation factor for which the active value of [UNLIKELY] is employed in the meaning-form mapping process in Yorùbá, drives a two-way distinction of conditional forms – {A, B} versus {C, D}.

As for the TIME OF CONDITION factor, it sets apart situations {A, B, C} from situation {D} (see table 2.1.2.4).

<sup>21</sup> The (UN)LIKELYHOOD OF SATISFACTION has three different values. However, languages differ with respect to what prominent value – i.e. [likely] or [unlikely] versus the 'fails-to-be-...' – they consider to be salient.

Table 2.1.2.4: Time of condition and sets of forms it distinguishes (SAE).

Situation:	Situation factor:	Morpho-syntactic type of construction:
	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	NON-PAST	INDICATIVE CONDITIONAL
B	NON-PAST ‘FAILS-TO- BE-PAST’	<u>NON-PAST</u> SUBJUNCTIVE
C	NON-PAST	CONDITIONAL
D	PAST	<u>PAST</u> SUBJUNCTIVE CONDITIONAL

The LIKELIHOOD OF SATISFACTION sets the situation {A} apart from the remaining three situations – {B, C, D} (see table 2.1.2.5 below).

Table 2.1.2.5: Likelihood of satisfaction and sets of situations/forms it distinguishes (SAE).

Situation:	Situation factor:	Morpho-syntactic type of construction:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. ‘FAILS-TO-BE-LIKELY’)	
A	LIKELY	(NON-PAST) <u>INDICATIVE</u> CONDITIONAL
B	UNVALUED	NON-PAST <u>SUBJUNCTIVE</u> PAST ———— <u>CONDITIONAL</u>
C	UNLIKELY ‘FAILS-TO-BE-LIKELY’	
D	UNLIKELY	

When this two situation factors combine they divide the set of situations into three subsets: {A}, {B, C} and {D} (as was shown in table 2.1.2.2 above).

There is a direct relation between the factor active in meaning-form mapping and the two types of conditionals that emerge. While the TIME OF CONDITION factor divides the system into non-past and past forms, the (UN)LIKELIHOOD OF SATISFACTION splits the system of conditionals into

either realis and irrealis forms (highlighting unlikelihood as in Yorùbá) or indicative and subjunctive types (highlighting likelihood as in SAE). Thus, LIKELIHOOD OF SATISFACTION drives the indicative/subjunctive split, while UNLIKELIHOOD OF SATISFACTION drives the realis/irrealis contrast. Notice that only when put together in one system do TIME OF CONDITION and the LIKELIHOOD OF SATISFACTION allow for the existence of the three-way split into (non-past) indicative, non-past subjunctive and past subjunctive conditional forms (as attested in English, French and Italian). The table below presents the general picture.

Table 2.1.2.6: Three situation factors and the subsets of situations/forms they distinguish.

Value of the factors:	Situation factors:		
	TIME OF CONDITION: (NON-PAST vs. PAST)	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	UNLIKELIHOOD OF SATISFACTION: (UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')
NON-PAST/ LIKELY	<u>NON-PAST</u> CONDITIONAL	<u>INDICATIVE</u> CONDITIONAL	<u>REALIS</u>
NON-PAST/ UNVALUED		<u>SUBJUNCTIVE</u> CONDITIONAL	CONDITIONAL
NON-PAST/ UNLIKELY.			<u>IRREALIS</u>
PAST/ UNLIKELY	<u>PAST</u> CONDITIONAL		CONDITIONAL

The division of labour between the situation factors when mapping meaning onto form leaves an imprint on the types of forms attested in a particular natural language. Given that the forms themselves depend largely on the morpho-syntactic elements that compose them, one can ask whether there exists any connection between the type of conditional form and morpho-syntactic marking that it receives. Based on the analysis of the data from the three Standard Average European languages as well as Yorùbá, the conclusion is that such a connection exists and follows a very particular pattern (see tables below).

Table 2.1.2.7: Forms of Yorùbá conditionals and the grammatical elements that mark them.

Situation:	Grammatical elements present in structure:		Morpho-syntactic type of construction:
	<u>ANTECEDENT</u> <sup>22</sup> :	<u>CONSEQUENT</u> :	
A	<u>MODAL</u>	REALIS MOOD +	REALIS
B		(FUTURE/) <u>MODAL</u>	<u>CONDITIONAL</u>
C	<u>MODAL</u>	IRREALIS MOOD +	IRREALIS
D		<u>MODAL</u>	<u>CONDITIONAL</u>

Table 2.1.2.8: Forms of SAE conditionals and the grammatical elements that mark them.<sup>23</sup>

Situation:	Grammatical elements present in structure:		Morpho-syntactic type of construction:
	<u>ANTECEDENT</u> :	<u>CONSEQUENT</u> :	
A	<i>NON-PAST</i> + INDICATIVE	<i>NON-PAST</i> + INDICATIVE (FUTURE-) <u>MODAL</u>	( <i>NON-PAST</i> ) INDICATIVE <u>CONDITIONAL</u>
B	<i>NON-PAST</i> + IMPERFECT SUBJUNCTIVE	{IMPERFECT SUBJUNCTIVE + <u>MODAL</u> = <u>CONDITIONAL</u> }	<i>NON-PAST</i>
C			SUBJUNCTIVE <u>CONDITIONAL</u>
D	<i>PAST</i> + IMPERFECT SUBJUNCTIVE	<i>PAST</i> + {IMPERFECT SUBJUNCTIVE + <u>MODAL</u> = <u>CONDITIONAL</u> }	<i>PAST</i> SUBJUNCTIVE <u>CONDITIONAL</u>

As the two tables above show, the descriptors for different forms of conditionals reflect the morpho-syntactic elements that surface. Specifically, indicative conditionals (those that are [LIKELY]) are marked for indicative mood whereas subjunctive conditionals (those that fail-to-be-LIKELY) are marked for subjunctive mood. Also, non-past conditionals (those of which time

<sup>22</sup> I omit here the clause-typing marker *bí*. This is due to the fact that it is present in antecedents of all types of conditionals in all languages discussed in this study.

<sup>23</sup> This table has been simplified. I return to the issue of how the particular morpho-syntactic elements are realised in chapter 3.

of condition is other than PAST) are marked for present/non-past tense; in contrast past conditionals (those whose time of condition is PAST) contain an occurrence of the past tense. The same holds for the realis versus irrealis mood marking in Yorùbá: realis marks conditionals classified as those that fail-to-be-UNLIKELY (namely A and B); irrealis marks the conditionals that are [UNLIKELY] – i.e. counterfactuals (C and D).

If we compare the two types of languages, namely Yorùbá and the Standard Average European, we notice two different patterns with respect to how many morpho-syntactic elements are contained within each form and where they are placed. This is shown in detail in table below.

Table 2.1.2.9: Morpho-syntactic marking of conditionals in SAE and Yorùbá.

Language:	Morpho-syntactic elements present in structure:	
	<u>ANTECEDENT:</u>	<u>CONSEQUENT:</u>
STANDARD AVERAGE EUROPEAN	TENSE + MOOD(IND/SUBJ)	TENSE + MOOD(IND/SUBJ) + MODAL
YORÙBÁ	MODAL	MOOD(REALIS/IRREALIS) + MODAL

First, let's concentrate on the consequent clause and how it is marked in the two types of languages. There are two differences to point out: (i) Yorùbá does not mark its consequents for TENSE unlike the Standard Average European languages and (ii) even though both types of systems mark their consequents for Mood, Yorùbá marks them for REALIS/IRREALIS, whereas the Standard Average European languages distinguish between INDICATIVE and SUBJUNCTIVE. The tense-marking difference likely stems from the fact that the non-past/past distinction that is morpho-syntactically coded in the Standard Average European languages is not coded directly in Yorùbá where the non-past/past distinction is derived indirectly based on the lexical aspect of verbs. (I return to this issue in chapter 4.) The mood-marking difference might be due to the fact that Yorùbá employs UNLIKELIHOOD OF SATISFACTION. Specifically, whereas Yorùbá

groups together the [UNLIKELY] situations (C and D) and contrast them with [fail-to-be-UNLIKELY] situations (A and B), the SAE system contrasts the [LIKELY] situation A with the remaining [fail-to-be-LIKELY] situations (B, C, D).

As to the antecedent, which allows us to classify conditional situations depending on situation factors, one substantial difference is to be noticed. Yorùbá antecedents seem to be marked with Modal, but do not seem to contain Tense or Mood markers. Standard Average European antecedents seem, in complete contrast, to be marked for Tense and Mood, but do not seem to contain a Modal.

The crucial difference between Standard Average European and Yorùbá conditionals is the presence of tense marking in the former and its absence in the latter. This is summarised in the table below.

Table 2.1.2.10: Morpho-syntactic marking in SAE and Yorùbá conditional forms.

Morpho-syntactic elements of conditionals:	Is this element overtly marked in morpho-syntax?	
	Standard Average European:	Yorùbá:
Tense	YES	NO
Mood <sup>24</sup>	YES	YES
Modal	YES	YES

Recall that the two types of languages also differ with respect to situation factors they employ in the meaning-form mapping. Yorùbá relies on UNLIKELIHOOD OF SATISFACTION, whereas the Standard Average European languages employ LIKELIHOOD OF SATISFACTION and TIME OF CONDITION. In addition, both systems must contain a quantificational element, namely MODAL QUANTIFICATION OVER POSSIBLE WORLDS.

<sup>24</sup> I ignore the realis/irrealis versus indicative subjunctive difference here as it has no influence on the arguments made below.

Table 2.3.2.11: Marking of semantic ingredients in forms of SAE and Yorùbá conditionals.

Ingredient of conditionals:	Is this element driving typology of conditionals?	
	Standard Average European:	Yorùbá:
TIME OF CONDITION	YES	NO
(UN)LIKELIHOOD OF SATISFACTION <sup>25</sup>	YES	YES
MODAL QUANTIFICATION OVER POSSIBLE WORLDS	YES	YES

The Tense, Mood and Modal found in surface forms are the morpho-syntactic realisation of TIME OF CONDITION, (UN)LIKELIHOOD OF SATISFACTION and MODAL QUANTIFICATION OVER POSSIBLE WORLDS respectively. This means that the TIME OF CONDITION is marked by Tense, the (UN)LIKELIHOOD OF SATISFACTION is marked by Mood and the MODAL QUANTIFICATION OVER POSSIBLE WORLDS is marked by a Modal element. Thus, there is an implicational relation between the three semantic ingredients that determine the meaning of the conditional and the three morpho-syntactic elements that can surface in the conditional forms.

### 2.1.3. Tense, Mood and Modal or what drives the interpretation model.

According to Ippolito (2002) the model for interpretation of conditionals is based on the tripartite structure within which three following elements are identified: (i) MODAL (QUANTIFICATION OVER POSSIBLE WORLDS), (ii) SIMILARITY FUNCTION and (iii) ACCESSIBILITY RELATION. They are defined as follows.

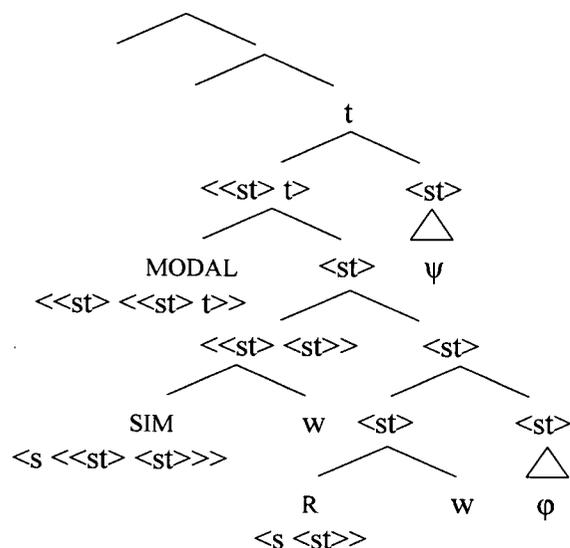
<sup>25</sup> The two variants discussed above.

Table 2.1.3.1: Three elements of the restrictor within the tri-partite structure.

Component:	Definition and function:
ACCESSIBILITY RELATION	$R = \lambda w. \lambda t. \lambda w'. w' \text{ is relevantly accessible from } w \text{ at } t.$  (R is a function which ensures that the set of possible worlds $w'$ , with respect to which the truth value of the conditional is evaluated, that gets construed – i.e. the set $p$ (which has the same members as the set $q$ ) – is the set of worlds relevantly accessible from the actual world $w$ at a time $t$ , which is the time of condition.)
SIMILARITY FUNCTION	$SIM(w)(p) = \{w' \in W: w' \in p \ \& \ w' \text{ is more similar to } w \text{ than any other } p\text{-world}\}$  (SIM is a function which ensures that the possible world $w'$ with respect to which the truth value of the conditional is evaluated is maximally similar to the actual world $w$ . In other words, out of the all possible worlds $w'$ introduced by the MODAL (i.e. those that are members of the set $p$ , and by extension set $q$ ) SIM picks out the one that is the most similar to the actual world $w$ .)
MODAL (QUANTIFICATION OVER POSSIBLE WORLDS)	$[[\text{MODAL}]]^w = \lambda p. \lambda q. \forall w' [w' \in p \rightarrow w' \in q]$  (MODAL ensures that the possible world $w'$ that it introduces and with respect to which the conditional is evaluated is member of two sets of possible worlds: $p$ (set of possible worlds of the antecedent) and $q$ (set of possible worlds of the consequent).)

The structure in (77) shows the distribution of these elements within the tri-partite quantificational structure.

(77)

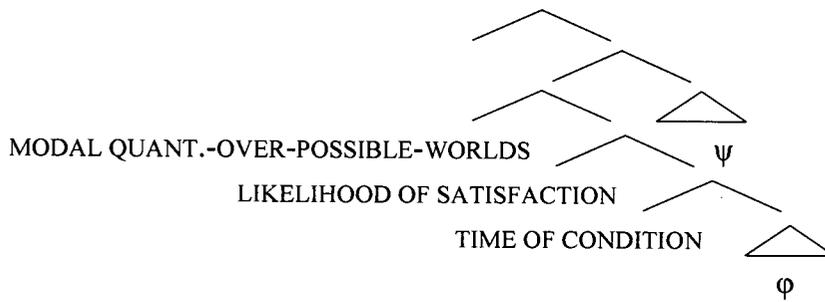


[adapted from Ippolito (2002)]

The SIMILARITY FUNCTION and the ACCESSIBILITY RELATION are important ingredients of conditionals and greatly influence the interpretation. Just as the MODAL is/does, they ensure that only relevant and accessible possible worlds are considered. Nevertheless, unlike the MODAL, they are not reflected in conditional forms by particular morpho-syntactic elements. In fact, they are not realised on the surface at all. Hence, I will omit reference to them hereafter when presenting the tri-partite structures. However, readers should be aware that each time I refer to MODAL QUANTIFICATION OVER POSSIBLE WORLDS, the SIMILARITY FUNCTION and the ACCESSIBILITY RELATION are also included.

I have established that the interpretation of conditional constructions depends on three semantic elements, namely the two situation factors: the TIME OF CONDITION and the (UN)LIKELIHOOD OF SATISFACTION, as well as the MODAL QUANTIFICATION OVER POSSIBLE WORLDS. Moreover, if one considers the facts that the interpretation of conditionals is based on a tri-partite quantificational structure and that the two semantic factors restrict the result clause as part of the condition clause; they will admit that these two semantic factors must be part of the restrictor as well. This is shown in (78) below.

(78)



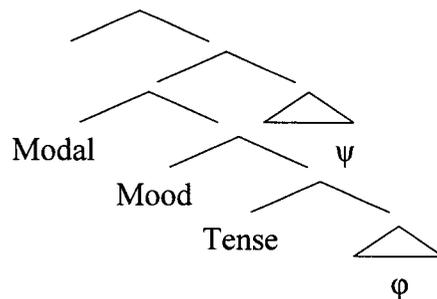
If natural languages use different situation factors to drive their division of conditional forms, then it must be the case that they also attach different importance to each of the components of the restrictor. Consequently, this means that they employ different morpho-syntactic markers to code such forms, as summarised in the table below.

Table 2.1.3.2: Ingredients of conditionals and their instantiations in the form.

Necessary ingredients of conditionals:	Grammatical categories that code them:
(UN)LIKELIHOOD OF SATISFACTION	Mood
TIME OF CONDITION	Tense
QUANTIFICATION OVER POSSIBLE WORLDS	Modal

(79) illustrates how these equivalencies map onto the tri-partite structure which is basis for the interpretation of conditionals.

(79)



#### 2.1.4. Ippolito's (2002) movement analysis.

In Ippolito (2002) model the PAST tense and/or PERFECT, which are part of the restrictor (and most likely the accessibility relation)<sup>26</sup>, move up to the projection higher than the MODAL. It is this position that allows them to be copied to both the antecedent and the consequent clause during meaning-form mapping, in contrast to the MODAL which stays low in its original position and copies only to the consequent. Given that in the previous sections of this study I argued that the Simple Past and Past Perfect (Comrie's (1976) DOUBLE PAST – i.e. past-in-the-past) morphology are actually morpho-syntactic realisations of SUBJUNCTIVE and (SUBJUNCTIVE-in-the-)PAST (i.e. MOOD and TENSE), one would expect that these two forms will move up.

However, I am not quite sure what the motivations are for postulating such a movement – Ippolito (2002) does not specify why such movement should be expected. The only reason why the movement might be needed is to account for the surface forms which according to her mark, in the antecedent, only these meaning elements that have moved up to positions higher than that of the MODAL. This might be true for the Standard Average European languages, but is definitely not the case in Yorùbá. In fact, the particularity of Yorùbá is that it marks both the antecedent and consequent of a conditional with a modal auxiliary and mood-marking seems to surface only in the consequent. In contrast, the exact opposite is true of the Standard Average European languages. Consequently, compatibility of the model with forms found in Yorùbá would require that the model allow for flexibility of movement of all three elements within the tri-partite structure including MODAL. This, however, is highly problematic given that moving modal might cause change in scope and, hence, change in what is considered to be the restrictor and what the nuclear scope is. Therefore, movement of elements should be avoided.

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<sup>26</sup> It is an assumption that I do not share, both in terms of PAST and PERFECT being ingredients of conditionals as well as the fact that they are part of the ACCESSIBILITY RELATION.

### 2.1.5. The current proposal: a copy analysis.

Another possibility is to consider that the morpho-syntactic marking mirrors the semantic information contained in the tri-partite quantificational structure. That is to say that there is no movement, but instead there exists a copying mechanism which requires that all active elements in the restrictor are copied to the nuclear scope and, hence, realised morpho-syntactically in the consequent.

This is compatible with the observation that semantic elements are in a one-to-one relationship with the morpho-syntactic markers found in the attested surface forms. Given that only the active situation factors are employed to distinguish between different types of conditionals in various languages (with the MODAL QUANTIFICATION OVER POSSIBLE WORLDS being always active), one expects that the surface forms are marked in similar way – i.e. morpho-syntactic marking for a particular category appears only if it makes a meaning distinction. Specifically, if Yorùbá employs MODAL QUANTIFICATION OVER POSSIBLE WORLDS and UNLIKELIHOOD OF SATISFACTION, its conditional forms should be marked both for Modal and Mood (realis/irrealis)<sup>27</sup>. And in Standard European languages where MODAL QUANTIFICATION OVER POSSIBLE WORLDS, LIKELIHOOD OF SATISFACTION and TIME OF CONDITION drive the typology of conditionals, the surface forms should be marked with all three grammatical elements: Modal, Mood (indicative/subjunctive) and Tense.

The copying strategy nevertheless fails to account for the lack of Modal-marking in SAE antecedents and the lack of mood-marking in Yorùbá antecedents. However, the model works perfectly well for Polish, a language that is currently changing its system of conditionals from Standard Average European system to a Yorùbá-like system. This raises the question of whether it is the copying strategy that is wrong or whether the particularities of Standard Average European languages and Yorùbá reflect system-specific restrictions. In chapter 3, I will argue that the latter is actually the case. First, however, I demonstrate how the model for

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<sup>27</sup> Note that there seems to be a correlation between the realisation of Mood-marking as indicative/subjunctive and/or realis/irrealis on one hand and the system-specific parameter that establishes which one of the values of the (UN)LIKELIHOOD OF SATISFACTION ([LIKELY] or [UNLIKELY]) is the marked, as opposed to the 'elsewhere', value on the other.

the interpretation of conditionals proposed here works and what outputs are predicted under the copying strategy.

Lastly, given that languages vary in ways they employ the (UN)LIKELIHOOD OF SATISFACTION – its [LIKELY] versus its [UNLIKELY] force – and that not all factors have identical salience in meaning-form mapping, one may ask what are the allowed and possible combinations of such factors and why. I address this question in the Appendix A. The remainder of this chapter focuses on demonstrating how the proposed model applies to Yorùbá and other languages under the scope of this study, namely English, French and Italian (the so-called Standard Average European languages) as well as Polish.

## 2.2. Applying the model to Standard Average European languages.

The Standard Average European languages (Italian, French and English) map the meaning of four conditional situations {A, B, C, D} onto three forms {indicative conditionals, non-past subjunctive conditionals and past subjunctive conditionals}. They employ two situation factors in this process: LIKELIHOOD OF SATISFACTION and TIME OF CONDITION. That is to say that they follow the LIKELY<sup>28</sup> pattern as identified in chapter 1 and appendix A.

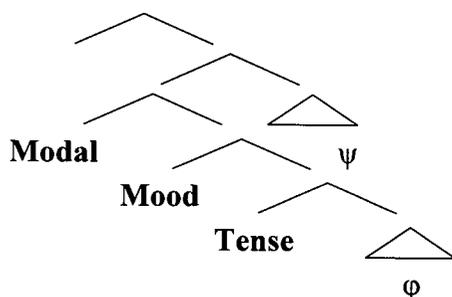
Table 2.2.1: LIKELY PATTERN: Standard Average European.

Situation:	Situation factor(s) employed:		Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	[LIKELY]	NON-PAST	INDICATIVE CONDITIONAL
B	[UNVALUED]	NON-PAST	NON-PAST SUBJUNCTIVE CONDITIONAL
C	[UNLIKELY]	NON-PAST	
D	[UNLIKELY]	PAST	PAST SUBJ. CONDITIONAL

<sup>28</sup> The LIKELY (TENSED) pattern.

Given the two situation factors employed in meaning-form mapping, SAE conditionals must have in their output an overt expression of Mood, Tense and Modality as in (80).

(80)



The question is whether this particular instantiation of the model predicts the correct outputs. Prior to be able to test them against the language data, one needs to identify the possible forms allowed by this particular version of the model. Given the factors employed by the Standard Average European systems, we expect Tense and Mood as well as Modal to surface. The first two of these grammatical categories can take one of the two values non-past/past and indicative/subjunctive<sup>29</sup> respectively. The Modal is always realised by a modal marker. The obligatory presence of the Modal<sup>30</sup> and the possible combinations of the Tense and Mood distinctions yield six possible outputs: (i) NON-PAST INDICATIVE (situation A), (ii) NON-PAST SUBJUNCTIVE (situations B and C), (iii) PAST SUBJUNCTIVE (situation D (and unattested situation \*E)) and (iv) PAST INDICATIVE (unattested situation \*F). [Remember that the situations \*E and \*F are ruled out for pragmatic reasons.] These possible outputs are presented below.

<sup>29</sup> Realis/irrealis marking is ruled out here as this distinction mirrors the UNLIKELY versus 'fails-to-be-UNLIKELY' split rather than the LIKELY versus 'fails-to-be-LIKELY' one that is rendered by indicative/subjunctive alternation.

<sup>30</sup> Matthewson (p.c.) points out that in some cases Modal is not present in conditionals (as in (i) below).

- (i) If Olú visited Mary, he made her happy.

Also, note that the TIME OF CONDITION is more restricted with this kind of conditionals, which may suggest pragmatic incompatibility.

- (ii) \*If Olú visited Mary tomorrow, he made her happy.

Does the morpho-syntax of (i) reflect the fact that Modals don't have past Tense forms? But then, what about the English 'would'? Since such constructions seem to be marginal and judged by native speakers as somehow less hypothetical, they are not further discussed in this study.

- OUTPUT I: NON-PAST INDICATIVE CONDITIONAL {A}:

FORM: [CONDITION NON-PAST INDICATIVE MODAL][RESULT NON-PAST INDICATIVE MODAL]  
 MORPHO- [ANTECEDENT (modal in the<sup>31</sup>) non-past tense of the indicative mood]  
 SYNTAX: [CONSEQUENT modal in the non-past tense of the indicative mood]

- OUTPUT II: NON-PAST SUBJUNCTIVE CONDITIONAL {B/C}:

FORM: [CONDITION NON-PAST SUBJUNCTIVE MODAL][RESULT NON-PAST SUBJUNCTIVE MODAL]  
 MORPHO- [ANTECEDENT (modal in the) non-past (tense of the) subjunctive mood]  
 SYNTAX: [CONSEQUENT modal in the non-past (tense of the) subjunctive mood]

- OUTPUT III: PAST SUBJUNCTIVE CONDITIONAL {D, \*E}:

FORM: [CONDITION PAST SUBJUNCTIVE MODAL][RESULT PAST SUBJUNCTIVE MODAL]  
 MORPHO- [ANTECEDENT (modal in the) past (tense of the) subjunctive mood]  
 SYNTAX: [CONSEQUENT modal verb in the past (tense of the) subjunctive mood]

- OUTPUT IV: PAST INDICATIVE CONDITIONAL {\*F}:

FORM: [CONDITION PAST INDICATIVE MODAL][RESULT PAST INDICATIVE MODAL]  
 MORPHO- [ANTECEDENT (modal in the) past tense of the indicative mood]  
 SYNTAX: [CONSEQUENT modal verb in the past tense of the indicative mood]

However, only three conditional forms are attested in Standard Average European languages. So, does the model really work? Actually it does, under the assumption that licit morpho-syntactic structures can be ruled out due to their semantic/pragmatic incompatibility. As argued in chapter 1, conditional situations E and F are ruled out due to their pragmatic incompatibility. Therefore, I assume hereafter that the only outputs produced by this particular instantiation of the model for the interpretation of conditionals are OUTPUTS I through III. The following three subsections demonstrate that the model proposed in this study makes the correct predictions with respect to forms of conditionals observed in Italian, French and English.

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<sup>31</sup> I return to the issue of modal being present in the antecedents in chapter 3 of this study.

### 2.2.1. Italian.

Three forms of conditionals are predicted by the model to exist in Italian. The examples (81) through (83) confirm such a prediction to be correct and compatible with the range of data attested in the language.

▪ NON-PAST INDICATIVE CONDITIONAL {A} = OUTPUT I:

(81) *Se Olú visita Maria domani, la fara felice.*

if Olú visit.PRES-IND.3SG Mary tomorrow, pro her do.FUT-MOD.3SG happy

= (A) 'If Olú visits Mary (tomorrow), he will make her happy.'

▪ NON-PAST SUBJUNCTIVE CONDITIONAL {B/C} – OUTPUT II:

(82) *Se Olú visitasse Maria (domani), la farebbe felice.*

if Olú visit.IMP-SUBJ.3SG Mary (tomorrow), pro her do.PRES-COND.3SG happy

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

▪ PAST SUBJUNCTIVE CONDITIONAL {D} = OUTPUT III:

(83) *Se Olú avesse visitato Maria (ieri), l'avrebbe fatta felice.*

if Olú have.IMP-SUBJ.3SG visit.PAST.PART Mary (yesterday), pro her have.PRES-COND.3SG do.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

### 2.2.2. French.

There are four forms of conditionals attested in French, as in (84) through (87).

