

A P R A G M A T I C A P P R O A C H T O M O D A L I T Y
A N D T H E M O D A L S :

WITH APPLICATION TO LITERARY ARABIC

BY

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ABSTRACT

This study sets out a pragmatic speaker-based approach to modality and the modals and applies it to Literary Arabic. The pragmatic framework is based on Searle's (1983) Theory of Intentionality, which is slightly modified to be capable of accounting for the pragmatic implications of the modals.

It is postulated that linguistic expressions have 'sense meaning', 'referential meaning' and 'Intentional meaning' and that modal meaning is basically 'Intentional'.

The Intentional meaning of the modals is analysed in terms of :

- i) the speaker's assumptions about his addressee at the time of utterance,
- ii) his belief or desire with respect to what he is speaking about, and
- iii) his intention or purpose of producing the illocutionary act (i.e., the Preparatory Conditions, Sincerity Condition and Illocutionary Point Condition, respectively). In performing the illocutionary act, the speaker's belief, desire, etc. are assumed to be externalized by means of a logically-prior illocutionary act of 'Informing', which is postulated to secure the illocutionary uptake through a complex intention-in-action on the part of the speaker.

Non-deontic modal implications are discussed and formalized in chapter 3. They are further clarified through the different environments of Tense, Negation and Interrogation, (chapters 4-6). Chapter 7 discusses the Intentional meaning of Deontic Modality, i.e., PERMISSION and OBLIGATION.

DECLARATION :

This thesis is my original work and of my own execution
and authorship.

Signature : *Sayed H. Zayed*

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List of Symbols and Abbreviations

A	agent, (as explained in 2.3.33)
Ad	set of addressees
H	set of hearers (including Ad)
S	speaker
p	propositional variable
P1,P2,Pn	propositional arguments
(.....)	set of arguments
x,y	variables ranging over states of affairs
e	is an element of
∃	existential quantifier
BEL	BELIEVE
DES	DESIRE
INT	INTEND
COMP	complementizer
COMB	combined-(modal)
IIA	intention-in-action,(cf. 2.3.35)
LA	Literary Arabic
Lit	literally
PAST	past-time marker
PASS	passive-affixation
POSS	POSSIBLE
NEC	NECESSARY
PC	preparatory condition
SC	sincerity condition
SUB	subject-affixation
Neg	negation marker
<u>rPN</u>	<u>rubbama</u> -perfect necessity reading
<u>rPP</u>	<u>rubbama</u> -perfect possibility reading
@	is used to indicate infelicity
*	is used to indicate ungrammaticality
?	is used to indicate doubtful acceptability

Chapter One

INTRODUCTION

1.0. The main concern of this study is to establish a pragmatic framework capable of explaining Modality and the Modals, in general, and to apply it to Modality and the Modals in Literary Arabic (henceforth LA), in particular. This will be attempted in the following chapters .

Studying the meaning of modality in a language normally presupposes the existence of a well defined set of modals in that language. Unfortunately, this cannot be the case for the present study, since no attempt has been made, so far, to study modality or the modals in any of the Arabic dialects. For this reason, the first aim of this Introduction is to investigate the syntactic and morphological characteristics of LA modals with a view to establishing their formal system.

In addition, an attempt will be made to provide a definition for LA and to discuss some questions related to the corpus used in this study and the transliteration of the LA examples.

1.1. LA Modal Verbs

This section discusses LA modal verbs, as a sub-class of LA main verbs, and states their chief characteristics. Saying that 'modal verbs' or 'modals', for short, are those linguistic expressions which "contribute modality to the verb phrase"¹, may confuse them with what is known in the literature as "modal operators"². What I will call LA modals are not "semantic markers ... occurring in the semantic representations of ... verbs"³, nor are they logical operators applying only to propos-

itions⁴, they are simply those "helping verbs" which have "no independent existence as verb phrases"⁵ e.g., must, can, may, etc. are the English counterparts of what are to be defined as LA modals.

There are eight modals in LA, (four modal verbs and four modal particles), with which this study is particularly concerned. The following are the modal verbs, (modal particles will be discussed in a later section) :

- 1) yagib, "must/ have to"⁶
- 2) yanba&i, "have to"
- 3) yumkin, " it is possible for..."
- 4) yastati:9 , " can/be able to"

1.1.1. The Defining Characteristics of LA Modals⁷

It will be seen that the 'properties' or 'tests' which characterise LA modals as a sub-category of main verbs are not identical to those used to sub-categorize the English modals⁸. LA modals do not have negative forms like 'can't' , 'won't', etc. nor are they inverted to form interrogatives. In the following, two sets of characterizing features will be discussed. The first set relates the modals to the verb-class, as opposed to other word-classes (e.g., nouns, adjectives, etc.). The second set will be used to distinguish the modals from other members of the verb class.