▪ NON-PAST INDICATIVE CONDITIONAL {A} = OUTPUT I:

- (84) *Si Olú rend visite à Marie demain, il la rendra heureuse.*  
if Olú pay.PRES-IND.3SG visit PREP Mary tomorrow, he her make.FUT-MOD.3SG  
happy  
= (A) ‘If Olú visits Mary (tomorrow), he will make her happy.’

▪ NON-PAST SUBJUNCTIVE CONDITIONAL {B/C} – OUTPUT II:

- (85) *Si Olú rendait visite à Marie (demain), il la rendrait heureuse.*  
if Olú pay.IMP.3SG visit PREP Mary (tomorrow), he her make.PRES-COND.3SG happy  
= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not  
(totally) unlikely that Olú will visit Mary.]  
= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’  
[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú  
will do so.]

▪ PAST SUBJUNCTIVE CONDITIONAL {D} = OUTPUT III:

- (86) *Si Olú avait rendu visite à Marie (hier), il l’aurait rendue heureuse.*  
if Olú have.IMP.3SG pay.PAST.PART visit PREP Mary (yesterday), he her have.PRES-  
COND.3SG make.PAST.PART happy  
= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

- PAST SUBJUNCTIVE CONDITIONAL (2<sup>ND</sup> FORM) {D} = OUTPUT III:

(87) *Si Olú eût rendu visite à Marie (hier), il l'eût rendue heureuse.*

if Olú have.IMP-SUBJ.3SG pay.PAST.PART visit PREP Mary (yesterday), he her  
have.IMP-SUBJ.3SG make.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

Even though there are four forms attested in French, they represent only three outputs of the model. This is due to the fact that OUTPUT III is represented by two forms: one that is more modern and predominantly used and a rarer one restricted to the written language. Thus, the examples (84) through (87) confirm that the model for the interpretation of conditionals proposed above works for French.

### 2.2.3. English.

- NON-PAST INDICATIVE CONDITIONAL {A} = OUTPUT I:

(88) *If Olú visits Mary tomorrow, he will make her happy.*

if Olú visit.PRES-IND.3SG Mary tomorrow, he FUT-MOD.3SG make her happy

= (A) 'If Olú visits Mary (tomorrow), he will make her happy.'

- NON-PAST SUBJUNCTIVE CONDITIONAL {B/C} = OUTPUT II:

(89) *If Olú visited Mary (tomorrow), he would make her happy.*

if Olú visit.PAST-IND.3SG Mary (tomorrow), he PAST-FUT-MOD.3SG make her happy

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

▪ PAST SUBJUNCTIVE CONDITIONAL – OUTPUT III {D}:

(90) *If Olú had visited Mary (yesterday), he would have made her happy.*

if Olú have.PAST-IND.3SG visit.PAST.PART Mary (yesterday), he PAST-FUT-MOD.3SG  
have.AUX make.PAST.PART her happy

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

The three forms of conditionals in English shown above are predicted by the model.

### 2.3. The model accounts for conditional forms attested in Yorùbá too.

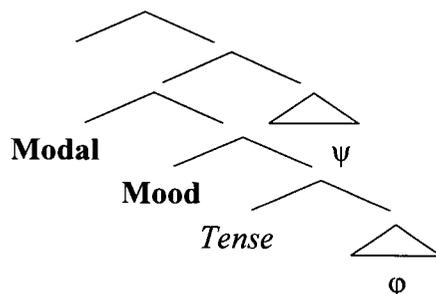
The Yorùbá language maps the meaning of four conditionals situations {A, B, C, D} onto two forms {realis conditionals and irrealis conditionals}. It employs a single situation factor in this process, namely the UNLIKELYHOOD OF SATISFACTION. I.e. it sets apart the unlikely situations C and D from the situations A and B that fail-to-be-UNLIKELY. That is to say that Yorùbá follows the UNLIKELY pattern as identified in chapter 1. More specifically, the Yorùbá pattern is an UNLIKELY and UNTENSED pattern, see appendix A.

Table 2.3.1: UNLIKELY PATTERN: Yorùbá.

Situation:	Situation factor(s) employed:	Resulting pattern:
	UNLIKELYHOOD OF SATISFACTION: (UNLIKELY vs. ‘FAILS-TO-BE-UNLIKELY’)	
A	[LIKELY] ‘FAILS-TO-BE-	REALIS
B	[UNVALUED] UNLIKELY’	CONDITIONAL
C	[UNLIKELY]	IRREALIS
D	[UNLIKELY]	CONDITIONAL

Given the situation factor employed in meaning-form mapping, we expect Yorùbá conditionals to have only the overt expressions of Mood and Modality, as in (91).

(91)



Again, the question is whether this model predicts the correct outputs – i.e.: does it predict the forms actually attested in the language and only those attested in the language? One needs to first identify the possible forms allowed by the model. Given the factor employed by Yorùbá in meaning-form mapping, we expect Mood as well as Modal to surface in conditional forms. The Mood element can take one of the two values: realis or irrealis<sup>32</sup>. They are presented in detail below.

▪ OUTPUT 1: REALIS CONDITIONAL {A/B, \*E/\*F}:

FORM: [CONDITION (REALIS) MODAL][RESULT REALIS MODAL<sup>33</sup>]

MORPHO- [ANTECEDENT modal (in the realis mood)]

SYNTAX: [CONSEQUENT modal (in the) realis mood]

<sup>32</sup> In contrast with the Standard Average European systems, the indicative/subjunctive marking of conditional forms is ruled out by the fact that this distinction mirrors the LIKELY versus ‘fails-to-be-LIKELY’ split rather than the UNLIKELY versus ‘fails-to-be-UNLIKELY’ one that is rendered by realis/irrealis alternation.

<sup>33</sup> Again, I follow here the evidence from the morpho-syntactic forms of conditionals in that I put Modal in both the condition and the result clauses and Mood only into the result clause. In chapter 3, I will explain in great detail why exactly the surface forms may appear to be slightly different than predicted by the model – they actually are not different.

▪ OUTPUT 2: IRREALIS CONDITIONAL {C/D}:

FORM: [CONDITION MODAL][RESULT IRREALIS MODAL]

MORPHO- [ANTECEDENT modal (in the irrealis mood)]

SYNTAX: [CONSEQUENT modal (in the) irrealis mood]

Now, compare the forms in (92) and (93) below. These data shows that the two outputs predicted are not only attested in the language, but more importantly are the only outputs predicted and the only outputs attested. (Situations E and F are ruled out by semantic/pragmatic incompatibility.)

▪ REALIS CONDITIONAL {A/B}= OUTPUT 1:

(92) *Bí Olú bá lọ kí Meri (lọla), yóò mú inú rẹ̀ dùn.*

if Olú MOD go PREP Mary (tomorrow), FUT-MOD make stomach PRO.3SG sweet

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

- IRREALIS CONDITIONAL {C/D} = OUTPUT 2:

(93) *Bí Olú bá (ti) lọ kí Meri (lánà/lọla), ì bá (ti) mú inú rẹ dùn.*

if Olú MOD (PERF) go PREP Mary (yesterday/tomorrow), IRR-MOOD MOD (PERF)  
make stomach PRO.3SG sweet

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

## 2.4. Polish.

As I showed in chapter 1 (section 1.6), Polish used to be like the Standard Average European languages in that it mapped the meaning of four conditional situations {A, B, C, D} onto three forms {indicative conditionals, non-past subjunctive conditionals and past subjunctive conditionals}. Specifically, it employed two situation factors in this process: the LIKELIHOOD OF SATISFACTION and the TIME OF CONDITION. That is to say that it followed the LIKELY<sup>34</sup> pattern.

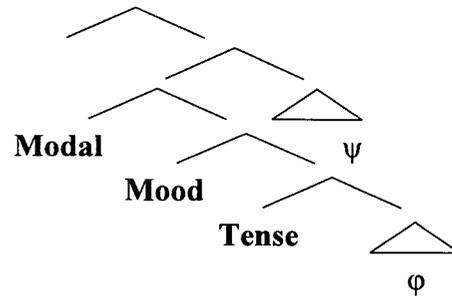
Table 2.4.1: LIKELY PATTERN: 'old' Polish (alike the SAE languages).

Situation:	Situation factor(s) employed:		Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	[LIKELY]	NON-PAST	INDICATIVE CONDITIONAL
B	[UNVALUED] 'FAILS-TO-BE-LIKELY'	NON-PAST	NON-PAST SUBJUNCTIVE CONDITIONAL
C		NON-PAST	
D	[UNLIKELY]	PAST	PAST SUBJ. CONDITIONAL

<sup>34</sup> The LIKELY (TENSED) pattern.

Given the two situation factors employed in meaning-form mapping, 'old' Polish conditionals must have in their output an overt expression of Mood, Tense and Modality as in (94).

(94)



As in the Standard Average European systems, four possible outputs are generated by the model for 'old' Polish. However, due to the semantic/pragmatic ill-formedness of situations E and F, only three outputs are allowed in the system: (i) NON-PAST INDICATIVE, (ii) NON-PAST SUBJUNCTIVE and (iii) PAST SUBJUNCTIVE. They are presented in detail below.

▪ OUTPUT I: NON-PAST INDICATIVE CONDITIONAL {A}::

FORM: [CONDITION NON-PAST INDICATIVE (MODAL)][RESULT NON-PAST INDICATIVE (MODAL)]

MORPHO- [ANTECEDENT non-past tense of the indicative mood (modal)]

SYNTAX: [CONSEQUENT non-past tense of the indicative mood (modal)]

▪ OUTPUT II: NON-PAST SUBJUNCTIVE CONDITIONAL {B/C}::

FORM: [CONDITION NON-PAST SUBJUNCTIVE MODAL][RESULT NON-PAST SUBJUNCTIVE MODAL]

MORPHO- [ANTECEDENT modal in the non-past (tense of the) subjunctive mood]

SYNTAX: [CONSEQUENT modal in the non-past (tense of the) subjunctive mood]

- OUTPUT III: PAST SUBJUNCTIVE CONDITIONAL {D}:

FORM: [CONDITION PAST SUBJUNCTIVE MODAL][RESULT PAST SUBJUNCTIVE MODAL]

MORPHO- [ANTECEDENT modal in the past (tense of the) subjunctive mood]

SYNTAX: [CONSEQUENT modal in the past (tense of the) subjunctive mood]

Data in (95) through (97) confirm that there are three forms of conditionals in ‘old’ Polish as expected from the model for the interpretation of conditionals.

- INDICATIVE CONDITIONAL {A} = OUTPUT I:

(95) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if Olú visit.FUT-MOD.3SG Mary tomorrow, cause. FUT-MOD.3SG her pleasure

= (A) ‘If Olú visits Mary tomorrow, he will make her happy.’

- NON-PAST SUBJUNCTIVE CONDITIONAL {B/C} = OUTPUT II:

(96) *Jeśli Olú odwiedziłby Marie (jutro), sprawiłby jej przyjemność.*

if Olú visit.PRES-COND.3SG Mary (tomorrow), cause.PRES-COND.3SG her pleasure

= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

- PAST SUBJUNCTIVE CONDITIONAL {D} = OUTPUT III:

(97) *Jeśli Olú byłby odwiedził Marie (wczoraj), byłby sprawił jej przyjemność.*

if Olú be.PAST-COND.3SG visit.PERF.3SG Mary (yesterday), be.PAST-COND.3SG

cause.PERF.3SG her pleasure

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

Nevertheless, Polish is currently undergoing a shift in the types of conditional forms that it distinguishes. The other pattern of conditionals attested in Polish (modern Polish) is shown in (98) and (99) below.

▪ REALIS CONDITIONAL {A/B} = OUTPUT 1:

(98) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if Olú visit.FUT-MOD.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

▪ IRREALIS CONDITIONAL {C/D} = OUTPUT 2:

(99) *Jeśli Olú odwiedziłby Marie (wczoraj/jutro), sprawiłby jej przyjemność.*

if Olú visit.PRES-COND.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG her pleasure

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

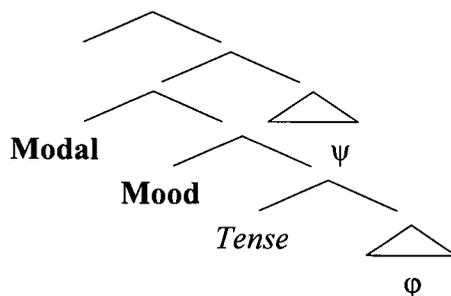
The above examples demonstrate that in modern Polish the meaning of four conditionals situations {A, B, C, D} is mapped onto two forms {realis conditionals and irrealis conditionals}. Specifically, a single situation factor is employed in this process, namely the UNLIKELYHOOD OF SATISFACTION, which sets apart situations that are UNLIKELY (C and D) from those that 'fail-to-be-UNLIKELY' (A and B).

Table 2.4.2: UNLIKELY PATTERN: modern Polish (and Yorùbá).

Situation:	Situation factor(s) employed:	Resulting pattern:
	UNLIKELYHOOD OF SATISFACTION: (UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')	
A	[LIKELY] 'FAILS-TO-BE-	REALIS
B	[UNVALUED] UNLIKELY'	CONDITIONAL
C	[UNLIKELY]	IRREALIS
D	[UNLIKELY]	CONDITIONAL

Given the situation factor employed in meaning-form mapping, we expect Yorùbá conditionals to have only the overt expressions of Mood and Modality, as in (100).

(100)



The forms in (98) and (99) also show that the two only outputs predicted by this particular version of the revised model for the interpretation of conditional are the only and the correct outputs attested in modern Polish. (Situations E and F are ruled out as semantically/pragmatically incompatible.)

Even though the forms of conditionals have been reanalysed in modern Polish in terms of their meanings, the morpho-syntactic marking still reflects the 'old' Polish system. Specifically, the forms of conditionals are still marked for Mood with the indicative/subjunctive markers and not the realis/irrealis ones (as well as Tense to some extent), yet their semantic interpretations

have been shifted and are now identical to those of the Yorùbá-like system. (Details are provided in chapter 3.)

- OUTPUT 1: REALIS CONDITIONAL {A/B, \*E/\*F}:

FORM: [CONDITION NON-PAST INDICATIVE (MODAL)][RESULT NON-PAST INDICATIVE (MODAL)]

MORPHO- [ANTECEDENT non-past tense of the indicative mood (modal)]

SYNTAX: [CONSEQUENT non-past tense of the indicative mood (modal)]

- OUTPUT 2: IRREALIS CONDITIONAL {C/D}:

FORM: [CONDITION NON-PAST SUBJUNCTIVE MODAL][RESULT NON-PAST SUBJUNCTIVE MODAL]

MORPHO- [ANTECEDENT modal in the non-past (tense of the) subjunctive mood]

SYNTAX: [CONSEQUENT modal in the non-past (tense of the) subjunctive mood]

## 2.5. Restrictions on cross-linguistic variation: possible conditional forms and ranges of their meanings.

I have presented a model for the interpretation of conditionals based on the tri-partite quantificational structure and shown that languages differ with respect to situation factors that they employ for meaning-form mapping. Even though languages make use of the same mechanisms, they manoeuvre them in slightly different ways. This is why languages end up displaying different conditionals forms. So far, my discussion has focused on the Standard Average European languages (Italian, French and English), Polish and Yorùbá. However, as observed in chapter 1 (and is further discussed in appendix A), the languages mentioned in this study might not form an exhaustive set of all logically possible variants of conditional systems. In what follows, I consider potential restrictions on the cross-linguistic variation of conditional systems.

If the model for the interpretation of conditionals in natural languages as presented above is correct, its particularities should not only stem out from certain parameters defining ranges of possible and actual meanings in natural languages, but in fact might be used as diagnostics for such semantic properties. In other words, if a particular pattern of conditionals based on this model is attested in a natural language, such a natural language will display certain semantic properties that are in-sync with the rules of the model. Specifically, natural languages which do not display temporal distinctions in their conditionals might be aspect-prominent, e.g. Yorùbá. In contrast, those that display the non-past/past distinction in conditionals might be tense-prominent, e.g. Standard Average European languages.<sup>35</sup>

The question that arises is whether the aspect-prominence of the Yorùbá type implies absence of Tense altogether – i.e. TENSELESSNESS. Note that the revised model does not predict that TIME OF CONDITION (coded as Tense) will not be used to distinguish between conditional situations {A, B, C, D}. Rather what we see is that TIME OF CONDITION need not be used to drive the meaning-form mapping: this corresponds to Yorùbá. In fact, modern Polish provides important evidence to support this argument. Specifically, even though the two types of conditional forms found in this system are derived using UNLIKELIHOOD OF SATISFACTION only, such forms are still marked for present versus past Tense. Given the above, an analysis of conditionals based on the model proposed here can provide evidence for whether a language is tense- or aspect-prominent, and, by extension, for whether one is to expect unique morpho-syntactic elements marking the category of Tense.

The above observations lead to the following two conjectures:

▪ CONJECTURE I: ASPECT-PROMINENCE AND UNLIKELIHOOD OF SATISFACTION.

THERE EXISTS A CORRELATION BETWEEN ASPECTUAL PROMINENCE OF A LANGUAGE (CATEGORY OF ASPECT BEING MORE ACTIVE IN ITS GRAMMAR) AND ACTIVE STATUS OF THE UNLIKELIHOOD OF SATISFACTION FACTOR IN MEANING-FORM MAPPING OF CONDITIONALS.

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<sup>35</sup> See Parker (1986) for related discussion.

▪ CONJECTURE II: TENSE-PROMINENCE AND LIKELIHOOD OF SATISFACTION.

THERE EXISTS A CORRELATION BETWEEN TEMPORAL PROMINENCE OF A LANGUAGE (CATEGORY OF TENSE BEING MORE ACTIVE IN ITS GRAMMAR) AND THE LIKELIHOOD OF SATISFACTION FACTOR BEING ACTIVE IN MEANING-FORM MAPPING OF CONDITIONALS.

We do not know yet which of these implications is/are active in natural languages:

(i) Does the aspect-prominence versus tense-prominence in the grammar of a language determine the active status of UNLIKELIHOOD OF SATISFACTION versus LIKELIHOOD OF SATISFACTION factor in meaning-form mapping of conditionals?

or

(ii) Does the active status of UNLIKELIHOOD OF SATISFACTION versus LIKELIHOOD OF SATISFACTION factor in the meaning-form mapping of conditionals imply that a language is aspect-prominent versus tense-prominent respectively?

It may be that both implications hold simultaneously. For now, I am unable to argue for or against either of the two possibilities.

In addition, the revised model for the interpretation of conditionals makes similar predictions with respect to whether a particular natural language has an indicative/subjunctive contrast or a realis/irrealis contrast. The evidence for this claim is a bit trickier as the relationship of the indicative and realis moods on one hand and the subjunctive and the irrealis on the other are not well understood. Nevertheless, given that no language has been identified so far that would express both types of mood alternations within the same domain<sup>36</sup>, it seems that languages that employ LIKELIHOOD OF SATISFACTION are systems (like the Standard Average European languages) which show the indicative/subjunctive alternation and those languages that employ UNLIKELIHOOD OF SATISFACTION (e.g. Yorùbá) display the realis/irrealis alternation.

If the systems that make use of LIKELIHOOD OF SATISFACTION necessarily make TIME OF CONDITION active, it might be that there exists a correlation between a language being tense-

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<sup>36</sup> Barczak, Déchaine & Wolfart (2006) argue that Plains Cree makes the indicative/subjunctive distinction in the verbal domain and the realis/irrealis distinction in the nominal domain.

prominent and selection of the [LIKELY]-driven version of the (UN)LIKELIHOOD OF SATISFACTION factor. The reverse would, then, be true for the aspect-prominent languages – i.e. the prominence of aspect (and ignorance of the TIME OF CONDITION factor during the meaning-form mapping of conditionals) would force the selection of the [UNLIKELY]-driven version of the (UN)LIKELIHOOD OF SATISFACTION factor. In my opinion, this is actually very likely, especially when we consider the very compelling evidence from the language ‘in-transition’ – i.e. Polish – in which the loss of Tense (double past) and, by extension, the decrease of the importance of the TIME OF CONDITION factor cause the shift from the LIKELIHOOD OF SATISFACTION-driven conditionals system to the one driven by the UNLIKELIHOOD OF SATISFACTION. (See appendix A for more details.)

The above are possible and very likely consequences of the revised model for the interpretation of conditionals in natural languages. Nevertheless, they are far from being the laws limiting the cross-linguistic variation of natural languages with respect to Tense and Mood. In fact, as I pointed out in previous sections of this study, some morpho-syntactic elements are not always what they appear to be (e.g. past tense is used to mark the subjunctive mood in English). Therefore, a morpho-syntactic evaluation of conditionals is a necessary step in testing a particular model, especially if one recognises that there exists a tight relationship between meaning and form, which I do. That is to say that the next chapter of this study concentrates on the morpho-syntax of conditionals in natural languages and Yorùbá, in particular. It also tackles the issue of copying the information from the tri-partite quantificational structure onto the syntactic structure (consistent with the model) of conditional forms, especially the question of morpho-syntactic realisation of the MODAL.

### Chapter 3: Morpho-syntax of Yorùbá conditionals.

The previous chapter presented a model for the interpretation of conditionals based on the tripartite quantificational structure. This model is meant to represent not only the meaning of such constructions, but should also account for the particularities of their forms. This is especially important given the hypothesis that there is a direct mapping between meaning and form. Specifically, I argue that the model for interpretation of conditionals maps directly onto a complex morpho-syntactic structure containing a matrix (consequent) and subordinate (antecedent) clause. Moreover, each of the clauses within this structure contains (not always overt) markers of three grammatical categories: Modal, Mood and Tense. The interpretation of conditionals is driven by three semantic components as well: possible worlds, likelihood of satisfaction and time of condition. This is shown in the table below. The possibility that will be explored here is that the grammatical elements are actually surface realisations of the meaning components.

Table 3.1.: The correlation between morpho-syntactic and meaning elements.

Components of meaning in conditional situations:	MODAL QUANTIFICATION OVER POSSIBLE WORLDS	LIKELIHOOD OF SATISFACTION	TIME OF CONDITION
Grammatical elements present in surface forms of conditionals:	Modal (modal/future)	Mood i. <u>unlikelihood</u> (realis/irrealis) ii. <u>likelihood</u> : (indicative/subjunctive)	Tense (non-past/ past)

The three elements of the conditional meaning, namely: (quantification over) possible worlds, (un)likelihood of satisfaction as well as time of condition and the three grammatical elements (coding the syntactic categories of Modal, Mood and Tense) found in surface forms are realised within both antecedent/subordinate clause ( $\phi$ ) and consequent/matrix clause ( $\psi$ ).

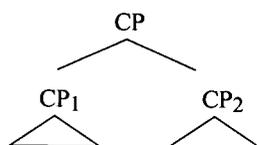
What follows is a presentation of how the morpho-syntactic model applies for the languages under the scope of this study. First, I point out that Polish is the only language of the group in which a direct, one-to-one mapping is observed: all the elements are present in the forms attested as predicted by the structure. Second, I show that the model also applies to the Standard Average European languages and to Yorùbá. Specifically, I propose that the absence of an overt modal in antecedents of Standard Average European conditionals is due to the fact that the clause-typing marker contains a modal component. I further propose that the lack of mood marking in antecedents of Yorùbá conditionals is due to phonotactic properties. A detailed discussion of the semantic and morpho-syntactic status of grammatical markers that surface in Yorùbá conditional constructions – such as *bí* ‘if’, *ṣí* ‘irrealis mood’ and *bá* ‘underspecified modal’ – closes the chapter.

### 3.1. Putting antecedent and consequent together: the form predicted by the proposed model.

To my knowledge, no proposal has been made as of yet concerning the combination of the antecedent and the consequent clauses. In effect, even though the semantic model is generally accepted, a syntactic model that would reflect such a semantic structure is non-existent. The hypothesis adopted in this study is that there is a very tight mapping between form (morpho-syntax) and meaning (semantics) and that semantic structure and syntactic structure mirror each other.

In the proposed model for the interpretation of conditionals (based on the tri-partite structure as in Ippolito (2002) and Heim (1982)), which is headed by MODAL, the antecedent clause (the *if*-clause) acts as a restrictor on the consequent (the [*then*]-clause) – i.e. the nuclear scope. One way of mapping this dependency onto syntax is to assume that one clause is adjoint to the other; as in (101).

(101)



Neither of these structures does, however, reflect the dependency that the conditional clause imposes on the result clause. Therefore<sup>37</sup>, one is left with no choice but to assume that the antecedent is generated as an adjunct to the consequent clause. Furthermore, given that the antecedent restricts the MODAL, it is likely that it attaches at a fairly high projection, most likely above either the VP node or the IP node.

If the attachment is above the VP node but below the IP node, then movement operations are required in order to derive the correct word order; otherwise the surface structure of conditionals would have the antecedent clause spelled-out somewhere between the subject and the verb. This is not the case in conditionals. In that case, let me consider the second option where the antecedent CP attaches to a projection higher than the IP node.

The projection that is left and available for such an attachment is the CP projection of the consequent. And since the head of a projection cannot be phrasal, the only positions available for generation of the antecedent CP are the specifier and a modifier of the matrix CP, which is the consequent. My claim is that the antecedent clause is a modifier of the consequent CP: there are two reasons to think this.

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<sup>37</sup> ... and given that the two clauses are very unlikely to be in the head-complement relationship. If this was actually the case, the truth value of the consequent clause (matrix) would always depend on that of the antecedent clause (complement). The truth conditions of a sentence like (i) show that it is not always the case – i.e. (i) does not entail (ii).

- (i) If John comes to the party, we will have a great time. [Iatridou (2000:234)]  
(ii) We will have a bad time, if John doesn't come.

Further, if we compare the role of the antecedent of (i) with the embedded CP of (iii), we realise that the embedded CP of (iii) is not only crucial for (iii) from a morpho-syntactic point of view but also from the point of view of semantics, as shown in (iv/v) and (vi) respectively.

- (iii) He asked me [if John came to the party].  
(iv) \*[If John came to the party] he asked me.  
(v) √We will have a great time, if John comes to the party.  
(vi) #He asked me. [uttered out of the blue]

The first argument that the consequent CP cannot be a specifier and must be a modifier is based on linearization. In some views of phrase structure (like the GOVERNMENT & BINDING THEORY, as in Haegeman (1994), Zwicky (1993), etc.) it is assumed that the specifier position is stable language internally (to the left of or to the right of the head depending on the language – English having a SPEC position to the left of the head), unless a movement operation is involved. In contrast, modifiers are more flexible with respect to the side on which they attach. If the ‘specifier’ insertion of the antecedent CP is to be adopted, it predicts that *if*-clauses always precede their consequents. This is definitely not true for the Standard Average European languages (as in (102) versus (103)) neither is it true in Yorùbá.

(102) [*if*-clause If he gets invited to the party], [*then*-clause he will bring a dessert].

(103) [*then*-clause He will bring a dessert], [*if*-clause if he gets invited to the party].

A second argument is that within a given projection multiple modifier positions are possible but there is a unique specifier position. This would predict that once a specifier position is filled, no other element can be generated in SPEC or move to SPEC. The prediction based on this property is that no constructions (derived from conditionals) that involve movement of an element to the SPEC of consequent CP be grammatical. However, there are such constructions (as in (104)). In (104) the Wh-expression occupies the SPEC CP position of the consequent clause; therefore, the antecedent *if*-clause cannot be in SPEC CP position.

(104) *What<sub>i</sub> will he buy for Olú, if he gets invited to his birthday party [t<sub>i</sub>]?*

If the antecedent clauses cannot be in SPEC, then the only other alternative is to generate them as modifiers of consequent clauses at the CP level. The last question that remains to be answered is whether both clauses composing the conditional constructions are in fact CPs.

Part of my previous argument related to the attachment site of antecedents was based on the fact that the antecedent modifies a full sentence which is the consequent. A full sentence is an IP; therefore, one must admit that the consequent projects at least as high as IP. Further, it has been argued that the antecedent attaches above such consequent IP, but is still tightly related to

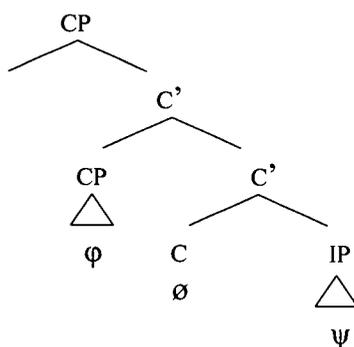
this IP and, therefore, must be within the CP projection of the consequent. This makes the consequent into a CP.

A parallel argument is even easier to make for the antecedent clause due to the fact that antecedents overtly show clause-type marking (e.g. English *if*). Since such clause-type markers are usually associated with the CP projection – i.e. are complementisers, I assume without further deliberation that antecedents are also CPs. As a consequence, Wh-extraction is allowed only from the consequent clause – as shown by ungrammaticality of (105). Specifically, given that CPs are islands for extraction, antecedent clauses must be CPs.

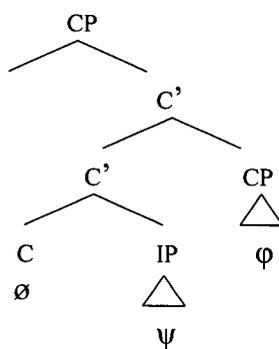
(105) \* *To what if he gets invited, he will buy Olu a gift.*

To summarise, the above arguments are consistent with the following syntactic model of conditional sentences, as in (106)/(107) and their right-headed equivalents in (108)/(109).

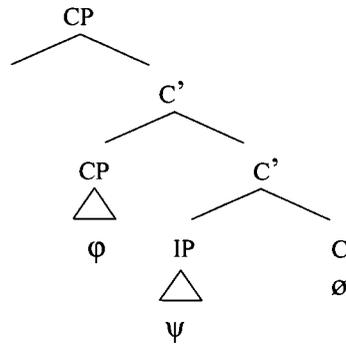
(106) [LEFT-HEADED WITH LEFT ADJUNCTION]



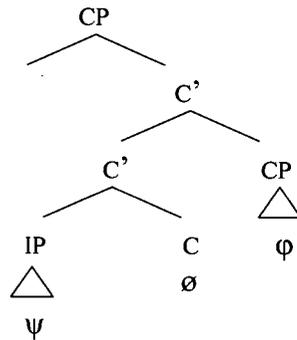
(107) [LEFT-HEADED WITH RIGHT ADJUNCTION]



(108) [RIGHT-HEADED WITH LEFT ADJUNCTION]



(109) [RIGHT-HEADED WITH RIGHT ADJUNCTION]



An additional advantage of this model is that it is compatible with the morpho-syntactic make-up of both the antecedent and the consequent clause of which the main difference is the presence (in antecedents) and/or absence (in consequents) of the clause-type markers. And given that Yorùbá is a language without overt head-movement, the word order attested in surface forms must be the same as the ordering of projections within the CP. The morpho-syntactic make-up of the antecedent and consequent clauses is discussed in the following sections of this chapter.

### 3.2. From restrictor and nuclear scope to antecedent and consequent.

In previous chapters, I also showed that there is a one to one correspondence between the restrictor and the nuclear scope (of the tri-partite quantificational structure/model for interpretation of conditionals) on one hand and, respectively, the antecedent (subordinate

clause) and consequent (matrix clause) within the syntactic structure on the other. In addition, it has been established that the restrictor contains three semantic factors: MODAL QUANTIFICATION OVER POSSIBLE WORLDS, (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION. I proposed that these factors were morpho-syntactically expressed by three different grammatical categories: Modal, Mood and Tense. Moreover, I argued that not all the factors are necessarily active in a particular language as regards meaning-form mapping. For example, whereas Standard Average European languages (like English, French and Italian) employ both the LIKELIHOOD OF SATISFACTION and the TIME OF CONDITION factors, Yorùbá makes use only of the UNLIKELIHOOD OF SATISFACTION. However MODAL QUANTIFICATION OVER POSSIBLE WORLDS is always present and active. Unsurprisingly, the different meaning-form mappings result in a difference in the morpho-syntactic inventory of conditionals, both in terms of the cross-systemic properties (number of different morpho-syntactic types of conditionals) and system-internal realisations (morpho-syntactic make-up of the conditional constructions).

Specifically, given the semantic and morpho-syntactic differences between the Yorùbá and the Standard Average European, one expects the following two differences to emerge: (i) Yorùbá conditionals should be marked with realis or irrealis mood, whereas the SAE conditionals should be marked for indicative or subjunctive mood; and (ii) SAE conditionals are always (present/past) tense-marked, in contrast to their Yorùbá counterparts. Related to this is the fact that Yorùbá distinguishes only two types of conditionals (realis and irrealis), whereas the Standard Average European languages distinguish three of them (indicative, non-past subjunctive and past subjunctive). However, these are not the only differences. While Yorùbá marks both the antecedents and the consequents with a modal verb, the SAE languages have a modal verb only in the consequent clauses. Section 3.3. shows that all three semantic factors are always present in the morpho-syntax in one form or another.

### 3.3. What copies and where? Polish tells it all.

Recall section 1.6. above in which the types of conditionals in Polish were presented. I argued that the language is currently in transition from the SAE-like system to the Yorùbá like system due to the loss of the ‘past in the past’ construction also known as Past Perfect. In other words, Polish has lost one of the conditional forms (past subjunctive) and, consequently, reanalysed the two other forms into realis- and irrealis-like forms of Yorùbá.

Table 3.3.1: Types of conditionals in Polish, a language ‘in transition’.

Situation:	Morpho-syntactic type of construction:	
	<u>‘old’ Polish:</u> (Standard Average European pattern)	<u>Polish now:</u> (Yorùbá pattern)
A	INDICATIVE CONDITIONAL	REALIS
B	NON-PAST SUBJUNCTIVE CONDITIONAL	CONDITIONAL
C		IRREALIS
D	PAST SUBJUNCTIVE CONDITIONAL	CONDITIONAL

Despite these interpretative changes, the sentence-internal morpho-syntactic structure of the conditional clauses remained unchanged. That is to say, Polish conditionals are still morphologically marked as if they were indicative and (non-past) subjunctive conditionals.

- REALIS CONDITIONAL: the antecedent and the consequent of a realis conditional are in the indicative mood and both clauses are marked for the future/modal (*odwiedzi* and *sprawi przyjemność* respectively).

ANTECEDENT: [FUTURE/MODAL [jeśli [φ]]]

CONSEQUENT: [FUTURE/MODAL [ψ]]

(110) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if Olú visit.FUT-MOD.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

- IRREALIS CONDITIONAL: both the antecedent and the consequent of an irrealis conditional are in the present conditional form (*odwiedziłby* and *sprawiłby przyjemność* respectively).

ANTECEDENT: [PRESENT-CONDITIONAL [jeśli [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

(111) *Jeśli Olú odwiedziłby Marie (wczoraj/jutro), sprawiłby jej przyjemność.*

if Olú visit.PRES-COND.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG her pleasure

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

Keeping in mind the arguments regarding the status of conditional and subjunctive forms (and especially their relation with respect to one another) put forward in chapter 1, Polish conditionals can be reduced to the following templates.

Table 3.3.2: Templates of conditional forms attested in modern Polish.

Type of conditional:	ANTECEDENT			CONSEQUENT	
REALIS CONDITIONAL	<i>jeśli</i>	indicative	modal- future	indicative	modal- future
IRREALIS CONDITIONAL	<i>jeśli</i>	past (subjunctive)	modal <i>by</i>	past (subjunctive)	modal <i>by</i>
MORPHO-SYNTAX	CLAUSE- TYPING	MOOD	MODAL	MOOD	MODAL

Given that past (tense) is used to mark subjunctive (a form that has disappeared in Polish), then Polish conditionals can be characterised as follows.

$$(112) \quad [{}_{\text{ANTECEDENT}} \text{CLAUSE-TYPING M} [{}_{\text{MOOD}} [{}_{\text{MODAL}} [\varphi]]]] \rightarrow [{}_{\text{CONSEQUENT}} \text{MOOD} [{}_{\text{MODAL}} [\psi]]]$$

If we compare the morpho-syntactic marking of Polish conditionals to the tri-partite model for interpretation of conditionals, we see that only the ‘active’ elements that drive the typology of conditionals are morpho-syntactically expressed. Specifically, given that only UNLIKELIHOOD OF SATISFACTION is active in the meaning-form mapping; the conditionals are marked for mood. A modal verb is also present, consistent with the fact that MODAL QUANTIFICATION OVER POSSIBLE WORLDS is always ‘active’. Both the antecedent and the consequent are interpreted with respect to possible worlds  $w'$ . Therefore, a modal verb is present in both the antecedent and the consequent clause.

The question that arises at this point is why some languages, like the Standard Average European ones, do not mark both components of their conditional construction (specifically antecedents) with a modal. Before I answer this question, I want to point out an additional particularity of Polish which will allow me to answer this question: Polish has two different clause-typing markers of which only one can be thought of as having modal properties.

Consider again the examples of Polish conditionals ((110) and (111) above). It turns out that only the irrealis conditional (115) allows for the clause-typing marker *jeśli* ‘if’ to be replaced by another conditional marker *gdyby* ‘if.MOD’ (as shown in (116)).

▪ REALIS CONDITIONAL:

(113) *Jeśli Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if Olú visit.FUT-MOD.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

= (A) ‘If Olú visits Mary tomorrow, he will make her happy.’

= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

(114) \**Gdyby Olú odwiedzi Marie jutro, sprawi jej przyjemność.*

if.MOD Olú visit.FUT-MOD.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

▪ IRREALIS CONDITIONAL:

(115) *Jeśli Olú odwiedziłby Marie (wczoraj/jutro), sprawiłby jej przyjemność.*

if Olú visit.PRES-COND.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG her pleasure

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

(116) *Gdyby Olú odwiedził Marie (wczoraj/jutro), sprawiłby jej przyjemność.*

if.MOD Olú visit.PAST.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG her pleasure

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

The change in the clause-typing marker (i.e. replacement of *jeśli* by *gdyby*) triggers a change in the morpho-syntax of the verb form. Specifically, the verb takes with *jeśli* the present conditional form (past (subjunctive) + modal); however, when *gdyby* is used the verb form must change to the past (subjunctive) one.

(117) \**Gdyby Olú odwiedziłby Marie (wczoraj/jutro), sprawiłby jej przyjemność.*

if.MOD Olú visit.PRES-COND.3SG Mary (yesterday/tomorrow), cause.PRES-COND.3SG  
her pleasure

The introduction of *gdyby* must involve the introduction of a modal element: this accounts for the deletion of the modal part in the verbal form. The morpho-phonological evidence confirms this claim: the modal component of the verb form is marked by the suffix *-by* 'MOD' and *gdyby* is a complex lexical item composed of *gdy* 'when' and *-by* 'MOD'. That is to say that *gdyby* is equivalent to the English hypothetical *whenever*.

Moreover, if one considers the ungrammatical (114), they might wonder why *gdyby* is not allowed as a replacement of *jeśli* in realis conditionals. The answer to this puzzle is actually very simple and has to do with the fact that the antecedent of Polish realis conditionals is already marked for future tense (which in many analyses, including this study, is considered to be a modal – see Enç (1986) for example) and, therefore, the introduction of yet another modal is not necessary and is, in fact, prohibited. In addition, there seems to exist some other constraint in Polish that does not allow for the future marking to be replaced by the indicative present marking as a possible remedy strategy, as in (118).<sup>38</sup>

(118) \**Gdyby Olú odwiedza Marie jutro, sprawi jej przyjemność.*

if.MOD Olú visit.PRES.3SG Mary tomorrow, cause.FUT-MOD.3SG her pleasure

Consequently, the conclusion that can be reached is that the modal of the tri-partite structure for the interpretation of conditionals can be, but does not need to be, realised as a modal verb.

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<sup>38</sup> An interesting point about *gdyby* is that it seems to be the 'counterfactual if'. This is further reflected in the language by existence of a noun and a verb: *gdybanie* 'action of expressing regrets about the past' and *gdybać* 'hypothesise with regret about past events' which are clearly reflecting the counterfactual environments.

The lack of modal in antecedents of conditionals in languages like the Standard Average European ones might be due to some similar property of these languages. I address this issue below.

### 3.4. The form of Standard Average European conditionals.

Recall that the surface forms of conditional constructions found in the Standard Average European languages are distinguished based on two situation factors. Specifically, the factors active in the meaning-form mapping are: TIME OF CONDITION and LIKELIHOOD OF SATISFACTION. This is summarised in the table below.

Table 3.4.1.: SAE pattern of conditionals driven by the two situation factors employed.

Situation:	Situation factor(s) employed:		Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	[LIKELY]	NON-PAST	INDICATIVE CONDITIONAL
B	[UNVALUED]	NON-PAST	NON-PAST SUBJUNCTIVE
C	[UNLIKELY]	NON-PAST	CONDITIONAL
D	[UNLIKELY]	PAST	PAST SUBJUNCTIVE CONDITIONAL

Given that the active situation factors are realised morpho-syntactically by corresponding grammatical elements (tense and mood (indicative/subjunctive) in case of SAE languages) and that the always active MODAL is expressed on the surface by a modal element; it is to be expected that both the antecedents and the consequents of the SAE conditionals will be marked for tense, mood and modal. Specifically, indicative conditionals ought to be marked with present tense, indicative mood and modal; non-past subjunctive conditionals with present

tense, subjunctive mood and modal; and, lastly, past subjunctive conditionals with past tense, subjunctive mood and modal. However, as the (Italian, French and English) data below shows, only consequents of SAE conditionals meet this morpho-syntactic marking requirement. The antecedents of all SAE languages do contain a clause-typing marker, but do not contain a modal element.

### ITALIAN:

- INDICATIVE CONDITIONAL: both the antecedent and the consequent are in the indicative mood, with the antecedent being in the present indicative (*visita*) and the consequent in the future/modal indicative (*fara felice*).

ANTECEDENT: [PRESENT-INDICATIVE [if [φ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ψ]]

(119) *Se Olú visita Maria domani, la fara felice.*

if Olú visit.PRES-IND.3SG Mary tomorrow, pro her do.FUT-MOD.3SG happy

= (A) ‘If Olú visits Mary tomorrow, he will make her happy.’

- NON-PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the imperfect subjunctive mood (*visitasse*), while the consequent is in the present conditional (*farebbe felice*).

ANTECEDENT: [IMPERFECT-SUBJUNCTIVE [if [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

(120) *Se Olú visitasse Maria (domani), la farebbe felice.*

if Olú visit.IMP-SUBJ.3SG Mary (tomorrow), pro her do.PRES-COND.3SG happy

= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

- PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the plus-quam-perfect subjunctive mood (*avesse visitato*), while the consequent is in the past conditional (*avrebbe fatta felice*).

ANTECEDENT: [PLUS-QUAM-PERFECT-SUBJUNCTIVE [if [φ]]]

CONSEQUENT: [PAST-CONDITIONAL [ψ]]

(121) *Se Olú avesse visitato Maria (ieri), l'avrebbe fatta felice.*

if Olú have.IMP-SUBJ.3SG visit.PAST.PART Mary (yesterday), pro her have.PRES-COND.3SG do.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

### FRENCH:

- INDICATIVE CONDITIONAL: the antecedent and the consequent are both in the indicative mood with the antecedent being in the present indicative (*rend visite*) and the consequent in the future/modal indicative (*rendra heureuse*).

ANTECEDENT: [PRESENT-INDICATIVE [if [φ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ψ]]

(122) *Si Olú rend visite à Marie demain, il la rendra heureuse.*

if Olú pay.PRES-IND.3SG visit PREP Mary tomorrow, he her make.FUT-MOD.3SG happy

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

- NON-PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the imperfect of the indicative mood (*rendait visite*), while the consequent is in the present conditional (*rendrait heureuse*).

ANTECEDENT: [IMPERFECT-INDICATIVE [if [φ]]]

CONSEQUENT: [PRESENT-CONDITIONAL [ψ]]

(123) *Si Olú rendait visite à Marie (demain), il la rendrait heureuse.*

if Olú pay.IMP.3SG visit PREP Mary (tomorrow), he her make.PRES-COND.3SG happy

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

- PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the plus-quam-perfect of the indicative mood (*avait rendu visite*), while the consequent is in the past conditional (*aurait rendue heureuse*).

ANTECEDENT: [PLUS-QUAM-PERFECT-INDICATIVE [if [φ]]]

CONSEQUENT: [PAST-CONDITIONAL [ψ]]

(124) *Si Olú avait rendu visite à Marie (hier), il l'aurait rendue heureuse.*

if Olú have.IMP.3SG pay.PAST.PART visit PREP Mary (yesterday), he her have.PRES-COND.3SG make.PAST.PART happy

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

#### ENGLISH:

- INDICATIVE CONDITIONAL: the antecedent and the consequent are both in the indicative mood with the antecedent being in the present indicative (*visits*) and the consequent in the future/modal indicative (*will make happy*).

ANTECEDENT: [PRESENT-INDICATIVE [if [φ]]]

CONSEQUENT: [FUTURE/MODAL-INDICATIVE [ψ]]

(125) *If Olú visits Mary tomorrow, he will make her happy.*

if Olú visit.PRES-IND.3SG Mary tomorrow, he FUT-MOD.3SG make her happy

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

- NON-PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the Past Simple of the indicative mood (*visited*), while the consequent is in the modal/future-in-the-past (*would make happy*).

ANTECEDENT: [PAST-INDICATIVE [if [φ]]]

CONSEQUENT: [MODAL/FUTURE-IN-THE-PAST [ψ]]

(126) *If Olú visited Mary (tomorrow), he would make her happy.*

if Olú visit.PAST-IND.3SG Mary (tomorrow), he PAST-FUT-MOD.3SG make her happy

= (B) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

- PAST SUBJUNCTIVE CONDITIONAL: the antecedent is in the Past Perfect of the indicative mood (*had visited*), while the consequent is in the modal/future-in-the-past-perfect (*would have made happy*).

ANTECEDENT: [PAST-PERFECT-INDICATIVE [if [φ]]]

CONSEQUENT: [MODAL/FUTURE-IN-THE-PAST-PERFECT [ψ]]

(127) *If Olú had visited Mary (yesterday), he would have made her happy.*

if Olú have.PAST-IND.3SG visit.PAST.PART Mary (yesterday), he PAST-FUT-MOD.3SG have.AUX make.PAST.PART her happy

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

The morpho-syntactic pattern(s) of Standard Average European (Italian, French and English) conditionals is summarised in the table below.

Table 3.4.2.: Templates of conditional forms of the Standard Average European languages.

Type of conditional:	ANTECEDENT				CONSEQUENT
INDICATIVE CONDITIONAL	if	present	indicative	?	present indicative future/modal (Ø <sup>39</sup> )
NON-PAST SUBJUNCTIVE CONDITIONAL	if	present	subjunctive (past <sup>40</sup> )	?	present subjunctive (past) + (Ø) future/modal (Conditional)
PAST SUBJUNCTIVE CONDITIONAL	if	past	subjunctive (past)	?	past subjunctive (past) + future/modal (Conditional)
MORPHO- SYNTAX	CLAUSE- TYPING	TENSE	MOOD	MODAL	TENSE MOOD + MODAL

The question marks (?) in the table indicate the apparent lack of the modal element in the antecedent clause of the Standard Average European conditionals. Why apparent? Because even though it is not morpho-phonologically overt, the presence of a modal element is predicted by the semantic model for the interpretation of conditionals proposed in chapter 2.

As I mentioned above, one way of solving this problem would be to revise the model so that this discrepancy is accounted for – a possibility that I will not even consider given that such a revision would no longer account for Yorùbá and Polish data. Another possibility would be to say that the model is correct, but that the modal element that is ought to mark antecedents is morpho-phonologically null (a null modal operator). In fact, Ippolito (2002) seems to assume this in her analysis of conditionals. Such an account is plausible, but its appeal fades in light of the cross-linguistic evidence that has been provided in section 3.3. where I discussed clause-typing of antecedents in Polish, and argued that they have a modal component.

<sup>39</sup> Morpho-syntactically null.

<sup>40</sup> In French and English past is a realisation of subjunctive as the true subjunctive forms have been lost (see chapter 1 of this study for details).

If clause-typing can be modal in nature like the Polish *gdyby* ‘if.MOD’, then the non-co-occurrence of a modal expressed on/by a verbal element within the antecedent produces a pattern similar to that found in antecedents of conditionals in the Standard Average European. Therefore, I conclude that the SAE conditional clause-typing markers (Italian *se*, French *si* and English *if*) are equivalents of Polish *gdyby* in that they are also complex lexical items that contain a modal component: *se* ‘if.MOD’, *si* ‘if.MOD’ and *if* ‘if.MOD’.

Although the null modal analysis and the ‘if.MOD’ analysis are impossible to distinguish based on language internal-evidence; I nevertheless adopt the latter explanation here as it is supported by cross-linguistic evidence. Consequently, I revise the morpho-syntactic templates of Standard Average European conditionals as follows.

Table 3.4.3.: Templates of conditional forms of the Standard Average European languages.

Type of conditional:	ANTECEDENT			CONSEQUENT		
INDICATIVE CONDITIONAL	if.MOD	present	indicative	present	indicative	future/modal (Ø)
NON-PAST SUBJUNCTIVE CONDITIONAL	if.MOD	present	subjunctive (past)	present (Ø)	subjunctive (past) + future/modal (Conditional)	
PAST SUBJUNCTIVE CONDITIONAL	if.MOD	past	subjunctive (past)	past	subjunctive (past) + future/modal (Conditional)	
MORPHO- SYNTAX	CLAUSE- TYPING. MODAL	TENSE	MOOD	TENSE	MOOD + MODAL	

Such templates are consistent not only with the forms predicted by the model for the interpretation of conditionals proposed in this study.

### 3.5. The form of Yorùbá conditionals.

I have shown that the model for the interpretation of conditionals proposed in chapter 2 is compatible with data from the Standard Average European languages and Polish (a language in transition). More importantly, the analysis has explanatory power in that it also accounts for conditional forms found in Yorùbá.

Recall that in Yorùbá conditionals are classified as realis or irrealis (as per table below).

Table 3.5.1.: Types of conditionals in Yorùbá.

Situation:	Situation factor(s) employed:	Resulting pattern:
	UNLIKELYHOOD OF SATISFACTION: (UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')	
A	[LIKELY]	REALIS
B	[UNVALUED]	CONDITIONAL
C	[UNLIKELY]	IRREALIS
D	[UNLIKELY]	CONDITIONAL

- REALIS CONDITIONAL: both the antecedent and the consequent of Yorùbá realis conditional contain a modal element (*bá* and *yóò* respectively), with the consequent being marked (not always overtly) for realis mood (*M-tone* on *y* the first segment of *yóò*). At the same time the antecedent is marked with a conditional clause typing marker (*bí*).

ANTECEDENT: [MODAL [bí [φ]]]

CONSEQUENT: [REALIS MOOD-MODAL [ψ]]

(128) *Bí Olú bá ló kí Meri (lólá), yòò mú inú rẹ̀ dún.*

if Olú MOD go greet Mary (tomorrow), FUT-MOD make stomach PRO.3SG sweet

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

- IRREALIS CONDITIONAL: both the antecedent and the consequent have a modal element (*bá*). The consequent is also marked for irrealis mood (*L-tone i*), while the antecedent contains a conditional clause typing marker (*bí*).

ANTECEDENT: [MODAL [bí [φ]]]

CONSEQUENT: [IRREALIS MOOD-MODAL [ψ]]

(129) *Bí Olú bá (ti) ló kí Meri (lánà/lólá), ì bá (ti) mú inú rẹ̀ dún.*

if Olú MOD (PERF) go greet Mary (yesterday/tomorrow), IRR-MOOD MOD (PERF)  
make stomach PRO.3SG sweet

= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

The situation factor which is active in the meaning-form mapping in Yorùbá is the UNLIKELIHOOD OF SATISFACTION. Considering this in conjunction with the fact that MODAL QUANTIFICATION OVER POSSIBLE WORLDS is always active in the interpretation of conditionals, this implies that both Mood (realis/irrealis) and Modal will be morpho-syntactically reflected in antecedents and consequents of Yorùbá conditionals. However, as the templates in table below show; mood is not marked in the antecedents.

Table 3.5.2: Templates of conditional forms attested in Yorùbá.

Type of conditional:	ANTECEDENT			CONSEQUENT	
REALIS CONDITIONAL	<i>bí</i>	?	modal <i>bá</i>	realis mood	modal-future
IRREALIS CONDITIONAL	<i>bí</i>	?	modal <i>bá</i>	irrealis mood	modal <i>bá</i>
MORPHO-SYNTAX	CLAUSE-TYPING	MOOD	MODAL	MOOD	MODAL

Recall the discussion of clause-typing markers in both Polish and the Standard Average European languages. I argued based on evidence from Polish that the SAE *if* is a complex functional item which contains a modal component (*if* = ‘if.MOD’). In light of the above evidence, an obvious thing is to propose that the Yorùbá clause-typing marker *bí* is a complex word as well and contains a mood component – i.e. *bí* = ‘if.MOOD’, as opposed to *bí* = ‘if’ (or ‘if.MOD’ for that matter<sup>41</sup>).

An alternative explanation for the absence of overt Mood marking in antecedents of Yorùbá conditionals comes from the marking of Mood elsewhere in the language. Specifically, Yorùbá distinguishes two categories of mood: realis and irrealis. The realis mood, being an unmarked category, is very rarely morpho-syntactically marked in surface forms. In fact, the mid tone (M-tone) that marks the realis mood is often thought of as default tonal value/absence of tone and, hence, it is not surprising that its insertion in places like the antecedent of conditional constructions does not change the surface form. The irrealis mood is also marked with a tone, the low tone (L-tone)<sup>42</sup>, which enclitises onto the preceding tone-bearing unit. It is, therefore, possible that due to unavailability of such a tone-bearing unit, the low tone (L-tone) marking the irrealis mood deletes as well. In fact, maybe the deletion of the irrealis mood marking in some way results from the more general unmarkedness of the realis mood?

<sup>41</sup> We know that it cannot be equivalent of ‘if.MOD’ as the modal element is overt in Yorùbá antecedents.

<sup>42</sup> See section 3.6.2 below for details and arguments.

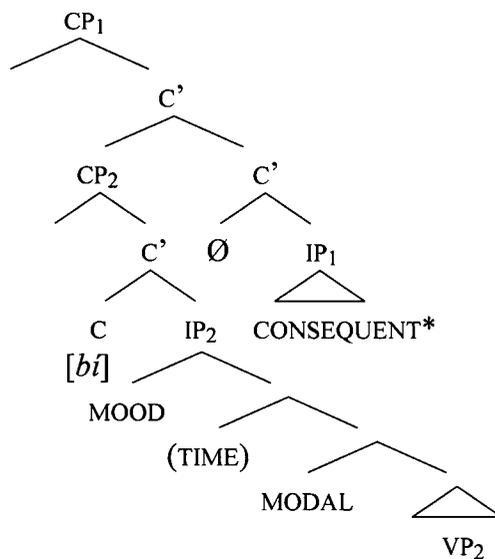
Again, it is hard to argue for one hypothesis being superior to the other due to very limited language-internal evidence. If the cross-linguistics patterns are taken into consideration, the *bí* = 'if.MOOD' analysis is plausible.