1.1.12. LA Modals are related to the Main Verbs

LA modals share the following features with LA main verbs :

- i. They have imperfect verb form. E.g., ya-gib, "must" yaanba&i, "have to", correspond to ya-?kul, "(he) eats" and ya-naam , " sleeps".

ii. Both modals and main verbs are negated with the pre-verb negative particle, laa :

<u>Full Verbs</u>	<u>Modals</u>
<u>laa-ya?kula</u> , "he does not eat"	<u>laa-yagiba</u> , "mustn't"
<u>laa-yanaama</u> , "he does not sleep"	<u>laa-yanba&i</u> , "he does not have to"

iii. LA full verbs are interrogated with hal, "yes-no question marker", in initial position, and so do the modals :

<u>Full Verbs</u>	<u>Modals</u>
<u>hal ya?kula</u> ? "Does he eat ?"	<u>hal yagiba</u> ? " Is it necessary ?"

These three features ,(i through iii) have been mentioned to show that LA modals have enough syntactic characteristics to relate them to the verb class ,in contrast to other word-classes.

1.1.13. Modals vs Full Verbs

LA modals are distinguished from LA full verbs by the following,(iv-ivx) features :

iv. No Perfect forms for the modals :

LA full verbs have imperfect as well as perfect verb forms , e.g., ya?kula, "he eats" vs ?akala, "he ate"; and yafhama, "he understands" vs fahama, "he understood". In contrast, LA modals, (with the exception of yastati:9), have only the imperfect form, namely yagib, yanba&i, etc.

v. No person inflections :

The imperfect verb form of LA full verbs, which is shared by the modals, is normally inflected for the first, second and third persons, which are further marked for number, (i.e., singular, dual and plural), and gender, (i.e., masculine and feminine). E.g.,

?afhama , "I understand "

tafhama, "you (sing.) understand"

yafhama, "he understands"

nafhama, " we understand"

etc.

In contrast, the modals have only one form, which would structurally correspond to the third person singular inflection, namely yagib, yanba&i, etc. It will be seen, (in vi below), that this structural correspondence has no semantic significance.

vi. Modals are referentially neutral, their inflection is impersonal :

The prefix ya- in ya-gib is not a pronominal affix in the sense that it is in, e.g., ya-fhama, "he-understands". Whereas the full verb affixation changes to indicate the different persons, as shown in (v) above, modal verb affixation is always with ya- with all persons, e.g.,

?ana yagib, " I must "

?anta yagib, " you (sing.) must "

?antum yagib, "you(plur.) must"

hyya yagib, "she must"

etc.

vii. Modals are not used in complement structures :

LA has a number of complementizers like ?an, li-, likey, etc. which

are normally followed by the imperfect form of the full verb, e.g.,

?an ya-fhama, "(roughly) for him to understand"

likey yafhama, "(roughly) in order for him to understand"

Modals are not acceptable in this environment, e.g.,

* ?an yagib

* likey yagib

viii. No co-occurrence :

No modal verb precedes or follows another modal or full verb :

* yagiba ?an yanba&i

* yanba&i ?an yagib

ix. "must be followed by an ?an-clause" :

This restriction is recognized by Abdel Hamid⁹, who observes that Arabic modals "must be followed by an ?an-clause" which functions as the English complementizers :

yagiba ?an yafhama . "He must understand ."

It should be mentioned, however, that this characteristic is not modal-specific, since it occurs with some desire verbs like yuri:da, "he wants", yatamana, "he hopes", etc. E.g.,

yuri:da ?an yafhama . " He wants to understand ."

yatamana ?an yafhama . "He hopes to understand ."

x. No negation with lam or lan, "didn't and won't, respectively".

In addition to laa, "do not/ does not", which is used as a negative particle for negating modals and full verbs alike, full verbs are also negatable with lam, "did not" and lan, "will not" :

laa yafhama . "He does not understand."

lam yafhama . "He did not understand ."

lan yafhama . "He will not understand."

In contrast, LA modals are negatable only with laa :

laa yagib, "mustn't"

* lam yagib

* lan yagib

xi. No simple imperative form :

The simple imperative form of LA full verbs is derived from the imperfect stem by ?u-prefixation and the deletion of the final case-marker : ya-xrug-a , "he goes out", vs ?u-xrug, "Go out"; ya-ktub-a, "he writes" vs ?u-ktub, "write". This imperative form does not exist for LA modals .

xii. No imperative with li-, (laam il-?amr, "the letter L of command")

laam il-?amr, "the L of command", is not restricted, as the simple imperative, to the second person. Thus :

li-yaxrug, "(roughly) it is my order that he goes out"

li-yaxrugu, "it is my order that they go out ."