Unfortunately, this puzzle cannot be resolved at present. Nevertheless, I claim that the model for the interpretation of conditionals proposed here is not only compatible with the Yorùbá data but more importantly allows for an explanatory analysis of the latter. A detailed consideration of the internal components of Yorùbá conditionals (section 3.6. below) as well as the consequences that the analysis of conditionals proposed above has for the general view of the Yorùbá phrase structure (chapter 4 below) indicates that this general approach yields insight.

### 3.6. Inside the structure of Yorùbá conditionals.

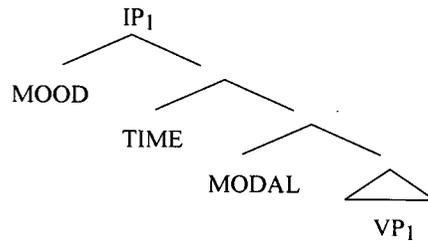
I have shown that the form of the conditional constructions in Yorùbá can be derived based on the direct meaning-form mapping by using the tri-partite quantificational model. This model translates into the syntactic structure(s) presented below.

(130)



\*Where the consequent is further decomposed as follows:

(131)



I have also argued that Yorùbá conditional clauses are marked with particular morpho-syntactic markers: (i) the clause-typing marker (antecedent clauses only); (ii) mood marker (hence, the distinction into realis and irrealis conditionals); and (iii) modal. Here I take a closer look at both the semantic and morpho-syntactic properties of these three elements.

### 3.6.1. Marking the antecedent: clause-typing marker.

The following presents the top-most morpho-syntactic ingredient of conditionals in the Yorùbá language: the clause-typing marker, which in the syntactic structure is equivalent to a complementiser.

(132)



Only antecedents are marked with a morphologically overt complementiser, usually *bí* (see (133)). Even though *bí* is the most frequently used clause-typing marker in Yorùbá conditionals and is often preferred by speakers, there is another clause-typing marker attested in the language as well, namely *kání* (as in (134) below).

(133) *Bí ó bá lọ iléiwé ni ì bá di dọkítá.*

if 3sg MOD go school EMPH IRR-MOOD MOD become doctor

‘If he had gone to school, he would be a doctor now.’

‘If he had gone to school, he would have become a doctor.’

(134) *Kání Meri lọ iléiwé, ì bá yege nínú ìdanwò.*

if Mary go school IRR-MOOD MOD succeed in exam

‘If Mary had gone to school, she would have succeeded in her exam.’

The choice of *bí* over *kání* has implications for the morpho-syntactic makeup of the antecedent. An antecedent marked with *kání* does not contain the modal *bá*.<sup>43</sup> The clause type marker *kání* is hardly ever used by speakers, so the structure with *bá* in the antecedent is definitely the predominant one. Given that functional elements in the language are usually associated with a (C)V template, it is almost certain that *kání* is a complex lexical item composed of at least two functional elements.

It is likely that the functional elements that combine together to form the clause-typing marker *kání* are as follows:

(i) *kí* (subordinating conjunction: ‘in order that’)

(135) *ó sọ pé kí n lọ.*

3SG happen say CONJ 1SG go

‘He told me that I must go.’

(ii) *á* (epistemic modal with future readings), and

(136) *Olú á lọ ní iléiwé.*

Olú MOD go PREP school

‘Olu will go to school.’

<sup>43</sup> Some may wonder: how likely is it that *kání* also contains a Mood component (just like was suggested for *bí*)? If this is the case, why is the clause-typing the same in both realis and irrealis conditionals? An argument that is likely to be raised by the supporters of the markedness hypothesis.

(iii) *ni* (focus marker)

(137) *tèmi ni iwé yí*  
POSS.1SG FOC book this  
'this book is MINE'

(138) *iwé yí ni tèmi*  
book this FOC POSS.1SG  
'THIS book is mine'

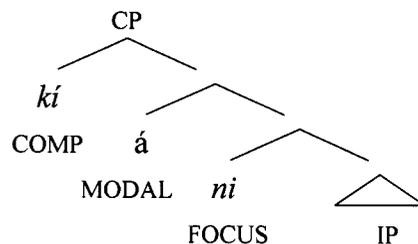
or

(iii) *ní* (preposition 'in reference to' derived from the possession verb *ní* 'have' which is also used for marking future environments under the scope of negation)<sup>44</sup>.

(139) *ó pé míf ní orúkọ.*  
3SG say GEN.1SG PREP name  
'He called me by name.'

This is shown in the structure below.

(140)



The fact that *kání* replaces both the clause-typing marker *bí* and the modal *bá* suggests that *kání* has the qualities of both a modal and a conditional clause-typing marker. Therefore, the subordinating conjunction *kí* and the modal *á* are likely to be its compositional elements. Given the default status of the vowel *i* in Yorùbá (Pulleyblank (1988a)), it is very plausible that *kí* and

<sup>44</sup> All definitions are cited after Abraham (1958).

*á* yield the first CV segment, namely *ká*. I cannot offer an explanation as to why the preposition *ní* is present. One possible way of looking at *ní* is that it is an environment-sensitive particle that surfaces in marked environments such as the negative environment and, hence, surfaces in the restrictor (imposed condition) environment as well. Such an approach does not, however, explain why *ní* is not present in antecedents of all conditionals (i.e. those headed by *bí*). Although I do not have an answer to this puzzle, it may be that *ní* is also sensitive to other factors (e.g.: it surfaces in negative futures, but not in negative past clauses) and this is why it is not present in the conditional antecedents marked with the *bí...bá* sequence.

### 3.6.2. Expressing Mood: positional low tone (L-tone).

This section presents an analysis of the low tone marker *ì* which appears in the consequent clauses of Yorùbá irrealis conditionals.

(141) *Bí Olú bá (ti) lẹ́ kí Meri (lánà/lólá), ì bá (ti) mú inú rẹ̀ dún.*

if Olú MOD (PERF) go greet Mary (yesterday/tomorrow), **IRR-MOOD** MOD (PERF)  
make stomach PRO.3SG sweet

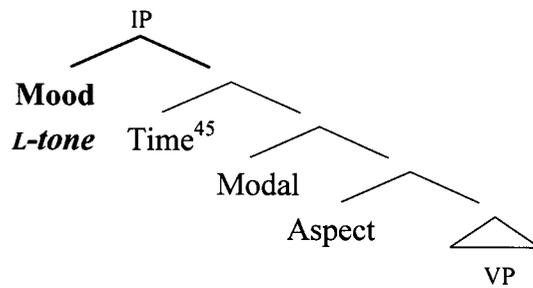
= (C) 'If Olú visited Mary (tomorrow), he would make her happy.'

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) 'If Olú had visited Mary (yesterday), he would have made her happy.'

My main claim here is that this low tone *ì* is, in fact, a positional low tone (L-tone) associated with the syntactic position of Mood within the extended inflection projection as shown below (after Cinque (1999)). The vowel quality, which in many cases is *i*, is determined in one of the two ways: (i) by insertion of a default vowel *i* or (ii) by encliticising the low tone onto the preceding syntactic element (both phenomena being very common in the phonology of the language – for details see Abraham (1958), Bamgboṣe (1967), Awobuluyi (1978)).

(142)



According to Abraham (1958) and Awobuluyi (1978) the morpheme *ì* has multiple meanings. Specifically, it can be used as: (i) a nominaliser deriving abstract nouns; (ii) a ‘negator’ of deverbal nominals; (iii) an unaccomplished action marker; and/or (iv) a grammatical marker surfacing in consequents of irrealis conditionals. As these four meanings/functions have little in common, the immediate question arises as to whether this element is a single lexical item with different meanings – a polysemous morpheme – or if these are unrelated lexical items which happen to have the same form – a case of homonymy. Below, I present evidence from the Standard and Moba dialects of Yorùbá based on which I conclude that the low tone *ì* found in consequents of irrealis conditionals is actually a positional low tone (L-tone) and is the irrealis mood marker in the language.

When *ì* attaches as a prefix to verbs of emotion and/or cognition (a semantically restricted set of verbs), it acts as a nominaliser. This is shown for Standard Yorùbá in (143) below.

(143) a. *ronú*  
‘think’

b. *ironú*  
NOM.think  
‘thought’

If, after the process of nominalisation (derivation of nouns from verbs via the nominalising prefix *à-*), an *ì* is infixes between a verb and its nominaliser; this *ì* functions as a negative marker (as in (144)).

<sup>45</sup> Time = Tense/Aspect (see section 4.2.).

(144) a. *àlo0329*

NOM.go

‘act of going’

b. *àllo*

NOM.NEG.go

‘failure to go’

Furthermore, when placed before a verb as a free morpheme, *ì* acts as an unaccomplished action marker (see (145) and (146)). In fact, the example (146) is a conditional construction with the marker *ì* present in its consequent. Also, notice that in both cases the *ì* is always accompanied by the underspecified modal *bá*.

(145) *iṣé tí Oladiipo ì bá ṣe*  
work COMP Oladiipo IRR MOD do  
‘work that Oladiipo would have done’

(146) *Bí Olú bá tí ló sí iléìwé ní sáà yíí,*  
if Olu MOD PERF go PREP school PREP semester this  
  
*ì bá tí pàdé Akin.*  
IRR MOD PERF meet Akin  
‘If Olu had attended school this summer, he would have met Akin.’

Dialectal variation – i.e. data from the Moba dialect of Yorùbá – is crucial here for determining whether *ì* is a unique morpheme with multiple meanings or if the surface similarity is due to homophony. In effect, the morpheme *ì* has three equivalents in the Moba dialect: (i) as a nominaliser used to derive abstract nouns it has the form *ù*; (ii) when it is interpreted as a negative marker in deverbal nominals it has the form *rì*; and (iii/iv) as an unaccomplished action marker as well as in conditional clauses it has the form *è/è̃*<sup>46</sup>. Below, I present the data from Moba Yorùbá.

<sup>46</sup> The ATR/RTR alternation is due to the vowel harmony process commonly found in the language and is not further discussed in this paper. For more information, reader should refer to Perkins (2005) and sources cited there.

- (147) a. *ronú* [MOBA]  
 ‘think’
- b. *ùronú*  
 NOM.think  
 ‘thought’

What is interesting here is that there is a phonotactic restriction in Standard Yorùbá on the occurrence of the vowel *u* – i.e. it never occurs word-initially – such a restriction does not hold in the Moba dialect and therefore, the surface form is equivalent to the underlying representation (compare (143) with (147)).

Moreover, when used as a negative particle within the deverbal nouns, the *ì* of the Standard dialect takes on a different form in Moba: *rì*. Again, the reduction of the sequence *rì* to *ì* is due to a common process found in Standard Yorùbá, but inactive in Moba – i.e. the *r*-deletion rule (Akinlabi (1993)). (Compare the example in (148) with the one in (144) above.)

- (148) a. *àlọ* [MOBA]  
 NOM.go  
 ‘act of going’
- b. *àrìlọ*  
 NOM.NEG.go  
 ‘failure to go’

The last form of Moba dialect that is expressed as *ì* in the Standard variety of the language is that found in conditional sentences and so called unaccomplished action expressions, namely the *è/ẹ̀*. What Awobuluyi (1978) refers to as unaccomplished action clause can be analysed as a reduced conditional – i.e. a conditional with the antecedent clause being presupposed or contextually salient and/or a nominal conditional as discussed in Lasersohn (1996). (Again compare (149) and (150) with (145) and (146) respectively.)

(149) *usé tini Oladiipọ è bá se* [MOBA]  
 work COMP Oladiipo IRR MOD do  
 ‘work that Oladiipo would have done’

(150) *Bí Olú bá lọ sí uléiwé, è bá di dọkitá.*  
 if Olu MOD go PREP school IRR MOD become doctor  
 ‘If Olu went to school, he would be a doctor.’

In addition, the vowel *è* with low tone surfaces in two more environments in the Moba dialect: (i) as part of the future auxiliary *é è*<sup>47</sup> and (ii) within the negative marker *kè*. See examples (151) and (152) respectively in which I contrast the Moba data with their equivalents in Standard Yorùbá.

(151) a. *ø é è lọ.* [MOBA]  
 3SG FUT go  
 ‘He will go.’

b. *ø yóò lọ.* [STANDARD YORÙBÁ]  
 3SG FUT go  
 ‘He will go.’

(152) a. *Olú kè lọ.* [MOBA]  
 Olu NEG go  
 ‘Olu didn’t go.’

b. *Olú kò lọ.* [STANDARD YORÙBÁ]  
 Olu NEG go  
 ‘Olu didn’t go.’

<sup>47</sup> As I will argue in the part of my paper devoted to Moba Yorùbá, the *è* is not only part of the future marker in the dialect. In fact, it is the irrealis marker which has assumed the role of the future marker due to the absence of a morpho-syntactically overt future marker in this variety.

In both cases the vowel quality has changed from *e* to *o*<sup>48</sup>. Nevertheless, the two varieties of Yorùbá share the following property: their future marker and their negation auxiliary contain both the same vocalic segment (*è/è̃* in Mòba and *ò* in Standard Yorùbá).

In light of the evidence based on examining cross-dialectal variation as well as variety-internal patterns, I conclude that: (i) the *ì* that we find in conditionals is not the same morpheme as that found in nominalisations or negation of deverbal nouns; (ii) it appears that *i* is a default vowel in Standard Yorùbá – i.e. other vowels are replaced by it as a repair strategy in case of a phonological conflict (see Ola (1995) amongst others); and (iii) *ì* surfaces only when the pronoun referring to the 3<sup>rd</sup> person singular subject is missing<sup>49</sup>, in all other cases the *i* itself is not present but the (positional) low tone (L-tone) is. The paradigms presented in the table below illustrate my point.

Table 3.6.2.1: Morpho-syntactic marking of irrealis and realis environments in Yorùbá.

X =	'X would (have) go(ne) to school'	'X went / has gone to school'
1.PERS.SG	<i>mì bá ló ní iléìwé</i> I MOD go PREP school	<i>mó ló ní iléìwé</i> I go PREP school
2.PERS.SG	<i>ò bá ló ní iléìwé</i> YOU MOD go PREP school	<i>o ló ní iléìwé</i> YOU go PREP school
3.PERS.SG	<i>ì bá ló ní iléìwé</i> S/HE MOD go PREP school	<i>ó ló ní iléìwé</i> S/HE go PREP school
1.PERS.PL	<i>à bá ló ní iléìwé</i> WE MOD go PREP school	<i>a ló ní iléìwé</i> WE go PREP school
2.PERS.PL	<i>è bá ló ní iléìwé</i> YOU MOD go PREP school	<i>e ló ní iléìwé</i> YOU go PREP school
3.PERS.PL	<i>wòn bá ló ní iléìwé</i> THEY MOD go PREP school	<i>won ló ní iléìwé</i> THEY go PREP school

<sup>48</sup> The tonal pattern remains unchanged across the two varieties, which is consistent with the analysis developed in this study – i.e. it is not the quality of the vowel that is important but the presence of the low tone (L-tone).

<sup>49</sup> The absence of the 3SG pronoun clitic has been previously discussed in the Yorùbá literature – see Déchaine (1993) for example.

Such a positional low tone (L-tone) is also present throughout the entire paradigm of (always precedes) the future-marking auxiliary *á*, the latter, as some point out, being often hard to distinguish from the irrealis mood (Déchaine (1993)). Furthermore, the presence of *ì* is always associated with certain semantic environments yielding the interpretations that can be classified as NOT REAL: (i) counterfactual (situations) – within forms of irrealis conditionals (see (146) above); (ii) unaccomplished status of actions (as in (144)); (iii) negatives and futures, which are viewed by many linguists as irrealis environments (refer back to (152) and (151) respectively); and (iv) subjunctive environments (wishes, hopes, etc...) as shown below.

(153) *ì bá ʒe pé o wà níbí.*<sup>50</sup>  
 IRR MOD do COMP 2SG be place.here  
 ‘I wish you were here.’

(154) a. *mo ro pé ò ó télé mi lɔ síbè.*  
 1SG wish COMP 2SG.IRR HTS follow 1SG go LOC  
 ‘I hope you go there with me.’

b. *mo ʒo pé o ó télé mi lɔ síbè.*  
 1SG say COMP 2SG HTS follow 1SG go LOC  
 ‘I said that you went there with me.’

(155) a. *mo ro pé ò á télé mi lɔ síbè.*  
 1SG wish COMP 2SG.IRR FUT follow 1SG go LOC  
 ‘I hope you (will) go there with me.’

b. *mo ʒo pé ò á télé mi lɔ síbè.*  
 1SG say COMP 2SG.IRR FUT follow 1SG go LOC  
 ‘I said that you will go there with me.’

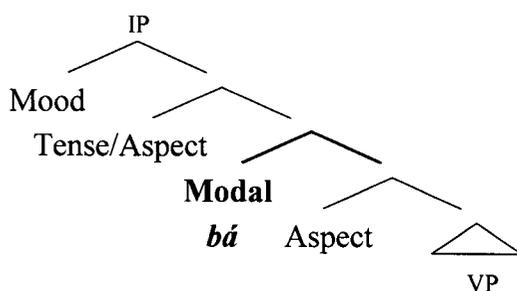
<sup>50</sup> 3SG is the subject of the matrix clause here – i.e. it is an impersonal construction.

Given the semantic properties of *ì* as well as its morpho-phonological alternations within the Moba dialect of Yorùbá, one can conclude that: *ì* (low tone *i*) is an instantiation of irrealis mood (in the 3<sup>rd</sup> person singular). The irrealis mood itself is expressed morpho-syntactically with a positional low tone (L-tone) which docks, where possible, onto a subject clitic<sup>51</sup>, if no segmental material is available (as in 3<sup>rd</sup> person singular) the default vowel *i* is inserted at PF yielding *ì*. Also, the syntactic position of this positional low tone (L-tone) – it surfaces between the subject (clitics) and the *High Tone Syllable* – is consistent with the grammatical category of Mood (as per the extended inflection projection model of Cinque (1999) adopted and exemplified throughout this study).

### 3.6.3. Expressing the Modal: auxiliary *bá*.

From the syntactic perspective, the bottom-most functional ingredient of both the antecedents and the consequents of conditional sentences are modal verbs – they occur directly before the verb phrase.

(156)



There exist many different modal auxiliaries in Yorùbá: some are epistemic, some are deontic and some allow for both readings. Some such modals are: *gbódò* ‘must’ (both epistemic and deontic); *lè/le* ‘can’ (deontic/epistemic respectively); *máa* ‘future/imperfective’ (actually only its subcomponent *mí* is modal) and *bá*. Given that *gbódò* and *lè* are rather infrequent in

<sup>51</sup> It (en-)cliticises onto the subject clitic.

conditional constructions, which are the core object of this study, I do not discuss their syntactic and/or semantic status.<sup>52</sup> The modal *máa*, being predominantly used in aspectual environments (habitual and progressive<sup>53</sup>) is discussed in the section devoted to implications of my model for the interpretation of conditionals for Yorùbá phrase structure, in particular the category of Aspect (view-point aspect) and future marking. The auxiliary that I am most interested in and to which this section is devoted is *bá*.

The syntactic position of *bá*, which I have established based on its co-occurrence patterns with other auxiliaries in the language, is that of a Modal in the structure shown above. As to its meaning, which I have not glossed yet, it should be classified as an *underspecified* modal whose primary semantic function is to introduce and quantify over possible worlds *w'* (without specifying whether it is the necessity, permission or any other relation that holds in these worlds). However, *bá* also occurs as a main verb, which is translated into English as 'meet'. I argue that the two instances of *bá* have little in common except for the phonological representation – i.e. they are homophonous. Let me start here by giving an example of the sentence where *bá* is used as a main verb.

- (157) *Akin ín bá Olú.*  
 Akin HTS meet Olu  
 'Akin (has) met Olu.'

In (157), both the meaning and the syntactic position of *bá* are consistent with its status as a main verb in this context. However, there are other environments where *bá* is used which are different than the one in (157). Example (158) below shows that, even though *bá* always follows the *High Tone Syllable* or the irrealis mood marker (low tone (*i*)), it can be followed by other verbs.

- (158) *ò bá lọ ní iléìwé.*  
 2SG.IRR MOD go PREP school  
 'You(SG) would (have) gone to school.'

<sup>52</sup> I do present some minor observations about these modal auxiliaries in section 4.5. below.

<sup>53</sup> As well as future/futurate ones.

- (159) *ò bá bá Olú.*  
 2SG.IRR MOD meet Olu  
 ‘You(SG) would meet Olu.’; ‘You(SG) would have met Olu.’

Data in (159) further prove the point illustrated in (158) and reinforces it in that it shows clearly that two occurrences of *bá* are grammatical within the same sentence, in fact they follow one another. If *bá* ‘meet’ and *bá* ‘modal’ were the same lexical item, their co-occurrence should result in ungrammaticality, but it doesn’t. Furthermore, only the modal *bá* behaves like other modals with respect to negation. In effect, modals in Yorùbá are the only auxiliaries that allow the negative particle *má* to surface<sup>54</sup>:

- (160) *o gbòdò má lọ ní iléìwé.*  
 2SG must NEG go PREP school  
 ‘You(SG) must not/cannot go to school.’

- (161) *ò bá má bá Olú.*  
 2SG.IRR MOD NEG meet Olu  
 ‘You(SG) would not (have) meet Olu.’

In contrast, main verbs accompanied only by the High Tone Syllable do not allow *má*:

- (162) *\*o ó má lọ ní iléìwé.*  
 2SG HTS NEG go PREP school

- (163) *\*o yóò má lọ ní iléìwé.*  
 2SG FUT NEG go PREP school

<sup>54</sup> Yorùbá displays great variety of negative markers: *kò, kì, kó, má*, etc... Not all of these markers are compatible with all auxiliaries or particular constructions, also their syntactic positions are not the same. Crucial to the discussion here is that *má* is a low negative (based on its fairly low syntactic position within the extended inflection projection), it is also not compatible with auxiliaries other than modals.

The main verb – i.e. ‘meet’ – *bá* does not allow the low negation (*má*) to surface:

(164) \**o*      *ó*      *má*      *bá*      *Olú.*  
           2SG      HTS      NEG      meet      Olu

(165) \**o*      *ó*      *bá*      *má*      *Olú.*  
           2SG      HTS      meet      NEG      Olu

The functional item *bá* exhibits all the properties of modal auxiliaries and, therefore, is to be classified as such within the set of auxiliaries. As to the meaning, its very flexible translations, and underdetermined quantificational force, as can be seen in examples cited throughout this study, suggest that modal *bá* is an UNDERSPECIFIED Modal which allows for introduction of possible worlds *w'* with respect to which a truth value of the sentence is evaluated and, at the same time, quantifies over them. Thus, it is no surprise that it surfaces in antecedent clauses of conditionals and consequent clauses of counterfactuals where it is accompanied by the irrealis mood marker – low tone (L-tone), e.g. *ʔi*. A more fine grained analysis of *bá*, which appears also in constructions other than conditionals (as shown by Ajiboye and Déchaine (2005)), is a topic for a separate study.

### 3.7. Summary.

In this chapter, I focused on the morpho-syntactic structure of conditional constructions with particular attention to such forms in Yorubá. I started by pointing out that the three components of meaning that drive the tri-partite quantificational model (MODAL QUANTIFICATION OVER POSSIBLE WORLDS, (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION) are reflected in the form of conditionals by three syntactic categories (Modal, Mood and Tense respectively).

Moreover, I argued that all languages under the scope of this study mark these three semantic factors in both the antecedent and the consequent, even though the surface forms may suggest

otherwise. Specifically, as was shown based on Polish, all three elements are copied from the semantic structure to both parts of the syntactic structure, namely the antecedent and the consequent. However, due to certain system-specific particularities, languages like Yorùbá and/or the Standard Average European ones may not display overt marking for a particular category. For example, lack of mood marking in Yorùbá antecedents and/or lack of modal marker in antecedents of the Standard Average European languages may be explained either by postulating the existence of a phonologically null element (as Ippolito (2002) does for the modal) or by admitting that clause-typing markers (as was shown for Yorùbá) also contribute grammatical information about modal force. Another possible explanation for this zero-marking of a category phenomenon, as was mentioned for Yorùbá, may be purely phonotactic. In effect, in cases where there is no free tone bearing unit to which the marker of a syntactic category – irrealis mood marked by low tone (L-tone) – can attach, then such a category is not realised at PF, etc. Testing such hypotheses is difficult and a more extensive investigation in this area is needed, an investigation that is beyond the scope of the current study.

Finally, in the last section on this chapter, I concentrated on presenting in-depth analyses of three grammatical elements surfacing in conditional constructions in Yorùbá: clause-typing markers, mood and modal. Specifically, I discussed the difference between *bí* and *kání* (the two clause-typing markers) of which the latter is a complex functional item; presented evidence for the claim that the low tone (L-tone) is an irrealis mood marker on its own; and showed that *bá* functions as a modal even though it is in a homophonous relationship with the verb *bá* ‘meet’. The next chapter explores the implications that this analysis of Yorùbá conditional constructions has for our understanding of the phrase structure of the language.

## Chapter 4: Consequences of the analysis.

This chapter focuses on the consequences of the analysis of conditional sentences presented in previous chapters for other areas of the Yorùbá language. This includes:

- (a) the *High Tone Syllable* which I argue to be both Tense and Aspect marker;
- (b) morpho-syntactic status of the complex auxiliary *yóò* (most frequent Mood/Modal element in the consequent clause of realis conditionals) which is here analysed as consisting of realis mood, *High Tone Syllable* and modal elements;
- (c) various ways of marking the future in the language – auxiliaries *yóò*, *á* and *máa* (of Standard Yorùbá);
- (d) aspectual and ‘future’ status of the auxiliary *máa*;
- (e) dialectal variation (Moba versus Standard Yorùbá) with respect to marking the future: more specifically, the status of the Moba auxiliary *è/è*.

While discussing the above properties, I also mention two particularities of the system which are responsible for patterns observed in the phrase structure and throughout the extended inflection projection (Cinque 1999) more specifically. These include:

- (f) phonotactic constraints and/or requirements on the size of words: Yorùbá verbs are monomoraic;
- (g) binarity of the phrase structure – i.e. the expressions of the Mood-Tense-Modal-Aspect phrases are based on a set of binary tone oppositions (yielding marked and/or unmarked categories) that are also context-sensitive.

### 4.1. Canonical Word Size.

Several grammarians of the Yorùbá language, including Bamgbose (1967), Awobuluyi (1978) and Déchaine (1993), have argued that the morpho-phonological shapes of many Yorùbá

words are determined by their syntactic categories. Specifically, grammars of the language mention verbs – monosyllabic words based on a CV template (as in (166) through (170)):

- (166) *je*           ‘eat.IMP’  
(167) *ʒe*           ‘do.IMP’  
(168) *fě*           ‘want.IMP’  
(169) *lɔ*           ‘go.IMP’  
(170) *kí*           ‘greet.IMP’

and nouns, which are said to take the VCV form (as in (171) through (175)):

- (171) *iwé*          ‘book’  
(172) *ajá*          ‘dog’  
(173) *ɔjó*          ‘day’  
(174) *òná*          ‘road’  
(175) *èkó*          ‘studies’

as CANONICAL examples of such category-form dependencies.

In fact, a simple browse through any dictionary of Yorùbá confirms that a majority of verbs and nouns follows this generalisation. For example, in his dictionary, Abraham (1958) lists thirty-nine verbs that begin with the consonant *r*. Out of these:

- (i) twenty-nine – about 74% – are monosyllabic (CV);
- (ii) nine – approximately 23% – are disyllabic (CVCV)<sup>55</sup>; and
- (iii) one – about 2% – is trisyllabic (CVCVCV).

A parallel Abraham’s (1958) dictionary count for nouns (excluding proper names) that begin with the vowel *a* revealed that out of the total of three hundred fifty-seven nouns:

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<sup>55</sup> At least six of them were serial or splitting verbs.

- (i) two hundred eighty-nine – approximately 81% – are of the VCV-shape;
- (ii) four – about 1% – have a VV-shape;
- (iii) thirty-nine – approximately 11% – could be reduced to the VCVCV template<sup>56</sup>;
- (iv) twenty-three – approximately 6% – are of the VVCV-shape<sup>57</sup>; and
- (v) two – barely 0.5% – follow the VCVVCV template.

If these numbers represent the large picture – i.e. Yorùbá word inventory, then it must be that forms like CV and VCV are CANONICAL VERBS and CANONICAL NOUNS in the language. This is a fact. Nonetheless, a following question remains: how is this fact understood within the Yorùbá grammar? Specifically, (i) what are the implications of CANONICAL WORD SIZE for other components of the grammar? and/or (ii) is CANONICAL WORD SIZE an epiphenomenon or a by-product of more general properties of the system?

For example, Déchaine (1993) takes this fact at face value and treats CANONICAL WORD SIZE as an inherent part of the language. However, not all linguists agree with such an approach to canonical size of lexical items and, by extension, category-form relations.

#### 4.1.1. Minimal Prosodic Word: McCarthy and Prince (1986 and 1993).

The debate on the size of words in Yorùbá has reopened in early 1990s in light of works by McCarthy and Prince (1986) and (1993) and their definition of the unmarked MINIMAL PROSODIC WORD.

MINIMAL PROSODIC WORD (Prwd) is characterised as a binary foot.

[cited after Ola, 1995: 168]

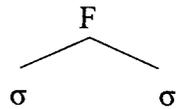
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<sup>56</sup> Of which at least fourteen were analysed by the author as complex nouns VCV + VCV → VCVCV.

<sup>57</sup> In some cases the author signalled a possible V + VCV composition of such nouns.

\*where a binary foot is defined as follows:

(176)



If about ninety-nine per cent of nouns in Yorùbá are at least disyllabic – follow a VCV or a bigger segmental template – and, therefore, form a binary foot; then the MINIMAL PROSODIC WORD constraint is satisfied, basically without exceptions<sup>58</sup>

Applying the McCarthy and Prince ((1986) and (1993)) principle to Yorùbá verbs seems to be much more problematic as a vast majority of verbs (seventy-four per cent) are monosyllabic (CV) and, hence, do not satisfy the MINIMAL PROSODIC WORD constraint. That is to say that they are not well-formed words under the McCarthy and Prince (1993) view.

Since there is little doubt that lexical items like those in (166) through (170) above are verbs, in fact, CANONICAL VERBS, and not just incomplete forms (in the sense of stem and/or root that needs to be further augmented), the McCarthy and Prince (1993) approach proves problematic for Yorùbá.

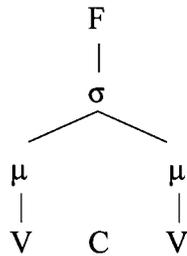
#### 4.1.2. Minimality Restriction: Ola (1995).

A similar, but weaker definition of MINIMAL PROSODIC WORD has been proposed for Yorùbá by Ola (1995). She argues that the nouns like those in (171) through (175) above – i.e. VCV nouns – do not map onto the binary foot structure as that in (176) above. Instead, having considered syllabification phenomena, she states that Yorùbá VCV nouns meet the MINIMAL PROSODIC WORD requirement in that they are bimoraic, not disyllabic, as in (177).

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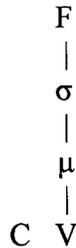
<sup>58</sup> Note that the only monosyllabic (CV) word in Yorùbá that has been identified as a noun is *bí* ‘way’ (Abraham (1958), Oyelaran (1987) and Déchaine (2000)).

(177)



Moreover, she claims that ‘*word well-formedness is satisfied [in Yorùbá] only if a CV is present in it*’ [Ola (1995: 83)] and states that ‘*the smallest root is a CV, the canonical verb form*’ [Ola (1995: 177)]. Consequently, she argues (following Ito and Mester (1992)) that ‘*the principle of properheadedness requires that every word must contain at least one foot, every foot at least one syllable, every syllable at least one nucleus, every nucleus at least one mora*’ [Ola (1995: 169)], as in (178).

(178)



Under such a view, the Yorùbá CV verb forms satisfy the MINIMALITY requirement (without being MINIMAL PROSODIC WORDS in the sense of McCarthy and Prince (1993)). Such an analysis is compatible with the CANONICAL WORD SIZE facts. However, she abandons current approach in her subsequent work: Ola and Pulleyblank (2000).

#### 4.1.3. Small and Large Words: Ola and Pulleyblank (2000).

Ola and Pulleyblank (2000) (and Pulleyblank (p.c.)) suggest that the words in the language can be classified based on their size into two subcategories: small words (SMALL VERBS (CV) and

SMALL NOUNS (the unique noun *bí* ‘way’)) and large words (LARGE VERBS (CVCV) and LARGE NOUNS (VCV)). They argue that many Yorùbá verbs are disyllabic (follow the CVCV pattern) and that, in fact, only the CVCV (and larger) forms meet the MINIMAL WORD REQUIREMENT; while the CV verbs are somehow deficient<sup>59</sup> in this regard. Consequently, under this analysis, the majority of Yorùbá verbs – i.e. the CV verbs (as identified by Abraham (1958) amongst others) – would not be MINIMAL WORDS and Yorùbá would be a language with a very limited amount of CANONICAL, disyllabic verbs (like the one in (179)).

(179) *fẹ̀rà̀n* ‘like, enjoy’

There are several issues with their approach that I would like to point out here. First, notice that the set of SMALL NOUNS has only one member, with all other nouns being classified as LARGE and CANONICAL. Second, notice that the situation is reverse in case of verbs – the set of SMALL VERBS contains multitude of members and is thought to be a set of CANONICAL VERBS. In contrast, the set of LARGE VERBS is limited in size and, more importantly, contains predominantly SPLITTING and/or SERIAL VERBS, as in (180) and (181).

(180) *Tundé ba inú jẹ́.* [SPLITTING VERB]

Tunde.HTS **spoil** stomach.

‘Tunde is sad.’

[Awóbùlúyì (1978): *bà jẹ́* ‘spoil’, cited after Ajiboye 2005: 158]

(181) *Akin ín lẹ́ kí Meri.* [SERIAL VERB]

Akin HTS **go greet** Mary

‘Akin visited Mary.’; ‘Akin went to visit Mary.’; ‘Akin paid Mary a visit.’

Moreover, many of these LARGE VERBS in Yorùbá are borrowed words (see the example that Ola and Pulleyblank (2000) quote: *wàhàlà* from Hausa ‘to trouble’) or complex words in terms of their internal structure. It is true, some of the complex verbs have no clear internal structure when analysed synchronically – as Ola and Pulleyblank (2000) point out in the case of *gbàgbé* ‘forget’ – nevertheless, most of the large verbs (CVCV) can be reanalysed as complex words

<sup>59</sup> Obviously, the deficiency of form would also suggest some deficiency in meaning.

composed of two small(-er) entities (CV+CV). In fact, SPLITTING VERBS (as in (180)) and SERIAL VERBS (as in (181)) are considered ‘flagship’ constructions of Yorùbá and, as Déchaine (2005) points out, their existence is expected precisely to avoid limitations on the system which is bound by its phonemic inventory in terms of the number of unique and distinct CV forms it can generate.

That is to say that, even though I am aware of the very particular semantic status of Yorùbá CV verb forms which are often said to be LIGHT VERBS (refer to Déchaine (2005) and Armoskaite (2004) for more details), I cannot see how this fact could translate into prosodic classification of such lexical items as SMALL VERBS. Therefore, I continue to agree with the generally accepted classification of these forms as canonical verbs in the language (as per Bamgboṣe (1967), Awobuluyi (1978) and Déchaine (1993)).

#### 4.1.4. A solution: Minimal Word Constraint and Maximal Lexical Item.

Interestingly enough, if one considers the two alternative analyses of verbs – i.e. Ola and Pulleyblank (2000) and Déchaine (2005) – they will realise that the reason for their apparent opposition is not necessarily conceptual but might be due to the fact that these analyses are concerned with different levels of linguistic realisation. Specifically, while Ola and Pulleyblank (2000) consider surface strings of phonemes both in terms of their segmental and prosodic content (without considering their internal structure or compositionality), Déchaine (2005) is mainly concerned with the morpho-syntactic make-up of verbal forms (with slightly less attention to various PF phenomena). Consequently, forms like those in (182) are considered by Ola and Pulleyblank (2000) to be LARGE verbs (but still simplex lexical items), while Déchaine (2005) treats them as complex lexical items in that they can be further analysed into smaller meaningful units.

(182)

Verbal form:		Ola and Pulleyblank (2000)	Déchaine (2005)
<i>ràwé</i>	'book-buying'	LARGE VERB	V + NP (VP): <i>rà</i> 'buy' + <i>iwé</i> 'book'
<i>binú jé</i>	'be sad'	LARGE VERB	SPLITTING VERB + NP (VP): <i>ba jé</i> 'spoil' + <i>inú</i> 'stomach'
<i>lọ kí</i>	'visit' 'pay a visit'	LARGE VERB	SERIAL VERB (V + V): <i>lọ</i> 'go' + <i>kí</i> 'greet'

That is to say that: (i) lexical items are restricted in Yorùbá in terms of the necessary prosodic minimum that they need to meet on the surface in order to be considered words (MINIMAL WORD CONSTRAINT) on the one hand and (ii) the canonical size of a particular syntactic category is determined by such a morpho-phonological minimum (CANONICAL PROSODIC REALISATION as per Hyman (1995)) on the other. Keeping in mind Déchaine's (2005) analysis of (serial) verbs, one can argue that the CANONICAL PROSODIC REALISATION is nothing else but a constraint on the maximal size of a simplex lexical item depending on its syntactic category (MAXIMAL LEXICAL ITEM). Specifically, if a lexical item is bigger in size than the predicted minimum and/or canonical template, then it must be a complex lexical item. In other words, a non-complex item of a particular syntactic category must have a morpho-phonological realisation that not only satisfies the MINIMAL WORD CONSTRAINT but also fits within the canonical template for lexical items of the same syntactic category. Therefore, if verbs are required to have minimally a CV shape, their canonical size is also CV.

#### 4.1.5. Extending the proposal to auxiliaries.

Being an analytic system, Yorùbá employs morphemes which usually stand as independent words to code grammatical information, dependencies and relations: functional items. Its

developed system of auxiliaries, which are a special kind of verbs, provides numerous examples of such functional items.

From a morpho-phonological perspective, auxiliaries may be monomoraic<sup>60</sup> as the ones in (183) or bimoraic as those in (184). As to the group of monomoraic auxiliaries, they can consist of:

- (i) a (mora specified for) tone only;
- (ii) a single (moraic) segment like a VOWEL (V) or a NASAL (N) both of which are tone-bearing units;
- (iii) a bisegmental CV template with an onset (C) and a moraic segment (V) which can bear a tone.

(183)

Monomoraic auxiliaries:		Segmental content:	Prosodic content:
▪ With prosodic content only (no segmental content):			
' ( <i>H-tone</i> )	'High Tone Syllable'	∅	μ
` ( <i>L-tone</i> )	'irrealis marker'	∅	μ
∅ ( <i>M-tone</i> )	'realis marker'	∅	μ
▪ With both segmental and prosodic content:			
▪ Onsetless (monosegmental):			
<i>a</i>	'tenseless habitual'	VOWEL	μ
<i>ń</i>	'progressive marker'	NASAL	μ
<i>á</i>	'future marker'	VOWEL	μ
▪ With onset (bisegmental):			
<i>ti</i>	'perfective marker'	(C) ONSET + VOWEL	μ
<i>bá</i>	'modal'	(C) ONSET + VOWEL	μ
<i>le/lè</i>	'can/ be-able-to'	(C) ONSET + VOWEL	μ

<sup>60</sup> Note that the auxiliaries are allowed to have onsets – i.e. have a CV form. Given that the presence or absence of an onset does not change the prosodic composition of the word/lexical item, I treat the onsetless auxiliaries the same way as the ones that have it.

As to the (larger) bimoraic auxiliaries they have either a CVV or a CVCV segmental content.

(184)

Bimoraic auxiliaries:		Segmental content:	Prosodic content:
▪ Single onset:			
<i>máa</i>	‘imperfective marker’	(C) ONSET + VOWEL + VOWEL	μ μ
<i>yóò</i>	‘future marker’	(C) ONSET + VOWEL + VOWEL	μ μ
▪ Double onset (disyllabic):			
<i>gbódò</i>	‘must, necessity marker’	(C) ONSET + VOWEL + (C) ONSET + VOWEL	μ μ

Even though auxiliaries do vary in size and segmental content, they are required to meet the minimal prosodic requirements for functional items: they have at least one mora (or, as it is in case of tonal auxiliaries, attach to a mora) and, by extension, they are predicted to be canonically monomoraic. A question that arises is whether the monomoraic auxiliaries in Yorùbá meet the minimal word requirements or not.

Ola (1995) seems to be convinced that auxiliaries (often smaller in size than other verbal elements) simply do not obey the MINIMAL PROSODIC WORD constraint. She seems to tie it to their functional (as opposed to lexical) nature. However, in this very same work, she also argues that *‘the presence or absence of an onset should not be phonologically significant for the satisfaction of the minimal word condition: a lexical word must contain a [syllable] σ’*. If one considers this statement in terms of the Ito and Mester (1992) framework (see above), they are compelled to admit that, under such condition, these auxiliaries are prosodic words in Yorùbá even though they are monomoraic.<sup>61</sup>

In Ola and Pulleyblank’s (2000) framework they would be referred to as SMALL or LARGE auxiliary verbs. In fact, many of them would not even meet the necessary requirements to be

<sup>61</sup> Auxiliaries such as High Tone Syllable (183) must cliticise onto a neighbouring lexical item in order to fulfill the at least one mora lexical item requirement. In environments where such a cliticisation is not possible, deletion takes place and such auxiliaries are not realised at PF.

considered SMALL verbs – e.g. onsetless and segmentless auxiliaries in (183). Conversely, if one considers the work of Déchaine (2005) on serial verb constructions – where she argues that verbs larger in size than the monosyllabic CV forms are likely to be complex lexical items – they will agree that it is possible that these same rules apply to the auxiliaries as well.

Therefore, assuming the application of the MAXIMAL LEXICAL ITEM, any auxiliary (be it a Mood, Tense, Modal and/or Aspect marker) that has more than one mora ( $\mu$ ) should be considered a complex lexical item both in terms of morpho-syntax as well as semantics. That is to say that some auxiliaries (like those in (184) above) might in fact have complex internal structures. As will become clear shortly, I strongly support this latter point of view.

One may wonder what the connection is between the canonical size(s) of words – verbs in particular as discussed above – and the phrase structure of the language. It is due to the fact that the minimality effects – which are observed within the category of grammatical markers as well, especially the set of (temporal, modal and aspectual) auxiliaries – allow for a more in-depth analysis of particular grammatical elements and shed light on the semantic and morpho-syntactic status of grammatical categories of MOOD, TENSE, MODAL, ASPECT, etc.

At least three Yorùbá auxiliaries are greater in size than as predicted by the minimal (C)V template: (i) the future tense marker *yóò*, (ii) the modal/imperfective marker *máa*; and (iii) modal *gbódò*. An in-depth discussion on the status of the auxiliary *yóò*, in light of the analysis of conditional constructions, is presented in section 4.3. Some preliminary findings on the auxiliary *máa* are presented in section 4.6. below as well. The status of the modal element *gbódò* is not discussed in this study.

## 4.2. Tense, Aspect or both? The High Tone Syllable.

The *High Tone Syllable* (HTS) has been analysed as a Tense marker (see Awóyalé (1991)) ambiguous between past and present tense readings. In effect, the actual interpretation of this tense marker is said to depend on the aspectual class of the verb phrase it precedes. In effect, it

has been said that the HTS followed by a stative verb yields sentences with present tense readings – as in (185) – and, in contrast, when it is followed by an eventive verb it yields past tense interpretations – as in (186: I):

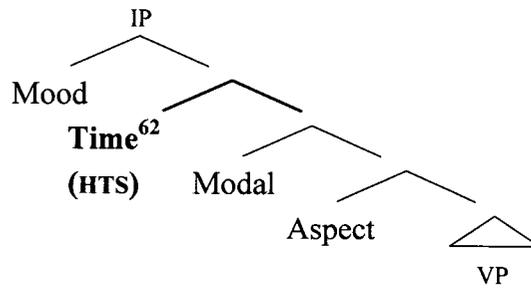
(185) *Akin ín mọ Olú.*  
Akin HTS know Olu  
'Akin knows Olú.'

(186) *Akin ín ra iwé.*  
Akin HTS read book  
I = 'Akin read a book.'  
II = 'Akin has read a book.'

More recent work by Manfredi (in prep.) has shown that the readings that were believed to be past tense readings are, in fact, instances of PERFECT and, therefore, are equivalents of the English Present Perfect rather than the Simple Past. Thus, the true interpretation is that shown in (186: II) above. (Manfredi maintains the claim that the aspectual class of the verb is crucial to the interpretation of the *High Tone Syllable*.)

In as much as I agree with Manfredi's (in prep.) claim as to the PERFECT interpretations of the HTS in the environment of eventive verbs; I want to make a much stronger claim as to what this auxiliary really is from the semantic point of view. A claim that is similar to what has been proposed by Déchaine (1993). The *High Tone Syllable* should be analysed as a TIME variable that expresses the relation between the event time and the reference time and is contextually bound with respect to the utterance time. On this view, the *High Tone Syllable* is both a Tense marker (picks out a reference time) and an Aspect marker (picks out an event time).

(187)



Even though the High Tone Syllable is interpreted based on the aspectual class of the verb phrase, it is also dependent on the context. In effect, when a stative verb is present the interpretation varies depending on the reference time established: such a reference time can be established by an overt time adverbial and/or context (as shown below).

(188) *Kí ni Akin ín ʒe lánǎ?* [QUESTION]

WH FOC Akin HTS do yesterday

‘What did Akin do/has Akin done yesterday?’

≠ ‘What does Akin do yesterday.’

≠ ‘What is Akin doing yesterday.’

(189) *Ojú ojó ø<sup>63</sup> dára, Akin ín lɔ wẹ.* [ANSWER]

face day HTS good, Akin HTS go swim

‘The day was nice, Akin went/has gone swimming.’

≠ ‘The day is nice, Akin went/has gone swimming.’

≠ ‘The day is nice, Akin has gone swimming.’ [only in context of (194)]

(190) *Ojú ojó ø dára.* [DEFAULT INTERPRETATION/

face day HTS nice

OUT-OF-THE-BLUE]

‘The day is nice.’

<sup>62</sup> Tense/Aspect expressed with the *High Tone Syllable*.

<sup>63</sup> The HTS is not realised phonologically when the subject bears a high tone (H-tone).

Example (188) shows that the overt time adverbial *lànà* ‘yesterday’ determines the interpretation of the *High Tone Syllable* in that it shifts the REFERENCE TIME (RT) into the past. (189) when uttered as a possible answer to (188) can only have the shifted-past meaning: i.e. it is interpreted as past action only. This suggests that the HTS is bound by the overt time adverbial of the previous sentence. A present tense reading is also available for the sentence in (189) if the context is a present tense one. Example (190) illustrates such interpretations of the *High Tone Syllable* in OUT-OF-THE-BLUE environments.

With eventive verb phrases the past tense or present perfect interpretations are the default, but it is impossible to cancel such a reading. Instead, either the progressive marker (*ń*) or the sequence of auxiliaries known as the habitual construction (*máa ń* or *a máa*) must be introduced before an eventive verb to yield present tense readings.

(191) *Kí ni Akin ín ɕe (lànà)?* [QUESTION]  
 WH FOC Akin HTS do (yesterday)  
 ‘What did Akin do/has Akin done?’

(192) *Akin ín ra iwé.* [√ANSWER]  
 Akin HTS buy book  
 ‘Akin (has) bought a book.’  
 ≠ ‘Akin is buying a book.’

(193) *Akin ń ra iwé.* [\*ANSWER]  
 Akin PROG buy book  
 ‘Akin is/was buying a book.’  
 ≠ ‘Akin (has) bought a book.’

(194) *Kí ni Akin ín (máa ń) ɕe?* [QUESTION]  
 WH FOC Akin HTS (IMP PROG) do  
 ‘What does Akin do?’

- (195) *Akin ín ra iwé.* [*\*ANSWER*]  
 Akin **HTS** buy book  
 ‘Akin (has) bought a book.’  
 ≠ ‘Akin buys books.’
- (196) *Akin máa ñ ra iwé.* [*√ANSWER*]  
 Akin **IMP PROG** buy book  
 ‘Akin buys books.’<sup>64</sup>  
 ≠ ‘Akin (has) bought a book.’
- (197) *\*Akin ín ra iwé ní ojójùmò.*  
 Akin **HTS** buy book **PREP** every.day  
 ≠ ‘Akin buys a book every day.’  
 ≠ ‘Akin is buying a book every day.’

The interpretation of the High Tone Syllable HTS is dependent on the context/overt time adverbial and the aspectual class of the verb phrase (stative versus eventive). Specifically, the context and/or the overt time adverbial specify the value of the *High Tone Syllable* by ordering the REFERENCE TIME with respect to the UTTERANCE TIME (i.e. its temporal value). The aspectual class of the verb phrase provides information on the relationship between the EVENT TIME and the REFERENCE TIME (i.e. the aspectual value of the HTS).

The *High Tone Syllable* never receives future tense readings. Matthewson (2004) considers a similar fact in Lillooet Salish as evidence for the presence of underspecified past/present tense. However, I think that the explanation for this fact might be different. One possible explanation can be provided by considering the blocking effect, as discussed in Williams (2003): i.e. the more specific and marked form, which here would be any of the auxiliaries with future tense readings, blocks the default or unmarked form, namely the HTS. If Enç’s (1986) analysis of the

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<sup>64</sup> Note that Yorùbá NPs are very often bare nouns. As such they are often ambiguous or underdetermined with respect to Number. In addition, their meaning may vary from generic to definite depending on the aspectual class of the verb (stative versus eventive) and context. Since such a change in meaning of NPs has no bearing on my proposal, it is not further discussed in this paper.

future tense as MODAL (which has been widely accepted) is correct; one must admit that it is unlikely that the presence of (future) Modal element would block the *High Tone Syllable* – a temporal/aspectual marker.

I conclude that the *High Tone Syllable* expresses both TENSE and ASPECT at the same time. That is to say, it provides information on the ordering of the REFERENCE TIME with respect to the UTTERANCE TIME while specifying the relationship between the EVENT TIME and the REFERENCE TIME. Moreover, as its value is context-dependent and in many cases corresponds to the English Present Perfect; it is possible that it is coding a PERFECT/NON-PERFECT distinction (in the sense of Comrie (1976)) with its particular value being determined based on context/presence of an overt time adverbial and/or aspectual class of the verb phrase.

Such an analysis is consistent with the general proposal accounting for the very many particularities of the Yorùbá auxiliary system and its phrase structure discussed in section 4.4. below. First, however, I take a closer look at the future auxiliary *yóò*.

### 4.3. Deconstructing *yóò*.

(*y*)*óò* is described in the literature as a future tense marker (Awobuluyi (1978), Awóyalé (1991), Déchaine (1993) amongst others) and it is said to be in complementary distribution with the *High Tone Syllable*. I argue that *yóò* is a morpho-syntactically complex auxiliary which combines three grammatical categories:

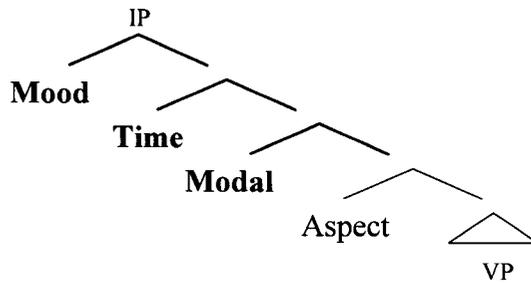
- (a) Mood ((UN)LIKELIHOOD/SPEAKER'S ATTITUDE) – realis (*y*);
- (b) Time (HIGH TONE SYLLABLE) – (*ó*); and
- (c) Modal (MODAL QUANTIFICATION OVER POSSIBLE WORLDS) – modal (*ò*).

Recall that auxiliaries are canonically monomoraic, so it is likely that *yóò* is a complex lexical item that can be re-analysed into smaller units. At first glance one might think that *yóò* is a bimorphemic auxiliary as it is made up of two moras (see (198) below).

(198)            y        ó        ò  
                               |        |  
                               μ        μ

However, as I will demonstrate, this auxiliary is trimorphemic and realises three syntactic categories. In other words, it spans (in the sense of Williams, 2003) three categories: Mood, Time (Tense/Aspect) and Modal, as in (199) and (200).

(199)



(200)

CATEGORY:	Mood	Time (Tense/Aspect)	Modal
PROSODIC CONTENT:	y (optional)	ó (H-tone v)	ò (L-tone v)
DESCRIPTOR:	realis mood	<i>High Tone Syllable</i>	modal auxiliary

Evidence for this view is strong and compelling. First, observe that *yóò* is in complementary distribution with the High Tone Syllable. Whereas the sentences in which the *High Tone Syllable* or *yóò* occur by themselves are grammatical (as in (201) and (202)), those where both the HTS and *yóò* are used as a sequence of auxiliaries are unacceptable (see (203) and (204)). This suggests that the two elements are in the same syntactic position.

(201) *Akin ín ka iwé.*  
 Akin    HTS    read    book  
 ‘Akin (has) read a book.’

(202) *Akin yóò ka iwé.*  
 Akin FUT read book  
 ‘Akin will read a book.’

(203) \**Akin yóò ó ka iwé.*  
 Akin FUT HTS read book

(204) \**Akin ín yóò ka iwé.*  
 Akin HTS FUT read book

In addition, when a negation marker such as *kò* is present, *yóò* disappears and instead a periphrastic construction is used:

(205) *Akin kò ní í ka iwé.*  
 Akin NEG have PROG read book  
 ‘Akin will not buy a book.’

(206) \**Akin kò yóò ka iwé.*  
 Akin NEG FUT read book

(207) \**Akin yóò kò ka iwé.*  
 Akin FUT NEG read book

The *High Tone Syllable* does not co-occur with the negative marker either:

(208) *Akin kò ka iwé.*  
 Akin NEG read book  
 ‘Akin didn’t but a book.’

(209) \**Akin kò ó ka iwé.*  
 Akin NEG HTS read book

- (210) \**Akin ín kò ka iwé.*  
 Akin HTS NEG read book

Furthermore, the complementary distribution of *yóò* extends to modal verbs: the future tense marker never co-occurs with either auxiliary classified as a modal<sup>65</sup>.

- (211) \**Akin yóò gbóòdò ka iwé.*  
 Akin FUT MUST read book

- (212) \**Akin (ín) gbóòdò yóò ka iwé.*  
 Akin (HTS) MUST FUT read book

This can mean that either the future auxiliary *yóò* is in the same syntactic position as modals are generated in or that it has the same semantic function and the occurrence of one blocks the occurrence of the other. My claim is that both statements are true. Not only does *yóò* occupy the same syntactic position as modals, but also it has semantic properties that are, at least, in part similar to that of modals: (i) it introduces and quantifies over possible worlds, (ii) it has a specified quantificational force, and (iii) it has volitional and future readings.

I have argued that *yóò* shares semantic and morpho-syntactic properties of both the *High Tone Syllable* and modals. This is further confirmed by the fact that whereas *yóò* never co-occurs with the HTS (as in (203) and (204) above); other modals require the presence of the *High Tone Syllable* for a sentence to be grammatical (as in (213) and ungrammatical (214)):

- (213) *Akin ín gbóòdò ka iwé.*  
 Akin HTS MUST read book  
 ‘Akin must read a book.’

- (214) \**Akin gbóòdò ka iwé.*  
 Akin MUST read book

<sup>65</sup> Some examples of modal verbs in Yorùbá include: *le* or *lè* ‘can’; *bá* – underspecified, weak modal; *á* – future WOLL always accompanied by irrealis mood marked by an occurrence of L-tone; etc.

The conclusion that *yóò* SPANS across the categories of Time (HTS) and Modal might not seem appealing at first. However, once the MINIMAL WORD CONSTRAINT is taken into account, it becomes clear that *yóò*, being bimoraic, may in fact be a lexical item that combines the two categories. Morpho-phonological and syntactic facts further support this view. Not only does this auxiliary contain a mora with a high tone (H-tone) attached to it, but also the vocalic quality of the two moras is identical, which – in light of Ajiboyè and Déchaine (2004) – is likely to be the morpho-syntactic expression of quantificational force. To be more specific, the two authors claim that reduplication is the most prominent way in which Yorùbá marks quantification in the nominal domain. Generalising this to auxiliaries this implies that the *ó ò* sequence is an instance of quantificational reduplication.<sup>66</sup> Finally, as to the initial glide *y* of *yóò*, my take on it is that *y* is the optional realis mood marker – mid tone (M-tone) *i* that surfaces as the glide (*y*) in the syllable-/word-initial environment. Another piece of evidence in support of this claim comes from Barczak (2004a), where it is observed that *yóò* is never associated with irrealis readings and/or environments which are marked by the low tone (L-tone) with a default vowel – *i* for Standard Yorùbá. If the realis mood is the unmarked counterpart of irrealis, it is not unlikely that both are realised by the same default vowel; the difference being the presence or absence of a positional low tone (L-tone). An important amendment to make here is that the realis mood marking (in the form of *y*) is optional as shown by the *yóò* versus *óò* free alternation (as in (215) and (216)) and never seems<sup>67</sup> to surface with auxiliaries other than this one (see (217) and (218)).

(215) *Akin yóò ra iwé.*  
 Akin FUT read book  
 ‘Akin will read a book.’

(216) *Akin óò ra iwé.*  
 Akin FUT read book  
 ‘Akin will read a book.’

<sup>66</sup> The *yóò/óò* is, by now, a grammaticalised (or almost fully grammaticalised) lexical item in Yorùbá. However, the *y* (realis mood marking) is optional and very often omitted.

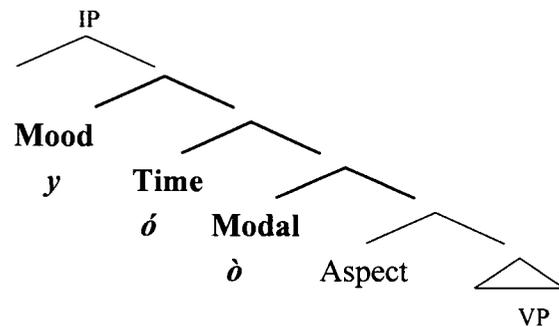
<sup>67</sup> Since the realis mood marking consists of the positional mid tone (M-tone), which is often analysed as absence of tone, it might be that the mood marking is present structurally at LF just not realised at PF.

(217) \**Akin i gbóḍḍò ra iwé.*  
 Akin REAL-MOOD MOD read book

(218) \**Akin i lè ra iwé.*  
 Akin REAL-MOOD MOD read book

The analysis of *yóò* as *y* (realis mood) + *ó* (*High Tone Syllable*) + *ò* (modal) is not only plausible from a language internal point of view, but also from a broader cross-linguistic perspective. Specifically, as proposed by Cinque (1999), there exists a hierarchy of elements within the extended inflection projection which translates into a category-based ordering (or prominence) of elements. In fact, his survey, based on data from over one hundred and forty languages, reveals that regardless of their morpho-syntactic properties all languages share a consistent ordering pattern of grammatical elements expressing time, modality and aspect. In particular, the syntactic categories of Mood, Time (Tense/Aspect), Modal and Aspect are always ordered as follows:

(219)



[adapted from Cinque (1999)]

The present analysis of *yóò* is also directly supported by the semantic and morpho-syntactic properties of conditional sentences (as discussed in previous chapters). Specifically, the consequents of Yorùbá realis conditionals which require the presence of both (realis) Mood (MARKING LIKELIHOOD) and Modal (MODAL QUANTIFICATION OVER POSSIBLE WORLDS) are often marked with *yóò* only; hence it must express the two categories at once.<sup>68</sup>

<sup>68</sup> The time aspect of *yóò* being irrelevant in conditional constructions in the language.

Such a decomposition of *yóò*, when paired with the MINIMAL WORD CONSTRAINT, has far-reaching consequences for the view of the system of Yorùbá auxiliaries, especially in light of the analysis of conditional sentences proposed here. Not only can the grammatical status of many auxiliaries be revised or amended, but also a system-specific property based on binary oppositions within the auxiliary verbs system, which sheds light on constraints governing the phrase structure, is observed. The following sections pursue these issues in greater detail.

#### 4.4. Yorùbá phrase structure as a set of binary oppositions.

The analysis of conditional sentences that I have developed in previous chapters forces certain analysis of the *High Tone Syllable* (section 4.2.) and the future auxiliary *yóò* (section 4.3.). Although Yorùbá displays the same functional categories as other languages (as per Cinque (1999)), it has a very specific way of ‘materialising’ the nodes of the extended inflection projection, and, in fact, allows for multiple nodes to be spelled-out together as one morpho-phonological word. In Williams (2003) terms: one lexical item can SPAN across two or more categories and, hence, can realise both their syntactic function(s) and their meaning(s). The above property does not make Yorùbá an exceptional language in any way. After all, there exist many other languages that exhibit fusional morpho-syntactic properties, Polish being one such example. What is surprising, however, is that Yorùbá is an analytic language in general, abundant in unbound functional elements often the size of a mora or, even, a tone only (which usually attaches to the neighbouring tone-bearing unit). Spelling-out multiple nodes as one unbound lexical item seems to be a marked phenomenon in the language. As I mentioned in my discussion on the status of *yóò*, such complex functional elements are often compositionally opaque for Yorùbá speakers, unlike other lexical items. Yet, it does not mean that they were not transparent at some point in language’s evolution (diachronically). In fact, simple co-occurrence/complementary distribution tests show that it is possible to unambiguously determine how many and which of the syntactic and/or semantic categories every auxiliary expresses.

A more interesting observation that arises from a careful consideration of the system is that the system is that it seems to be based on a simple set of binary oppositions: (i) markedness oppositions within a category and (ii) tone polarity oppositions across categories. In other words, the system relies on two contrasts. First, within a grammatical categories, a marked value is contrasted with a default (or unmarked) value.

For example, with clause-typing marking, a clause can be marked as subordinate, relative,... or conditional via an overt marker like *bí* (see (220)) or may remain unmarked (as in (221)) in which case it is considered to be a matrix/main clause.

(220) *Bí Akin bá sùn, ...* [H-tone]  
 if Akin.HTS MOD sleep  
 ‘If Akin sleeps,...’; ‘If Akin slept,...’; ‘If Akin had slept,...’

(221) *Ø Akin ín sùn.* [Ø-tone]  
 Ø Akin HTS sleep  
 ‘Akin slept.’

Similarly, realis which is considered to be the marked value for the category of Mood surfaces as low tone (L-tone) (as shown in (222)). In contrast, realis – the unmarked mood – is often morpho-phonologically null (not realised) and, when actually expressed, it takes the default tonal value of mid-tone (M-tone) (as in (223)).

(222) *Akin bá sùn.* [L-tone]  
 Akin.IRR MOD sleep  
 ‘Akin would have slept.’

(223) *Akin yóò sùn.* [M-tone]  
 Akin REAL.HTS.MOD sleep  
 ‘Akin will sleep.’

The same holds for the *High Tone Syllable*, the marked Time (Tense/Aspect) category, which is morpho-syntactically expressed (as in (224)); the unmarked realisation of this category is the auxiliary *a* also known as the tenseless habitual used in proverbs, sayings and tales (see (225)).

(224) *ó je, ó sùn.* [H-tone]  
 3SG.HTS eat 3SG.HTS sleep  
 ‘S/he ate and slept.’

(225) *∅ a je, ∅ a sùn.* [M-tone]  
 3SG HAB eat 3SG HAB sleep  
 ‘S/he always/only eats and sleeps.’ [literal translation]  
 ‘a lazy person’

As to modals, they split into two separate categories: epistemic and deontic. Each of these categories has unique properties: (i) epistemic modals usually bear a high tone (H-tone) while (ii) deontic modals (as in (227)) usually have a low tone (L-tone). A modal like *gbóḍḍò*, which has both epistemic and deontic readings and has two tone-bearing segments, is marked for both high and low tone (H-tone - L-tone sequence) – see (226). Finally, monomoraic modals that have both epistemic and deontic readings available to them mark the primary reading with a high tone (H-tone) or low tone (L-tone) respectively and the other reading with mid tone (M-tone), which is often referred to as absence of tone (Pulleyblank (p.c.)): (227) versus (228).

(226) *Akín gbóḍḍò sùn.* [H-tone/(L-tone)]  
 Akin.HTS MOD sleep  
 ‘Akin must sleep.’; ‘Akin must have slept.’  
 [epistemic: The lights were off in Akin’s room, he must have slept.]  
 [deontic: It is imperative that Akin sleeps!]

(227) *Akín lè sùn.* [L-tone]  
 Akin.HTS MOD sleep  
 ‘Akin can (is allowed to) sleep.’  
 [deontic: Akin has a permission to sleep.]

- (228) *Akín le sùn.* [M-tone]  
 Akin.HTS MOD sleep  
 ‘Akin can sleep.’  
 [epistemic: Akin is capable of sleeping (he does not suffer from insomnia.)]

Similarly, progressive, which is considered to be the marked value for the category of Aspect (view-point), surfaces as high-tone nasal (H-tone N) (as shown in (229)). In contrast, perfective *ti* and habitual *a* – the unmarked aspect(s) – bear a mid-tone (M-tone), as in (230) and (231).

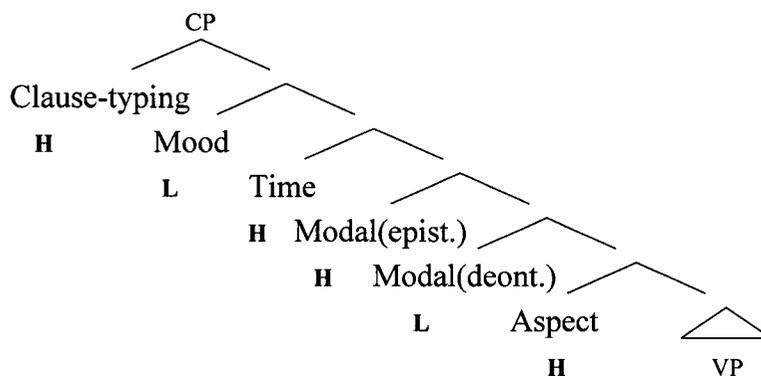
- (229) *Akin ñ sùn.* [H-tone]  
 Akin PROG sleep  
 ‘Akin is/was sleeping.’

- (230) *Akin ti sùn.* [M-tone]  
 Akin PERF sleep  
 ‘Akin always sleeps.’

- (231) *Akin a sùn.* [M-tone]  
 Akin HAB sleep  
 ‘Akin always sleeps.’

The above establishes that for each grammatical category the unmarked value is contrasted with the marked value. In addition, individual syntactic positions contrast with each other with respect to their (marked) tonal value.

(232)



Specifically, the marked value of each contrast maps onto a tonal melody in a polar fashion. For example, clause-typing markers are marked for high tone (H-tone) and the marked category of Mood (irrealis) is expressed by the presence of a low tone (L-tone). The syntactic category that follows Time (Tense) has its marked element (*High Tone Syllable*) realised with high tone (H-tone). Due to the fact that the 'higher' Aspect category is skipped in Yorùbá (it is realised together with Tense as Time), the epistemic Modal category is marked by a high tone (H-tone), whereas the deontic Modal category is marked with low tone (L-tone). Finally, the marked 'view-point' Aspect is realised as high tone (H-tone). This is shown in the table below.

Table 4.4.1. Binary oppositions within the auxiliary system (markedness and tone polarity).

T-POLA- RITY MAR- KEDNESS	CLAUSE- TYPE MARKING	MOOD	TIME		MODAL		ASPECT (VIEW- POINT)
			TENSE	(HIGHER) ASPECT	EPISTEMIC	DEONTIC	
MARKED VALUE OF THE CATEGORY	H-tone COMP {bí, kí}	L-tone IRREALIS {', i}	H-tone HIGH- TONE {', í}	← <sup>69</sup> SYLLABLE	H-tone {bá}	L-tone {lè}	H-tone PROG {ń}
UNMARKED VALUE OF THE CATEGORY	M-tone <sup>70</sup> {Ø}	M-tone REALIS {Ø, i, y}	M-tone TENSE- LESS {a <sup>71</sup> }	← <sup>72</sup> HABITUAL	M-tone (C)V MODALS WITH DERIVED EPISTEMIC AND DEONTIC READINGS {le(epistemic)}		M-tone PERF {ti} HABIT {a <sup>14</sup> }
PF STATUS	FREE MORPH.	ENCLITIC		FREE MORPHEME			

There are few extra things to point out about the Yorùbá system of auxiliaries, which is summarised for the reader's convenience in the table above. First, there exists an apparent gap between the Tense and Modal (epistemic) nodes which should be filled by the 'higher' Aspect<sup>73</sup> markers. This gap is due to the fact that the *High Tone Syllable* and its unmarked

<sup>69</sup> L-tone provided the syntactic category existed on its own.

<sup>70</sup> M-tone represents unmarked expression of the particular syntactic category, whereas Ø marks the lack of marking for such category. Note that not all of these syntactic categories are always present in the sentence, in such cases they receive zero marking (Ø). Only when present do they surface as marked or unmarked.

<sup>71</sup> Its tonal value (M-tone) seems to come from the TIME (TENSE/(higher)ASPECT) node, whereas its vocalic value might be determined in the ASPECT(view-point) node.

<sup>72</sup> M-tone provided the syntactic category existed on its own.

<sup>73</sup> The term 'higher' is not theoretically motivated, but rather based on language-internal observations.

equivalent – tenseless habitual *a* – combine the properties of the two categories, hence their label Tense/Aspect or Time. The existing gap in terms of the morpho-syntactic marking is, therefore, a reflection of this particularity. The table also reveals a consistent morpho-phonological property: markers of two syntactic categories that are immediately to the left of the gap formed by the ‘higher’ Aspect category being realised together with Tense as Time (Mood and Time) are phonologised as enclitics, while markers of categories that follow this gap (Modals and ‘view-point’ Aspect) are phonologised as free morphemes<sup>74</sup>.

As for the category of Modal, it divides into two subcategories: (i) EPISTEMIC and (ii) DEONTIC, each of which has its own marked value – i.e. high tone (H-tone) and low-tone (L-tone) respectively. However, as we know many modals allow for both epistemic and deontic interpretations depending on the context – English *must* and Yorùbá *gbódò* ‘must’ share this property. Interestingly, the latter auxiliary is a complex word in Yorùbá (according to the minimality/maximality constraints discussed in section 4.1.) of which the first tone-bearing unit is marked with a high tone (H-tone) – like an epistemic modal – and the second one with a low-tone (L-tone) – like a deontic modal. Although I have not study the behaviour of this auxiliary in detail, given the general pattern observed within the system, I think that the first component of the modal *gbódò*, namely *gbó* (or maybe even *gbí*), is epistemic and the second component – *dò* – is deontic. Hence, the two available readings. Moreover, and this a stipulation at this point, the tonal variation of the modal *lè/le* ‘can’ seems to be related to the shift from the canonically deontic (*lè*) to the derived epistemic (*le*) readings, with the change of tone reflecting a change in semantics. Consequently, if the two stipulations are sustainable, one can postulate that simplex modals ((C)V) have the unmarked tone value (M-tone), whereas complex modals ((C)VCV), that allow for both deontic and epistemic readings, preserve their tonal pattern in both the epistemic and deontic environments as they are marked for both subcategories to start with (H-tone + L-tone pattern).

The discussion in the following sections sheds some light on the implications of the ‘binary oppositions’ analysis discussed above for the status of future auxiliaries with a focus on the future/aspectual auxiliary *máa*.

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<sup>74</sup> It might be that some of these free morphemes are actually proclitics.

#### 4.5. 'Future' auxiliaries in Standard Yorùbá.

According to Yorùbá grammarians (Awóyalé (1991) for example), there are three future tense markers in Yorùbá: (i) *yóò*; (ii) *á*, which is always accompanied by the irrealis mood marker – low tone (L-tone); and (iii) *máa*, which is referred to by Ogunbowale (1970: 49) as *special*. I present here some observations on the three future tense markers and show how they tie into the morpho-syntactic analysis developed in previous sections.

Morpho-syntactically, both *yóò* and *máa* are complex words. (*y*)*óò* is composed of three morphemes: *yóò* = *y* (realis mood) + *ó* (*High Tone Syllable*) + *ò* (modal). *Máa* is composed of two morphemes: *máa* = *mí* (inertia worlds modal) + *a* (habitual). As for *á*, it is a single morpheme.

Table 4.5.1.: The three future auxiliaries: morpho-syntactic components.

'FUTURE' AUXILIARIES:	PHRASE STRUCTURE CATEGORIES AND THEIR MORPHO-SYNTACTIC MARKING:				
	MOOD	TIME (TENSE/ASPECT)	MODAL		ASPECT (VIEW-POINT)
			EPISTEMIC	DEONTIC	
<i>á</i>	(L-tone)	-	<i>á</i>	-	-
<i>yóò</i>	y (M-tone)	<i>ó</i> (H-tone i <sup>75</sup> )	-	<i>ò</i> (L-tone)	-
<i>máa</i>	?	co-occurs with HTS	<i>má</i> (mí <sup>76</sup> )	-	a

Further, only *á* appears accompanied by the irrealis mood marker – the positional low tone (L-tone); whereas *yóò* contains a realis mood marker (see section 4.3.) and *máa* seems to display no marking for mood at all. However, given that the realis mood is the unmarked category – i.e. its marking is optional – it is likely that *máa* is also associated with the realis mood. This is

<sup>75</sup> As suggested by the dialectal variation: Standard Yorùbá *yóò* vs. Ekiti dialect *yío*.

<sup>76</sup> Based on the dialectal variation: Ijesa *mí*; Moba *í*; and Standard Yorùbá *ń* and *máa*.

shown in (233) through (238) in which the future/modal *á* occurs. Specifically, each of the subject clitics is marked with a low tone (L-tone).

(233) *m̃ á lɔ ní iléiwé.*  
 1SG.IRR MOD go PREP school  
 ‘I will go to school.’

(234) *ò á lɔ ní iléiwé.*  
 2SG.IRR MOD go PREP school  
 ‘You will go to school.’

(235) *ì á lɔ ní iléiwé.*  
 (3SG.)IRR MOD go PREP school  
 ‘S/he will go to school.’

(236) *à á lɔ ní iléiwé.*  
 1PL.IRR MOD go PREP school  
 ‘We will go to school.’

(237) *ẹ á lɔ ní iléiwé.*  
 2PL.IRR MOD go PREP school  
 ‘You will go to school.’

(238) *wọ̀n á lɔ ní iléiwé.*  
 3PL.IRR MOD go PREP school  
 ‘They will go to school.’

Furthermore, the High Tone Syllable always precedes *máa* (as shown in (239) and (240)).

(239) *Akin ín máa ra iwé.*  
 Akin HTS FUT buy book  
 ‘Akin will buy a book.’

- (240) \**Akin máa ra iwé.*  
 Akin FUT buy book

But the High Tone Syllable never occurs with *yóò* (see (241) and (242)).

- (241) *Akin yóò ra iwé.*  
 Akin FUT buy book  
 ‘Akin will buy a book.’

- (242) \**Akin ín yóò ra iwé.*  
 Akin HTS FUT buy book

Similarly, the High Tone Syllable never occurs with *á* either (as in (243) versus (244)).

- (243) *Akin á ra iwé.*  
 Akin.IRR FUT buy book  
 ‘Akin will buy a book.’

- (244) \**Akin ín á ra iwé.*  
 Akin.IRR HTS FUT buy book

In terms of the semantics of the three auxiliaries yielding future tense readings, three important differences are observed. First only *máa* is compatible with aspectual readings (imperfective (as in (245) and (246)) and progressive (as in (247)) and instantiates the IMPERFECTIVE which means that at least part of it is generated under the ASPECT node (Barczak (2004b)).

- (245) *Akin ín máa ñ ra iwé.*  
 Akin HTS IMP PROG buy book  
 ‘Akin usually/habitually buys books.’

(246) *Akin a máa ra iwé.*  
 Akin HAB IMP buy book  
 ‘Akin usually/habitually buys books.’

(247) *Akin ín máa máa ra iwé.*  
 Akin HTS FUT PROG buy book  
 ‘Akin will be buying a book.’

In contrast, *(y)óò* and *á* are never used in aspectual contexts (as is shown in (248) and (249)).

(248) *Akin yóò ra iwé.*  
 Akin FUT buy book  
 \* ‘Akin usually/habitually buys a book.’  
 \* ‘Akin will be buying a book.’  
 = ‘Akin will buy a book.’

(249) *Akin á ra iwé.*  
 Akin.IRR FUT buy book  
 \* ‘Akin usually/habitually buys a book.’  
 \* ‘Akin will be buying a book.’  
 = ‘Akin will buy a book.’

Second, whereas *yóò* and *máa* can be used in shifted (in-the-past) environments (see (250) and (251) respectively), *á* is ungrammatical in such environments (as shown in (252)).

(250) *Akin ín sọ pé ø yóò ra iwé.*  
 Akin HTS say COMP 3SG FUT buy book  
 ‘Akin said that s/he would buy a book.’

(251) *Akin ín sọ pé ó ø máa ra iwé.*  
 Akin HTS say COMP 3SG HTS FUT buy book  
 ‘Akin said that s/he would buy a book.’

(252) *Akin ín sọ pé ó á ra iwé.*  
 Akin HTS say COMP 3SG FUT buy book  
 \* ‘Akin said that s/he would buy a book.’  
 ‘Akin said he will buy a book.’

Third, only *á* carries an implicature that cannot be cancelled (see ungrammatical (255)), as opposed to *yòò* and *máa*, which allow for such cancelling the implicature ((253) and (254) respectively).

(253) *Akin yòò ra iwé, súgbòn kò rá mọ.*  
 Akin FUT buy book, but NEG buy it  
 ‘Akin was going to buy a book, but he didn’t buy it.’

(254) *Akin ín máa ra iwé, súgbòn kò rá mọ.*  
 Akin HTS FUT buy book, but NEG buy it  
 ‘Akin was going to buy a book, but he didn’t buy it.’

(255) \**Akin á ra iwé, súgbòn kò rá mọ.*  
 Akin.IRR FUT buy book, but NEG buy it

The above suggests that only *á* shares the characteristics of WOLL (cf. Abusch (1984)) (the tense- neutral modal, from which the English *will* and *would* are derived) – i.e. except the tense-shifting property. This in turn may suggest that it is actually an instantiation of *will* (PRESENT + WOLL). However, such an analysis becomes problematic in light of the semantics and morpho-syntax of the TENSE/ASPECT category and the evidence from the ‘shifted-into-the-past’ environments. Not to mention that it obscures the existence of the apparent morpho-syntactic gap – i.e. from the form point of view the TIME position is skipped.

Table 4.5.2.: Morpho-syntactic components of the future marker `á.

'FUTURE'	PHRASE STRUCTURE CATEGORIES AND THEIR MORPHO-SYNTACTIC MARKING:				
	MOOD	TIME (TENSE/ASPECT)	MODAL		ASPECT (VIEW-POINT)
			EPISTEMIC	DEONTIC	
`á	` (L-tone)	-	á	-	-

Consequently, I argue that this auxiliary is tenseless (unmarked for the category of Time) and, therefore, cannot be instantiation of *will* (PRESENT + WOLL). Instead, it expresses the notion of TENSELESS + WOLL, which is a kind of 'absolute' future.

In contrast, *yòò* and *máa* are more likely to be equivalents of English intentional *going to* (with cancellable implicature). This is confirmed for *yòò* by the fact that speakers often judge it equivalent to the volitional verb *fě* 'want'.

- (256) *Akin yòò ra iwé.*  
 Akin FUT buy book  
 'Akin will buy a book'  
 'Akin has the intention of buying a book.'

- (257) *Akin ín fě ra iwé.*  
 Akin HTS want buy book  
 'Akin has the intention of buying a book.'

*Máa*, however, is never used as an equivalent of *fě* 'want'. This might be explained by the fact that *máa* is associated with imperfective, rather than volitional environments.

A full account of these three auxiliaries would require a fine-grained analysis which is not pursued here. However, the few facts presented indicate that these functional elements (*yòò*, *máa* and *á*) differ from one another in terms of their semantics and syntax.

#### 4.6. Future or imperfective? The ambiguity of *máa*.

In this section I take a closer look at the auxiliary *máa*. Barczak (2004b) claims that there are two instances of *máa*: (i) aspectual and (ii) future.

##### ASPECTUAL:

(258) *Akin ín **máa** ní ra iwé.*  
Akin    HTS    **IMP**    PROG    buy    book  
‘Akin usually/habitually buys books.’

(259) *Akin a **máa** ra iwé.*  
Akin    HAB    **IMP**    buy    book  
‘Akin usually/habitually buys books.’

(260) *Akin ín **máa** **máa** ra iwé.*  
Akin    HTS    FUT    **PROG**    buy    book  
‘Akin will be buying a book.’

##### FUTURE:

(261) *Akin ín **máa** ra iwé.*  
Akin    HTS    **FUT**    buy    book  
‘Akin will buy a book.’

Even though this generalisation is strongly supported by the data, it fails to establish the connection between the two readings. What I offer in this section is a compositional analysis of *máa* as a complex auxiliary spanning over the two nodes of the extended inflection projection: Mood (EPISTEMIC) and Aspect (VIEW-POINT) (as per section 4.5.) and argue that its semantic status is predictable based on its morpho-syntax.

I have shown that *máa* must be composed of two morphemes (forced by minimality/maximality constraints) – following the canonical monomoraic ((C)V<sup>77</sup>) template for auxiliaries – and that these two elements are likely to be Modal and Aspect. The question is what the two morphemes composing *máa* actually are and how they should be classified syntactically given their semantics.

Following the hierarchy of Cinque (1999) as well as the model of the phrase structure proposed in this paper, it is clear that the modal element must precede the aspectual one. This is especially important for a language like Yorùbá, which is argued to lack syntactic head movement (see Déchaine (1993) amongst others); where the surface position of functional elements is identical to the position in which they were base-generated. Considering both the positional argument as well as the (C)V template of auxiliaries yields the following prediction: *má* is modal and *a* is aspectual. In fact, given the vowel assimilation process, which is very active in the language, one may assume that *má+a* is a result of combination of either (a) *má* and *a*; or (b) *má* and *v* (vowel copy). I turn again to the dialectal difference to see if there are any indications with respect to which alternative is more plausible. Ajibóyè (p.c.) observes that in the Ijésà dialect, which is one of the most conservative varieties of Yorùbá, one finds the progressive marker *mí*. It is also known from the literature (Awóyalé (1991) for example) that *a* is found in very many varieties of the language and is used as a tenseless habitual marker used in proverbs and sayings. The above combined with the fact that *i* is a default vowel in Standard Yorùbá, which easily assimilates to other vowels, suggests that the *mí+a* hypothesis is most likely a valid representation of the morpho-phonological make-up of the auxiliary *máa*.

However, there seems to be a mismatch as far as syntax (and syntax-semantics mapping) is concerned. In effect, *mí* is said to be a progressive marker – i.e. an instantiation of the Aspect category. The same can be said about the tenseless habitual *a*. At this point, it looks like all the hopes for the compositional analysis of *máa* might be lost. There is, however, one property of the progressive described in Dowty (1979) and Portner (1998) that is relevant: the progressive is said to have quantificational power over a special type of worlds – inertia worlds (as defined by Dowty (1979)) – which means that it shares important properties with modals.

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<sup>77</sup> C (consonantal segment) being optional here.

(262)

INERTIA WORLDS are exactly like the given world up to the time in question and in which the future course of events after this time develops in ways most compatible with the past course of events.

[cited after Bar-el, 2005: 257]

My claim here is that the *mí* is actually generated under the Modal node, and, hence can co-occur with *a*, which instantiates Aspect. The two morphemes put together result in imperfective (both progressive and habitual) *máa*. This also explains why *máa* can yield future tense interpretations – i.e. being quantificational in nature it is partly a modal, hence it shares properties attributed to modals. Availability of future tense readings is one of these properties. Finally there is one more issue that needs to be addressed, namely the aspectual marker *ń* found in the Standard variety of Yorùbá. On the one hand it is a progressive marker; hence, it is likely to be generated under the Aspect node; on the other it has a striking resemblance to the imperfective marker *mí*, which I claim is generated under the Modal node. The point here is to find a proposal under which both observations will remain valid. First, it is possible that *mí* over time has evolved into *ń* – i.e. the tone has shifted onto the nasal (nasals are moraic in the language) and the default vowel *i* which was supporting the high tone is no longer necessary; as to the place of articulation, it is not fixed and depends on the first consonant of the verb that follows.<sup>78</sup> In (263) below it is alveolar nasal *ń* that surfaces in front of alveolar lateral *l*, while in (264) a bilabial stop *b* requires that the preceding nasal be bilabial as well: *m̀*.

(263) *ó*            *ń*        *lọ*        *kí*        *Meri*.  
3SG            PROG go        greet Mary  
'S/he is visiting Mary.'  
'S/he was visiting Mary.'

(264) *ó*            *m̀*        *bo*.  
3SG            PROG come  
'S/he is coming.' / 'S/he was coming.'

<sup>78</sup> It is possible, but not very likely, that a reverse change process has occurred – i.e. *ń* → n + H-tone → n + *í* → *mí*.

Second, what may be even more revealing is that *n̄* has no quantificational force. While *máa* is compatible with future tense readings, such readings are never available with *n̄* which is an aspectual marker associated with on-going actions and, therefore, has limited quantificational force: QUANTIFICATION OVER THE INERTIA WORLDS, not possible worlds.

(265) *Akin n̄ ra iwé.*  
 Akin PROG buy book  
 ‘Akin is buying a book.’

(266) *Akin ín máa ra iwé.*  
 Akin HTS IMP buy book  
 ‘Akin will/is going to buy a book.’

Inasmuch as this analysis is valid and compatible with the properties of the phrase structure argued for in the preceding sections of this paper, the above is not a sufficient explanation of the Aspect node and semantic values that it may have.

#### 4.7. Dialect variation: marking future in Standard Yorùbá and Moba.

The Standard dialect of Yorùbá distinguishes three types of future tense markers: (a) *yóò*; (b) *á*; and (c) *máa*. In contrast, the Moba dialect has only one auxiliary that yields future tense readings: *é è/é è*<sup>79</sup>. The three Standard Yorùbá utterances as shown in (267) – (269) are equivalent to Moba Yorùbá (270):

(267) *Akin (y)óò ra iwé.* [STANDARD YORÙBÁ]  
 Akin FUT buy book  
 ‘Akin will/is going to buy a book.’

<sup>79</sup> The [ATR] / [RTR] harmony causes the *é è* sequence to alternate with *é è*. For more details see Perkins (2005).

(268) *Akin á ra iwé.* [STANDARD YORÙBÁ]  
 Akin FUT buy book  
 ‘Akin will buy a book.’

(269) *Akin ín máa ra iwé.* [STANDARD YORÙBÁ]  
 Akin HTS FUT buy book  
 ‘Akin will/is going to buy a book.’

(270) *Akin é è ra iwé.* [MOBA]  
 Akin FUT buy book  
 ‘Akin will buy a book.’

At first glance, one striking morpho-phonological similarity may be observed – i.e. that between *é è* and *(y)óò*. However, is it enough to postulate that *é è* is the Moba version of *yóò*? No. In fact, as shown in table (4.7.1) below, not all the ‘future tense’ forms contain the *é è* sequence; other forms within the paradigm have only one element in common – the *è*. Thus, one can conclude that *è* is the future tense auxiliary in Moba.

Table 4.7.1: Future tense marking in Moba as per Perkins (2005: appendix).

X EQUALS:	'X will arrive'		
1 <sup>ST</sup> PERSON SINGULAR	<i>mè</i>	<i>è</i>	<i>dé</i>
	1.SG.PRO.CLIT	IRR	arrive
2 <sup>ND</sup> PERSON SINGULAR	<i>ò</i>	<i>è</i>	<i>dé</i>
	2.SG.PRO.CLIT	IRR	arrive
3 <sup>RD</sup> PERSON SINGULAR	<i>é</i>	<i>è</i>	<i>dé</i>
	3.SG.PRO.CLIT	IRR	arrive
1 <sup>ST</sup> PERSON PLURAL	<i>á</i>	<i>è</i>	<i>dé</i>
	1.PL.PRO.CLIT	IRR	arrive
2 <sup>ND</sup> PERSON PLURAL	<i>ìn</i>	<i>è</i>	<i>dé</i>
	2.PL.PRO.CLIT	IRR	arrive
3 <sup>RD</sup> PERSON PLURAL	<i>án</i>	<i>è</i>	<i>dé</i>
	3.PL.PRO.CLIT	IRR	arrive

One may wonder what is special about the 3<sup>rd</sup> person singular that it requires special support element for the future tense marker – i.e. the presence of the *é*. The answer is provided in Wade (2004) and is related to the clitic doubling phenomenon very common in the Moba dialect but absent in the Standard variety – i.e. subject clitics appear before auxiliaries/verb phrases even if a subject is present. Hence, what is glossed in (270) as future tense marking (FUT) is in fact two separate markers: (a) SUBJECT CLITIC for 3<sup>rd</sup> person singular and (b) FUTURE marker (FUT).

(271) *Akin é è ra iwé.* [MOBA]  
 Akin 3SG FUT buy book  
 'Akin will buy a book.'

(272) *é è ra iwé.* [MOBA]  
 3SG FUT buy book  
 'S/he will buy a book.'

Moreover, if the reader recalls the discussion of the status of *ì* in the standard dialect, s/he will remember that a particular instance of this auxiliary was rendered in Mòba with the *è* – i.e. only the *ì* which I claim to be the irrealis mood marker was rendered in Mòba as *è*, other instances of *ì* have different translations.

(273) *usé                      tini   Oladiipo   è   bá   se*                      [MÒBA]  
 work        COMP   Oladiipo        IRR.   MOD   do  
 ‘work that Oladiipo would have done’

(274) *Bí Olu   bá   lọ   sí   uléiwé, è   bá   di                      dọkitá.*  
 if Olu   MOD   go        PREP   school   IRR.   MOD   become        doctor  
 ‘If Olu went to school, he would be a doctor.’

Furthermore, there is one more fact to consider, namely the status of the vowels *i* and *e* in the two dialects respectively. *i* is the default vowel in Standard Yorùbá and is used to *repair* forms that would otherwise violate phonotactic constraints (Pulleyblank (1988a) and (1988b)). Such a function seems to be associated in the Mòba variety with the vowel *e*. Thus, given that the *ì* is, in fact, the low tone with the segmental value filled by the default vowel *i* (see chapter 3: the discussion of low tone (L-tone) as instantiation of MOOD); it is very likely that *è* is also a low tone (L -tone) with the default vowel *e* filling the segmental slot. This in turn leads to a prediction: the Mòba dialect does not have future tense marking per se – i.e. no auxiliary of the language is the equivalent of either: *yóò*, *á* nor *máa*.

(275) *Akin        (y)óò   ra   iwé.*                      [STANDARD YORÙBÁ]  
 Akin        FUT   buy   book  
 ‘Akin will/is going to buy a book.’

(276) *Akin        é        è        ra   iwé.*                      [MÒBA]  
 Akin        3SG   FUT   buy   book  
 ‘Akin will/is going to buy a book.’

- (277) *Akin á ra iwé.* [STANDARD YORÙBÁ]  
 Akin.IRR FUT buy book  
 ‘Akin will buy a book.’
- (278) *Akin é è ra iwé.* [MOBA]  
 Akin 3SG FUT buy book  
 ‘Akin will buy a book.’
- (279) *Akin ín máa ra iwé.* [STANDARD YORÙBÁ]  
 Akin HTS FUT buy book  
 ‘Akin will/is going to buy a book.’
- (280) *Akin é è ra iwé.* [MOBA]  
 Akin 3SG FUT buy book  
 ‘Akin will/is going to buy a book.’

While the Standard Yorùbá examples (275), (277) and (279) contain three different future tense auxiliaries, the corresponding Moba forms have only one future tense auxiliary, namely *è* (as in (276), (278) and (280)).

Given the above one can conclude that it is the presence of the irrealis mood marker that yields the future tense readings in Moba. In fact, it explains why Moba speakers have a tendency to neutralise the contrasts between the three FUTURE auxiliaries of the Standard variety and, therefore, use them interchangeably like they were in free variation with no consequences for the meaning.

## Conclusion:

This study presented an analysis of Yorùbá conditionals together with its implications for the phrase structure of the language, the system of auxiliaries in particular. Central to the analysis was the model for the interpretation of conditional constructions based on a tri-partite quantificational structure as defined by Heim (1982) and the assumption that there exists a direct mapping mechanism between meaning and form. Unlike a similar analytical tool proposed by Ippolito (2002), the model presented here not only accounts for the meaning and form of conditionals in Yorùbá, a Kwa language at the core of my investigation, but its explanatory power also extends to languages like English, French and Italian (the so-called Standard Average European languages) and Polish, a language ‘in-transition’. In fact, it allows for making predictions with respect to patterns which are to be expected cross-linguistically and why, both in terms of forms and the range of meanings available for each of these forms. Not to be ignored are also language-internal implications of such an analysis of conditionals and the model itself for various phenomena which are part of Yorùbá grammar, its phrase structure specifically. In as much as claims made throughout this study were geared towards explaining patterns found in the Standard variety of Yorùbá; it goes without saying that many of them extend to Mòba Yorùbá as well since the two dialects are very closely related.

It is to be noted that this study was based on original data collected from two speakers of Yorùbá, both fluent in Standard Yorùbá and one of the local varieties, their primary dialects: Mòba (O.A.) and Ekiti<sup>80</sup> (F.D.) to be precise. Occasionally, other dialects of the Yorùbá language were also mentioned. Other data came from native speakers of languages in question: English (9 speakers), French (3 speakers), Italian (1 speaker)<sup>81</sup>, Polish (5 speakers, including the author).

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<sup>80</sup> Although the range of data from the Ekiti dialect is not discussed in this study, it played an important role in eliminating Mòba-specific phenomena that otherwise might have been considered as inherent to the Standard Yorùbá grammar.

<sup>81</sup> and works by Ippolito (2002, 2003).

Chapter 1 exposed conditionals as a particular type of construction found in natural languages. It studied their components, the range of available meanings as well as the surface forms attested. One of the core findings presented there was the existence of two situation factors: (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION, the combination of which yields four types of conditional situations: Type A, Type B, Type C and Type D. (These mirror a classification proposed by Iatridou (2000): Future Neutral Vivid, Future Less Vivid, Present Counterfactual and Past Counterfactual.) Another observation made was that none of the languages under the scope of this study codes all four types of conditional situations with a unique surface form each. Specifically, I demonstrated that only two conditional forms are available in Yorùbá: REALIS CONDITIONAL and IRREALIS CONDITIONAL, while the Standard Average European languages display a three-way split on the surface: INDICATIVE CONDITIONAL, NON-PAST SUBJUNCTIVE CONDITIONAL and PAST SUBJUNCTIVE CONDITIONAL. I argued that such surface variation is due to the system-specific properties that influence the meaning-form mapping process. E.g.: in Yorùbá UNLIKELIHOOD OF SATISFACTION turns out to be the only factor active in the meaning-form mapping process, while in the Standard Average European languages LIKELIHOOD OF SATISFACTION and TIME OF CONDITION are both active. In fact, I observed that there seems to be a correlation between the active status of LIKELIHOOD OF SATISFACTION and TIME OF CONDITION, a correlation that does not exist between TIME OF CONDITION and UNLIKELIHOOD OF SATISFACTION. Finally, I linked this correlation to ASPECTUAL versus TEMPORAL PREDOMINANCE (respectively) in the systems themselves.

The discussion in chapter 2 focused on the necessary meaning ingredients of conditional constructions and the model for the interpretation of conditionals. The conditional ingredients include: (i) MODAL QUANTIFICATION OVER POSSIBLE WORLDS, which is restricted by the restrictions on similarity of these possible worlds  $w'$  to the actual world  $w$  (SIMILARITY FUNCTION) and their accessibility from the actual world  $w$  at a given time  $t'$  (ACCESSIBILITY RELATION); (ii) (UN)LIKELIHOOD OF SATISFACTION and (iii) TIME OF CONDITION. I argued that these three meaning ingredients are coded in surface forms in a consistent fashion. Specifically, MODAL QUANTIFICATION OVER POSSIBLE WORLDS is coded with elements of the category of Modal (modal verb/auxiliary), while TIME OF CONDITION is coded via the category of Tense (present/past) and LIKELIHOOD OF SATISFACTION and UNLIKELIHOOD OF SATISFACTION are coded by elements of the Mood category (indicative/subjunctive and realis/irrealis respectively). I

noted that only factors active in the meaning-form mapping are reflected in the surface forms. Moreover, the proposed model for the interpretation of conditionals not only accounts for the wider variety of data than that of Ippolito (2002), but also has a greater explanatory power. Consequently, it is more universal and, as I assume, can be applied cross-linguistically. I concluded the chapter by pointing out that the typology of conditionals attested in a particular language reflects general system-specific properties of its grammar and, likely, vice-versa.

In chapter 3, I looked into the actual forms of conditional constructions. The emphasis was on the two forms found in Yorùbá, namely the REALIS CONDITIONAL and the IRREALIS CONDITIONAL. However, the forms found in other languages were also discussed. In fact, it was based on the particularity of Polish, a language ‘in transition’, that I argued that all three ingredients of conditionals: MODAL QUANTIFICATION OVER POSSIBLE WORLDS, (UN)LIKELIHOOD OF SATISFACTION and TIME OF CONDITION are realised in conditional forms<sup>82</sup>, even though only some elements are active in the meaning-form mapping process. Subsequently, I discussed three grammatical elements which can be identified in Yorùbá conditional forms: (i) the clause typing marker (usually *bí* ‘if’), (ii) the modal auxiliary (most often *bá* and/or in some cases *yóò*, which is restricted to consequent clauses of realis conditionals only) and (iii) the marking of mood (irrealis marker (*L-tone*) or realis marker ( $\emptyset$  / *M-tone*)). Detailed discussions on the range of meanings and morpho-syntactic behaviours that these three grammatical elements display closed the chapter.

Finally, in chapter 4, I discussed the implications that the analysis of conditionals proposed throughout chapters 1, 2 and 3 has for the phrase structure of the Yorùbá language and its system of auxiliaries in particular. Specifically, I demonstrated that the very many phenomena that are part of the Yorùbá verbal domain are due to two properties of the system itself: (i) the MINIMAL WORD CONSTRAINT producing maximality effects on words (e.g.: verbs, auxiliaries included, are canonically monomoraic – CANONICAL WORD SIZE) as well as (ii) the two system-specific binary oppositions that determine category-internal and cross-categorical tonal patterns within the extended inflection projection, while rendering category-internal (un)markedness relations. These properties were at the core of my proposal to: (i) revise the status of the High

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<sup>82</sup> Note that the Tense-marking in Yorùbá, which is an aspect-prominent language, is quite opaque due to the properties of the system itself, not ways in which conditionals are coded.

Tone Syllable; (ii) analyse the complex future auxiliary *yóò* and the future-marking in general (i.e. compare the three Standard Yorùbá future auxiliaries: ` *á*, *yóò* and *máa*); (iii) propose an explanation for the many readings of the auxiliary *máa*. First, I argued that the *High Tone Syllable* can be analysed as a Time variable (in the sense of Heim (1982)) that expresses both Tense and Aspect at the same time – Yorùbá being an aspect prominent language. Second, I demonstrated that the auxiliary *yóò* is a complex lexical item with its three (monomoraic) morphemes representing a different grammatical category each. In other words, I showed that the auxiliary *yóò* spans (in the sense of Williams (2003)) across three grammatical categories which are represented by a single segment each: *y/i* (category of Mood: realis), *ó* (category of Tense/Aspect: *High Tone Syllable*) and *ò* (category of Modal: deontic). I introduced evidence to show that the category of Modal (within the extended inflection projection) hosts two types of quantificational elements: (i) those that quantify over possible worlds and (ii) those that quantify over a special type of possible worlds namely inertia worlds. This allowed me to explain why the auxiliary *máa* yields both future (modal) and imperfective (aspectual) readings. In addition, this evidence played a crucial role in providing argumentation for my proposal that only the ` *á* auxiliary of the Standard Yorùbá is a true future marker. Also, I briefly discussed the cross-dialectal variation pertaining to marking the future. I completed this study by demonstrating that the future environments are marked in Moba with irrealis Mood marker as opposed to the future/futurate auxiliaries that are used by speakers of the Standard variety.

## Bibliography:

- Ajiboye, Oladiipo. 2005. Topics on Yorùbá Nominal Expressions. Doctoral dissertation, The University of British Columbia.
- Ajiboye, Oladiipo and Rose-Marie Déchaine. 2005. The syntax and semantics of Yorùbá duplicative constructions. Paper read at a Linguistics Research Seminar, The University of British Columbia, Vancouver.
- Abraham, R.C. 1958. Dictionary of Modern Yorùbá. London: Hodder and Stoughton.
- Abusch, Dorit. 1984. On Verbs and Time. Doctoral dissertation, University of Massachusetts, Amherst.
- Abusch, Dorit. 1998. Generalising tense semantics for future contexts. In *Studies in Linguistics and Philosophy 70: Events and Grammar*, ed. S. Rothstein, 13–33. Kluwer.
- Anderson, A.R. 1951. A note on Subjunctive and Counterfactual Conditionals. *Analysis* 12: 35–38.
- Armoskaite, Solveiga. 2004. Aspect of simplex transitive Yorùbá verbs. Paper read at the 35<sup>th</sup> Annual Conference on African Linguistics, Cambridge, MA.
- Awobuluyi, Oladele. 1978. *Essentials of Yorùbá Grammar*. Ibadan, Nigeria: Oxford University Press Nigeria.
- Awoyale, Yiwola. 1991. Tense system of Yorùbá. *Afrikanistische Arbeits Papiere* 27:193–221.
- Bamgbose, Ayo. 1966. *A Grammar of Yorùbá*. Cambridge: Cambridge University Press.
- Bamgbose, Ayo. 1967. Vowel harmony in Yoruba. *Journal of African Languages* 6.3:268–173.
- Barczak, Leszek K. 2004a. Is the *yóò* real? A semantic study of the Yorùbá auxiliary *yóò*. Ms., The University of British Columbia.
- Barczak, Leszek K. 2004b. Syntax and semantics of the Yorùbá auxiliary *máa*. Paper read at the 35<sup>th</sup> Annual Conference on African Linguistics, Cambridge, MA.
- Barczak, Leszek K., Rose-Marie Déchaine and Chris Wolfart. 2006. Open conditionals in Plains Cree. Paper read at 11<sup>th</sup> Workshop on Structure and Constituency of Languages of the Americas, Vancouver.
- Bar-el, Leora A. 2005. Aspectual Distinctions in Skwxwú7mesh. Doctoral dissertation, The University of British Columbia.
- Bode, O.G. 2000. Yorùbá Clause Structure. Doctoral dissertation, University of Iowa.

- Cinque, Guiglielmo. 1999. *Adverbs and functional heads: a cross-linguistic perspective*. New York, NY and Oxford: Oxford University Press.
- Comrie, Bernard. 1976. *Aspect*. Cambridge: Cambridge University Press.
- Côté, Margaret R. n.d. *Conditionals in Ojibwe*. Ms, University of Regina.
- Côté Margaret R., Solomon Ratt and Terry J. Klokeid. 1987. *Conditional Sentences in Cree and Sauleaux*. *Papers of the Algonquian Conference* 18:49–57.
- Déchaine, Rose-Marie. 1993. *Predicates across categories: towards a category-neutral syntax*. Doctoral dissertation, University of Massachusetts, Amherst.
- Déchaine, Rose-Marie. 2005. *Serial verb constructions in Yorùbá*. Paper read at the Complex Predications Workshop at the 2005 LSA Institute, Cambridge.
- Dowty, David R. 1977. *Toward a Semantic Analysis of Verb Aspect and the English 'Imperfective' Progressive*. In *Formal Semantics: The essential readings.*, ed.\ Paul Portner and Barbara H. Partee. Oxford: Blackwell.
- Dudman, Victor H. 1984. *Conditional interpretations of if-sentences*. *Australian Journal of Linguistics* 4:143–204.
- Enç, Mürvet. 1987. *Anchoring Conditions for Tense*. *Linguistic Inquiry* 18:633–657.
- Enç, Mürvet. 1996. *Tense and Modality*. In *Handbook of Semantic Theory.*, ed.\ Shalom Lappin, 345-358. Oxford: Blackwell.
- von Stechow, Kai. 1998. *The Presupposition of Subjunctive Conditionals*. In *The Interpretive Tract*. MITWPL 25., ed.\ Uli Sauerland and Orin Percus. Boston, MA: MIT Press.
- von Stechow, Kai. 2001. *Counterfactuals in a Dynamic Context*. In *Ken Hale: A life in Language.*, ed.\ Michael Kenstowicz. Cambridge, MA: MIT Press.
- Haegeman, Liliane M. 1994. *Introduction to Government and Binding Theory*. 2<sup>nd</sup> ed. Oxford: Blackwell Publishers.
- Heim, Irene. 1982. *The Semantics of Definite and Indefinite Noun Phrases*. Doctoral dissertation, University of Massachusetts, Amherst. *Outstanding Dissertations in Linguistics*. New York & London: Garland Publishing Inc. [1998]
- Heim, Irene and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Oxford: Blackwell Publishers.
- Hyman, Larry. 1994. *Conceptual issues in the comparative study of the Bantu verb stem*. In *Topics in African Linguistics.*, ed.\ Salikoko S. Mufwene and Lioba Moshi, 3–34. Amsterdam: Benjamins.

- Iatridou, Sabine. 1994. On the contribution of conditional *then*. *Natural Language Semantics* 2:171–199.
- Iatridou, Sabine. 2000. Grammatical ingredients of counterfactuality. *Linguistic Inquiry* 31(2).
- Iatridou, Sabine and David Embick. 1993. Conditional Inversion. In *Proceedings of NELS 24.*, ed. M. Gonzalez. University of Massachusetts, Amherst: GLSA Publications.
- Ippolito, Michela. 2002. The time of possibilities: Truth and felicity of subjunctive conditionals. Doctoral dissertation, Massachusetts Institute of Technology.
- Ippolito, Michela. 2003. Presuppositions and implicatures in counterfactuals. *Natural Language Semantics* 11(2).
- Ito, Junko and Armin Mester. 1992. Weak layering and word binarity. In *A new century of phonological theory.*, ed. Takeru Honma, Masao Okazaki, Toshiyuki Tabata and Shin-ichi Tanaka, 2003:26–65. Tokyo: Kaitakusha.
- Kratzer, Angelika. 1981. The Notional category of Modality. In *Formal Semantics: The essential readings.*, ed. Paul Portner and Barbara H. Partee. Oxford: Blackwell.
- Kratzer, Angelika. 1986. Conditionals. In *CLS 22: Papers from the parasession on Pragmatics and Grammatical Theory.*, ed. A. M. Farley, P. Farley and K.-E. McCullough, 1–15. Chicago: Chicago Linguistics Society Publication.
- Lasnik, Peter. 1996. Adnominal Conditionals. In *Proceedings of SALT VI*, ed. T. Galloway and J. Spence. Ithaca, NY: CLC Publications.
- Lewis, David. 1973. *Counterfactuals*. Cambridge, MA: Harvard University Press.
- Manfredi, Victor. in prep. Tense parameters and serial verbs. Ms., Boston University.
- Matthewson, Lisa. 2004. What tense systems can be like: Evidence from a supposedly tenseless language. Ms., The University of British Columbia. [Matthewson (2005b)]
- Matthewson, Lisa. 2005. On the Absence of Tense on Determiners. *Lingua* 115:12, 6971–1735.
- Matthewson, Lisa. 2005b. Temporal semantics in a superficially tenseless language. Ms., The University of British Columbia.
- McCarthy, John and Alan Prince. 1986. Prosodic morphology. Ms., University of Massachusetts, Amherst and Brandeis University.
- McCarthy, John and Alan Prince. 1993. Prosodic morphology: Constraint interaction and satisfaction. Ms., Rutgers Optimality Archives.
- Miodunka, Władysław. 2005. *Cześć, jak się masz*. Krakow: TAIWPN Universitas.

- Ogunbowale, P.O. 1970. *The essentials of Yoruba language*. New York, NY: David McKay Company Inc.
- Ola, Olanike O. 1995. *Optimality in Benue-Congo Prosodic Phonology and Morphology*. Doctoral dissertation: The University of British Columbia.
- Ola, Olanike O and Douglas Pulleyblank. 2002. Yoruba vowel elision: minimality effects. *Natural Language and Linguistic Theory* 20(1):101–156. [2000, Ms.]
- Oyelaran, Olasope O. 1987. Theoretical Implications of the sources of the syllabic nasal in Yorùbá. In *Research in Yorùbá Language and Literature*, 7–20. Ile-Ife: Yorùbá Language and Literature Club.
- Parker, Elizabeth. 1991. Conditionals in Mundani. In *Tense and aspect in eight languages of Cameroon*, ed. Stephen C. Anderson and Bernard Comrie, 165–187. Dallas, TX, Summer Institute of Linguistics and the University of Texas at Arlington Publications in Linguistics 99.
- Perkins, Jeremy. 2005. *The RTR Harmonic Domain in two Dialects of Yoruba*. Master's Thesis, The University of British Columbia.
- Portner, Paul. 1997. The Semantics of Mood, Complementation, and Conversational Force. *Natural Language Semantics* 5, 167–212.
- Portner, Paul. 1998. The Progressive in Modal Semantics. *Language* 74(4): 760-787.
- Portner, Paul. 2003. The (temporal) semantics and (modal) pragmatics of the Perfect. *Linguistics and Philosophy* 26:459–510.
- Pulleyblank, Douglas. 1988. Vocalic Underspecification in Yoruba. *Linguistic Inquiry* 19(2):233–270.
- Pulleyblank, Douglas. 1988. Vowel Deletion in Yoruba. *Journal of African Languages and Linguistics* 10:117–136.
- Wade, Madeleine. 2004. Phonology of weak pronoun clitics in Moba Yorùbá. Paper read at the 35<sup>th</sup> Annual Conference on African Linguistics, Cambridge, MA.
- Williams, Edwin. 2003. *Representation Theory*. Boston, MA: MIT Press.
- Zwicky, Arnold. 1993. Heads, bases, and functors. In *Heads in grammatical theory*, ed. G.G. Corbett, N. Fraser and Scott McGlashan, 292–315. Cambridge University Press.

## Appendix A: Logically possible meaning-form mapping patterns.

On the assumption that the variation in natural languages is due to differences in ways in which they filter all available information during the meaning-form mapping process (rather than with respect to the ordering of morpho-syntactic elements within the structures themselves), it must be that languages can exploit each of the situation factors in their own, unique way. Specifically, even though each situation factor is equally important as far as the meaning is concerned, only some situation factors or only their particular values (as it is the case with the (UN)LIKELIHOOD OF SATISFACTION) play an active role in the meaning-form mapping process yielding the forms attested. In fact, as it was demonstrated in the previous chapters of this study, languages do differ in ways they interpret the (UN)LIKELIHOOD OF SATISFACTION factor. For example, the so-called Standard Average European languages focus on the likelihood of a condition actually being satisfied – the LIKELIHOOD OF SATISFACTION – which divides the set of conditional situations {A, B, C, D} into two subsets LIKELY = {A} and ‘fails-to-be-LIKELY’ = {B, C, D}. In contrast, languages like Yorùbá split this same set of conditionals situations {A, B, C, D} into the UNLIKELY = {C, D} and the ‘fails-to-be-UNLIKELY’ = {A, B} subsets by making the UNLIKELIHOOD OF SATISFACTION the active factor in the meaning-form mapping process. On this view a hypothetical natural language can employ only one situation factor or both of them to derive the conditional forms (ordering of the grammatical elements representing the factors used being determined by Cinque’s (1995) model and generalisations). Note that only one instantiation of the (UN)LIKELIHOOD OF SATISFACTION factor can be active in the meaning-form mapping process.<sup>83</sup> I do not think any additional evidence is required in order to convince reader of the conceptual plausibility of such an approach, instead I turn to the presentation of such five possible patterns predicted under this view.

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<sup>83</sup> Barczak, Déchaine & Wolfart (2006) show that this restriction applies only at a domain level. Specifically, in languages with extremely rich morphology, like Plains Cree, types of nominal conditionals are defined with respect to the UNLIKELIHOOD OF SATISFACTION, while the typology of sentence-based conditionals is driven by the LIKELIHOOD OF SATISFACTION.

Table A.1.: Pattern I: TEMPORAL.

Situation:	Situation factor(s) employed:	Resulting pattern:
	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	NON-PAST 'FAILS-	NON-PAST CONDITIONAL
B	NON-PAST TO-BE-	
C	NON-PAST PAST'	
D	PAST	PAST CONDITIONAL

The pattern above is very unlikely to be attested under the assumption that, while the TIME OF CONDITION is an important factor in conditional typology, languages make use of temporal differences predominantly for the purpose of structuring the course of events rather than to differentiate between actual and hypothetical contexts as modality does.

Table A.2.: Pattern II: LIKELY & ATEMPORAL.

Situation:	Situation factor(s) employed:	Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	
A	LIKELY	INDICATIVE CONDITIONAL
B	UNVALUED	SUBJUNCTIVE CONDITIONAL
C	UNLIKELY	
D	UNLIKELY	

At first glance, the existence of such pattern in some natural language seems very plausible. However, in light of the evidence from Polish, a language 'in-transition', one will realise that natural languages avoid such a pattern. (A detailed argumentation follows.)

Table A.3.: Pattern III: UNLIKELY (UNTENSED) attested in Yorùbá and modern Polish.

Situation:	Situation factor(s) employed:		Resulting pattern:
	UNLIKELIHOOD OF SATISFACTION: (UNLIKELY vs. 'FAILS-TO-BE-UNLIKELY')		
A	LIKELY	'FAILS-TO-BE-UNLIKELY'	REALIS
B	UNVALUED	UNLIKELY'	CONDITIONAL
C	UNLIKELY		IRREALIS
D	UNLIKELY		CONDITIONAL

Table A.4.: Pattern IV: LIKELY (TENSED) attested in English, French and Italian (as well as 'old' Polish).

Situation:	Situation factor(s) employed:		Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	LIKELY	NON-PAST 'FAILS-TO-BE-LIKELY'	NON-PAST INDICATIVE C.
B	UNVALUED	NON-PAST TO-BE-LIKELY'	NON-PAST SUBJUNCTIVE
C	UNLIKELY	NON-PAST PAST'	CONDITIONAL
D	UNLIKELY	PAST	PAST SUBJUNCTIVE COND.

Table A.5.: Pattern V: UNLIKELY & TEMPORAL.

Situation:	Situation factor(s) employed:		Resulting pattern:
	LIKELIHOOD OF SATISFACTION: (LIKELY vs. 'FAILS-TO-BE-LIKELY')	TIME OF CONDITION: (NON-PAST vs. PAST)	
A	LIKELY	'FAILS-TO-BE-	NON-PAST REALIS
B	UNVALUED	LIKELY'	CONDITIONAL
C	UNLIKELY	NON-PAST PAST	NON-PAST IRREALIS
D	UNLIKELY	PAST	PAST IRREALIS C.

Again, the pattern above is very unlikely to be attested. The reason for that is that indicative/subjunctive discrimination (and not the realis/irrealis division) is characteristic of the tense-prominent systems (as the language displaying patten v of conditionals would be).

To summarise, out of the five patterns that account for a possible range of cross-linguistic variation with respect to meaning-form mapping of conditionals, only two are actually attested in languages under the scope of this study: Pattern III (UNLIKELY) and Pattern IV (LIKELY). The other three patterns are very unlikely to be attested. Why would it be? After all, the two actually attested patterns are based on one (UNLIKELY) or two (LIKELY) situation factors – the three other patterns are no different. However, as it is discussed in chapter 2 (section 2.5.), these three patterns violate certain general properties of natural languages and, therefore, are unlikely to be attested.

The bulk of evidence in support of my claim comes from Polish, a language which is currently reanalysing its system of conditionals from an SAE-like (LIKELY) pattern into a Yorùbá-like (UNLIKELY) pattern. Such a shift in conditional forms is a result of (and a compensatory strategy to balance out) the loss of plus-quam-perfect (double past/past-in-the-past) morphology and as a result the system would no longer differentiate the non-past subjunctive and the past subjunctive conditionals. According to the tables above, Polish would then be an example of a language following pattern II (LIKELY & ATEMPORAL), which is the LIKELY pattern

without overt tense distinction. However, this is exactly what has NOT happened in Polish. Instead, Polish has shifted to the UNLIKELY pattern that shows no temporal distinctions. This suggests that there exists a direct dependency between the loss of temporal distinctions and the shift from indicative/subjunctive to the realis/irrealis modality. Interestingly enough, even though, to date, no linguistic evidence has been put forward that would determine how the indicative and the subjunctive on one hand and the realis and irrealis on the other compare with respect to their meaning, the two variants differ with respect to their sensitivity to tense. Specifically, while forms such as present irrealis or past irrealis are completely unattested, the subjunctive mood displays great sensitivity to tense distinctions and even tense-shifting (forms such as imperfect subjunctive, past subjunctive, plus-quam-perfect subjunctive are easily found in Romance languages, with Spanish having also the future subjunctive forms). Therefore, one may conclude that there is a tight correlation between the tense-prominence and indicative/subjunctive mood distinction within the system on one hand and the aspect-prominence and the realis/irrealis mood distinction on the other. Due to limited space, I am not going to elaborate further on this interesting dependency. Nevertheless, I assume that the above generalisation holds and, hence, I consider patterns II and V to be very unlikely – i.e. I do not expect them to be found in natural languages. Given that pattern I was eliminated as well (based on the fact that tense alone does not render hypothetical contexts), I conclude that the two patterns actually attested in the languages under the scope of this study are the only patterns that are expected to be found cross-linguistically. That is to say that there exists a conditional parameter that determines the typology of conditionals system-internally (LIKELY or UNLIKELY patterns). What is important is that the setting of this parameter is directly dependent on the system's temporal and/or aspectual prominence.

## Appendix B: The Ippolito's (2002) model fails to explain properties of Yorùbá conditionals.

The model for interpretation of conditionals proposed in this study was said to be more viable than that of Ippolito (2002) in that it accounts for a broader range of data found in natural languages. Since determining whether a model or an analysis is viable can be done by testing it against languages other than those for which it was originally devised, I tested the Ippolito's (2002) model against Yorùbá. Specifically, I asked two questions:

- (i) Does the model allow for the conditional forms attested in Yorùbá to be interpreted correctly?
- (ii) Is it possible to use this model to map the meaning of a conditional situation onto a form attested in the language that is said to be felicitous in this conditional situation?

Let's look again the types of conditionals attested in Yorùbá. Consider first the so-called realis conditional in (281). Observe that both the antecedent and the consequent contain a modal (*bá* and *yóò* respectively), with the consequent being optionally marked for the realis mood (*M-tone* on *y* of the *yóò*). The antecedent is additionally marked with a clause-typing marker (*bí*). This form is felicitous in two contexts: (i) where the time of condition is the non-past and where the speaker judges it to be likely that the condition might be satisfied (situation A) and (ii) where the time of condition is the non-past and where the speaker does not commit to its likelihood – s/he knows it is less than likely, but not unlikely (situation B).

(281) *Bí Olú bá lẹ kí Meri (lọla), yóò mú inú rẹ dùn.*

if Olú MOD go greet Mary (tomorrow), FUT/MOD make stomach PRO.3SG sweet

= (A) 'If Olú visits Mary tomorrow, he will make her happy.'

= (B) 'If Olú visited Mary (tomorrow), he would make her happy.'

[It is more likely that Olú will not visit Mary than that Olú will do so, but it is not (totally) unlikely that Olú will visit Mary.]

The other attested form in Yorùbá is the irrealis conditional, as in (282). Observe that in this form both the antecedent and the consequent contain a modal (*bá*), with the consequent being obligatorily marked for the irrealis mood (*L-tone i*). The antecedent is additionally marked with a clause-typing marker (*bí*). This form is felicitous in two contexts: (i) where the time of condition is non-past but the speaker judges that it is unlikely for the situation to be satisfied (situation C) and (ii) where the time of condition is past and where the speaker judges it to be unlikely that the condition be satisfied (situation D).

(282) *Bí Olú bá (ti) lọ kí Meri (lánà/lọla), ì bá (ti) mú inú rẹ̀ dùn.*

if Olú MOD go greet Mary (yesterday/tomorrow), IRR-MOOD MOD make stomach  
PRO.3SG sweet

= (C) ‘If Olú visited Mary (tomorrow), he would make her happy.’

[Given the present circumstances Olú will not visit Mary. I.e.: it is unlikely that Olú will do so.]

= (D) ‘If Olú had visited Mary (yesterday), he would have made her happy.’

Meaning-wise, the only factor which sets situations C and D apart from situations A and B is the UNLIKELIHOOD OF SATISFACTION, more specifically they share the [UNLIKELY] value for the LIKELIHOOD OF SATISFACTION. For situation C the actual state of affairs implies that the condition is unlikely to be satisfied, condition in situation D is not only unlikely to be satisfied but also refers to no longer accessible possible worlds which were only available as extensions of the actual world at a past time. In contrast, the situations A and B ‘fail-to-be-UNLIKELY’: in situation A it is likely that the condition might be satisfied and in situation B it is more likely that the condition will not be satisfied than that it might be satisfied, but it is not unlikely that it actually might be satisfied [compare with Iatridou (2000): Future Less Vivid].

As to the form, we observe that antecedents of both types contain the clause-typing marker *bí* ‘if’ and the under-specified modal *bá*. Consequents of Yorùbá conditionals also contain a Modal: a future tense marker like *yóò* or any other modal different than *bá* (*gbódò* ‘must’, *lè* ‘can’) in consequent of the realis conditional and the under-specified modal *bá* in consequent of the irrealis conditional. In addition, the consequents are marked for Mood: the mid-tone (M-tone) – *i* – is the realis mood – overt marking of which is optional or inherent to the modal (like

it is in the case of *yóò*) – and low-tone (L-tone) – *ì* – marks the irrealis mood (hence the terminology used to refer to these two forms). In addition, both the antecedent and the consequent of the irrealis conditional can be marked with the *ti* defined as a perfective marker (Awoyalé, 1991) and/or adverb ‘already’ (Barczak, 2004). The marking is optional, but whenever it occurs, it always surfaces in both clauses. This is shown in templates below.

Table B.1.: Templates of Yorùbá conditional forms.

Type of conditional:	ANTECEDENT			CONSEQUENT		
REALIS CONDITIONAL	bí	bá		(i)	modal	
					[*bá]	
IRREALIS CONDITIONAL	bí	bá	(ti)	ì	bá	(ti)
Syntactic category:	CLAUSE-TYPING	MODAL	ASPECT (perf.)	MOOD (real./irreal.)	MODAL	ASPECT (perf.)

Any attempt to map these templates onto the model proposed by Ippolito (2002) faces the following problems:

- (i) Except for the optional perfective marker *ti*, Yorùbá does not display any past tense/perfect marking in its conditionals;
- (ii) Both the antecedent and the consequent contain a Modal;
- (iii) The consequent is marked for realis/irrealis Mood.

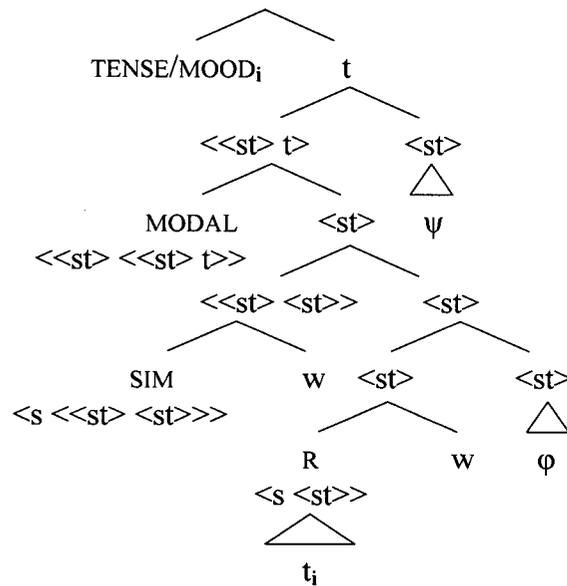
This is to say that not only Yorùbá does not make any use of the PAST/PERFECT – which drives the Ippolito’s (2002) system – but it also differs from Standard Average European languages with respect to how the other elements of the tri-partite structure (e.g. MODAL and MOOD) are mapped onto form. Consequently, if one were to input this information onto the tri-partite structure, the following model would emerge:



The first conclusion that one may jump into is that the notion of MODAL is stable across the two languages and, thus, the comparison of the MOOD (realis/irrealis) versus the TENSE (non-past/past) and/or the MOOD (indicative/subjunctive) will offer a solution to the current puzzle. This conclusion is even more plausible given that in a language like English past tense morphology is used in subjunctive environments. However, it loses a lot of its initial plausibility once the morpho-syntactic make up of conditional forms is considered. Specifically, if one is to assume that Modals are equivalents of each other in both types of systems and that Yorùbá irrealis Mood is equivalent to past Tense (as tense and/or as subjunctive mood marker) in the Standard Average European languages; then one needs to make stipulations as to the mapping from meaning onto form – i.e. from the semantic model (Ippolito (2002)) onto the morpho-syntactic structure. To be more precise, English-like systems have Tense morphology occurring in both the antecedent and the consequent clause; however, irrealis Mood in Yorùbá surfaces only in the consequent. Conversely, whereas Yorùbá requires the presence of a modal verb in both the antecedent and the consequent, Standard Average European languages have Modal occur only once, in the consequent clause. Therefore, assuming a tight meaning-form mapping, it seems like there is more parallelism between (i) Yorùbá MOOD and Standard Average European languages' MODALS on one hand and (ii) Yorùbá MODALS and (PAST) TENSE/MOOD of English-like systems on the other; rather than between categories believed to be equivalent at first glance.

Recall the semantic structure proposed by Ippolito (2002) as the interpretation model for conditionals (shown in (284) below). It appears that MODAL, which heads the quantificational structure, is morpho-syntactically expressed only in the consequent clause. In contrast, the TENSE and MOOD, which restrict the MODAL, are instantiated on the surface in both the antecedent and the consequent clauses. A different syntactic pattern is observed in Yorùbá. Specifically, the MODAL is morpho-syntactically present in both the antecedent and the consequent clauses. The element that is instantiated in the consequent clause only is MOOD. This suggests that MODAL is the element in Yorùbá which functions as the equivalent of the Standard Average European TENSE, whereas MOOD is the element which has the same distribution as MODAL in the Standard Average European languages. This explains why for Yorùbá the Ippolito's (2002) model would have to be revised as was shown in (283) above.

(284)



[adapted from Ippolito (2002: 116)]

In as much as this model remains self-explanatory with respect to meaning-form mapping, it does, however, create quite some debate as far as the semantic theory of MOOD and MODAL is concerned. According to Portner (1997) and (2003) it is the lack of quantificational force that distinguishes MOOD from MODAL. Thus, MOOD, being a non-quantificational element expressing LIKELIHOOD, should not be able to head the tri-partite structure which is the basis for the quantification over possible worlds. In the amended Ippolito's (2002) model (as in (283)), it is MOOD that heads the tri-partite structure – i.e. it must have quantificational power. There are several possible solutions to this potential problem. One involves the revision of the semantics of MOOD, another one calls for the flexibility in meaning-form mapping and so on. I present these two possible solutions below.

▪ HYPOTHESIS I: YORÙBÁ MOOD IS QUANTIFICATIONAL (= SAE MODAL).

YORÙBÁ MOOD IS QUANTIFICATIONAL IN NATURE, AND, THEREFORE, IS MORE LIKE A MODAL OF STANDARD AVERAGE EUROPEAN LANGUAGES IN THAT IT HEADS THE TRI-PARTITE SEMANTIC STRUCTURE. IN CONTRAST, MODALS ARE LIKE THE STANDARD AVERAGE EUROPEAN TENSE OR MOOD – THEY ACT AS RESTRICTORS ON THE ACCESSIBILITY OF POSSIBLE WORLDS  $w'$  WITH RESPECT TO WHICH THE CONDITIONAL CONSTRUCTIONS ARE EVALUATED RATHER THAN QUANTIFY OVER THEM.

Some may argue that instead of proposing to revise the semantics of MOOD and MODAL, I should consider switching the labels (Rullmann (p.c.)) which I have assigned to elements that I classify as MOOD and MODAL in Yorùbá. I do not believe that doing so would be right, especially since – as the discussions in chapters 3 and 4 show – these elements are associated with mood and modal environments respectively and that what I argue to be MOOD in conditionals behaves like MOOD in other constructions, same being true for MODAL in the language.

One possible answer to this puzzle is the idea stemming from work of Matthewson (2004) and (2006) on the future marker of Lillooet Salish – *kelh*. As she points out, *kelh* is still a realisation of the WOLL, but a modal<sup>84</sup> WOLL and, therefore, “does not specify universal quantificational force” (Matthewson (p.c.)). The same is true for the elements that I classify as MODAL in Yorùbá, which is why I believe that the labelling is appropriate. On that view, Yorùbá MOOD would be equivalent to general WOLL (just like Ippolito’s (2002) MODAL ‘MUST’<sup>84</sup>) and capable of having the universal quantificational force that might be restricted by other elements, just like it is the case in Standard Average European languages where the restriction is introduced by PAST/PERFECT (according to Iatridou (2000) and Ippolito (2002)) or TENSE/ MOOD (as per this study). This would not only allow Yorùbá MOOD to head the tri-partite quantificational structure (based on which conditionals are interpreted) and be copied only to the consequent clause, but also would explain why MODAL acts as a restrictor and is copied to both the antecedent and the consequent clauses of conditionals. The problem with this approach is that one is forced to admit that MOOD is quantificational – this goes against what has been assumed about the semantics of MOOD (see Portner, (1997) and (2003)).

▪ HYPOTHESIS II: ZERO DEPENDENCY BETWEEN MEANING AND FORM.

THE POSITIONING OF ELEMENTS WITHIN TRI-PARTITE QUANTIFICATIONAL STRUCTURE HAS NO IMPACT ON THE FORM OF CONDITIONALS. SPECIFICALLY, YORÙBÁ MOOD AND MODAL ARE IDENTICAL IN TERMS OF THEIR SEMANTICS TO MOOD AND MODAL OF STANDARD AVERAGE EUROPEAN LANGUAGES, BUT THEIR ORDERING IN THE TRI-PARTITE STRUCTURE IS REVERSED: MOOD TAKES WIDER SCOPE THAN MODAL. THE PROCESS OF MEANING-FORM MAPPING IS NOT, HOWEVER, SENSITIVE TO THIS DIFFERENCE IN SCOPE.

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<sup>84</sup> In her tri-partite structure, Ippolito specifies the MODAL as MUST.

The above solution would require admitting that the gap between meaning and form (i.e. interpretation and derivation of structures) is significant. In my opinion, it weakens the widely accepted PRINCIPLE OF COMPOSITIONALITY. Moreover, it also predicts that Yorùbá realis/irrealis Mood has the same restriction properties as Standard Average European past (perfect) Tense and indicative/subjunctive Mood. Nevertheless, this is a claim that one needs to be very cautious in making and in which I cannot see any plausibility.

In brief, both solutions are problematic given the current linguistic theory of MOOD/ MODAL and MEANING-FORM dependency. This is why I am reluctant to accept either of them as a viable answer to the puzzle of Yorùbá conditionals. In fact, provided the discussion as well as the issues surrounding the Ippolito's (2002) model which were raised above, I am left with no choice but to claim that this model cannot be applied to Yorùbá. Which is why, the current study proposes an alternative and more universal model which is based on the same concept – i.e. the tri-partite quantificational structure – but is governed by different principles.

## Appendix C: Distinguishing conditional situations B and C: data.

Standard Average European conditional forms such as (285) below are often said to be ambiguous between situation B and situation C readings (refer back to chapters 1 and 2).

(285) *If he went to school, he would be a doctor.*

[context (B): He does not seem to be going to school too often, but if he only commit, he could easily become a doctor (in the future).]

[context (C): He cannot be a doctor (even if he says he is), he did not go to school; maybe if he did, he could easily become one (given how gifted he is, etc...)].

In contrast, Yorùbá makes a clear distinction between the B and the C readings (Future Less Vivid versus Present Counterfactual respectively, as per Iatridou (2000)), so the two interpretations of the English (285) ((285 = B) versus (285 = C)) are realised in Yorùbá as (286) versus (287) respectively.

(286) *Bí ó bá lọ iléìwé, yóò di dòkita.*

if 3SG MOD go (attend) school, REAL-FUT-MOD become doctor  
= (B) 'If he went to school, he would be a doctor.'

[context: He does not seem to be going to school too often, but if he only commit, he could easily become a doctor (in the future).]

(287) *Bí ó bá lọ iléìwé, ì bá di dòkita.*

if 3SG MOD go (attend) school, IRREAL MOD become doctor  
= (C) 'If he went to school, he would be a doctor.'

[context: He cannot be a doctor, because he did not go to school; maybe if he did, he could easily become one (given how gifted he is, etc...)].

The following presents examples of Yorùbá forms rendering conditional situations B and C.

SITUATIONS B:

(288) *Bí Olú bá lọ sí Toronto lóla, yòò bá Meri.*

if Olú MOD go PREP Toronto, REAL-FUT-MOD meet Mary

‘If Olú went to Toronto tomorrow (he might finish his work on time and be able to catch the plane for Toronto), he would meet Mary.’

(289) *Tí ó bá ra iwé, yòò fún Meri.*

COMP 3SG MOD buy book, REAL-FUT-MOD give.as.gift Mary

‘If he bought a book (which he might do as he is passing by the bookstore anyhow), he would give it to Mary.’

(290) *Bí Ólú bá ní ka iwé, ó gbòdò jé itan àròsọ.*

if Olú MOD PROG read book, 3SG MOD be novel

‘If Olú were reading a book (which he might be doing as it is awfully quiet in his room), it would have to be a novel.’

(291) *Káni Olú lọ sí iléiwé ní sáà yíí, yòò pàdé Akin.*

COMP Olú go PREP school PREP term this, REAL-FUT-MOD get.to.know Akin

‘If Olú went to school this semester (he is in his school age so he might), he would meet Akin.’

(292) *Bí Olú bá ẹe idàwo lóla, yòò yege.*

if Olú go MOD do exam tomorrow, REAL-FUT-MOD pass

‘If Olú took his exam tomorrow (it is still possible to register), he would pass it.’

(293) *Tí ó bá dé, yòò mú ìkan.*

COMP 3SG MOD arrive, REAL-FUT-MOD pick one

‘If he came (and I think he might), he would pick one.’

(294) *Káni mo mò, mo yóò lọ.*

COMP 1.SG know, 1.SG REAL-FUT-MOD go

‘If I knew (I am not sure whether they have a talk a today, there is still 30 minutes left to their usual Wednesday lecture series slot, so they still might let me know), I would go.’

### SITUATIONS C:

(295) *Káni ó ̀şışẹ́ kára kára ni, ì bá ̀şe àşeyorí.*

if 3SG do.work hard hard FOC, IRR MOD do success

‘If he worked harder (but he does not work at all), he would succeed.’

(296) *Tí ó bá (ti) ra iwé ni ì bá (ti) fún Meri.*

COMP 3SG MOD (PERF) buy book, IRREAL MOD (PERF) give.as.gift Mary

‘If he bought a book (but he did not), he would give it to Mary.’

(297) *Bí Olú bá lọ sí Toronto lọla, ì bá bá Meri.*

if Olú MOD go PREP Toronto, IRREAL MOD meet Mary

‘If Olú went to Toronto tomorrow (but he cannot go), he would meet Mary.’

(298) *Bí Olú bá wà láyè, ì bá di èni ọgórùn-ún ọdún.*

if Olú MOD COP alive, IRREAL MOD become person hundred years

‘If Olú were alive today (but he is dead), he would be 100 years old.’

(299) *Káni Olú lọ sí iléiwé ní sáà yíí, ì bá pàdé Akin.*

COMP Olú go PREP school PREP term this, IRREAL MOD get.to.know Akin

‘If Olú went to school this semester (but he is not attending classes), he would meet Akin.’

(300) *Bí Olú bá ʒe idànwò lóla, ì bá yege.*

if Olú go MOD do exam tomorrow, IRREAL MOD pass

‘If Olú took his exam tomorrow (he was afraid, so he did not register for it, even though he was studying hard for it), he would pass it.’

(301) *Káni mo mọ̀, m̀ bá lọ.*

COMP 1.SG know, 1.SG IRREAL MOD go

‘If I (only) knew (but they never tell me anything about the lecture series until it is too late), I would go.’