This structure is not acceptable with the modals :

* li-yagib

1.1.14. General Remarks

The distinctive features of LA modal verbs, recognized so far, can be summed up as follows, (where A-features are meant to relate the modals to the verb class, in contrast to other word classes, and the

B-features are to establish the modals as a restricted sub-category of the verb class):

- A) i. Having an imperfect form.
 ii. Negated with the negative particle laa.
 iii. Interrogated with hal(and other wh-question words).
- B) iv. No perfect form.
 v. No person inflection.
 vi. Referentially neutral.
 vii. Not used in complement structures.
 viii. No co-occurrence.
 ix. Followed by an ?an-clause.
 x. No negation with lam or lan.
 xi. Having no imperative form.
 xii. Not used with the imperative li-

With the exception of yastati:9, "can/be able to", all LA modals satisfy all the criteria mentioned above¹¹. It is therefore appropriate to discuss this modal in some details. yastati:9 is recognized by Abdel-Hamid (1972:31) as a modal verb corresponding to the English can. The following is Abdel-Hamid's example :

fari:qana yastati:9a ?an yahzima fari:qa-kum .
 our team modal COMP defeat your team

" Our team can defeat your team."

It has to be mentioned, however, that although yastati:9 may be semantically equivalent with the English can, (specially as explained by Coates, 1983:83), it morphologically corresponds to the French pouvoir¹², since

it does not satisfy all the modal properties, mentioned above. It deviates from the modal criteria in the following, (Roman numbers are repeated for convenient reference):

iv) It has a perfect form : ?istata9, "(he) was able to"

v) It is inflected for all persons :

yastati:9a, "he can "

tastati:9a, "she can"

etc.

vi) It is not referentially neutral. This follows from (v), i.e., its being inflected for all persons

x) Finally, it accepts negation with lam and lan, e.g.,

lam yastati9, " he was not able to"

lan yastati9, " he will not be able to"

In spite of its partial deviation from the LA modal verb criteria, yastati:9 has to be included in this study for the following reasons:

a) It is always followed by an ?an-clause (vii):

yastati:9a ?an yaxruga. " He can go out."

b) It does not co-occur with other modals (viii)

✗ yagiba ?an yastati:9

✗ yastati:9a ?an yagib

c) It does not form a complement structure (ix) :

✗ yuri:da ?an yastati:9

"(roughly) he wants to can"

d) It is not used in any of the imperative structures, i.e., (xi) and (xii).

e) More important, yastati:9 is similar to other modal verbs in LA (and in English) in that it does not express anything beyond its modal meaning, i.e., it does not independently form a verb phrase¹³.

The following table shows how LA modals are related to and different from LA full verbs, (S = similar in this feature to full verbs and D = different from full verbs in the feature so marked):

	yagib	yastati:9	yumkin	yanba&i
i. <u>ya-</u> prefixation ;	S	S	S	S
ii. Negation with <u>laa</u>	S	S	S	S
iii. Interrogation with <u>hal</u>	S	S	S	S
iv. Past-tense form	D	S	D	D
v. Person inflection	D	S	D	D
vi. Referential neutrality	D	S	D	D
vii. <u>?an-</u> construction	D	D	D	D
viii. Cooccurrence	D	D	D	D
ix. Negation with <u>lam/lan</u>	D	S	D	D
x. Followed by <u>?an-</u> clause	D	D	D	D
xi. Simple imperative	D	D	D	D
xii. Imperative with <u>li-</u>	D	D	D	D

1.2. LA Semi-Modals

As implicitly recognized by Abdel-Hamid¹⁴, studying the meaning of modality in any of the Arabic dialects will not be complete without including modal particles, such as :

labudda , "it is necessarily the case that .."

rubbama, "it is possible that .."

qad, "(two meanings), it is possible that.. and it is actually the
the case that .."

qala-, "it is incumbent upon "¹⁵.

It is to be noted, however, that these modal particles, (with the exception of qala-), have a strongly verb-like behaviour, which makes them not essentially different from the modal verbs, discussed in (1.1.).

1.2.1. labudda

labudda has a syntactic behaviour similar to yagib, compare :

yagiba ?an yafhama . "He must understand ."

labudda ?an yafhama . " He has to understand."

The same syntactic behaviour can be observed with the past-time marker,

kaana :

kaana yagiba ?an yafhama . "He ought to have understood."

kaana labudda ?an yafhama . " It was necessary for him to understand."

1.2.2. rubbama and qad .

Compared to yumkin, "can", rubbama and qad are not separated from the main verb by the complementizer, ?an, otherwise they are syntactic-

ally alike :

yunkina ?an yafhama. " he can understand ." (Possibility-can)

rubbama yafhama. " He may understand." (Epistemic-may)

gad yafhama. " He may understand." (Epistemic-may)

Apart from these differences, the three modal particles, (labudda, gad and rubbama), share with LA modal verbs most of the characteristics discussed in (1.1.13). Moreover, they have no function in LA beyond their contribution of modality in the linguistic structures in which they are used. It may well be appropriate to mention that these semi-modals are in some cases more frequently used than the modal verbs.

I have also to mention that in the following chapters I shall use the term 'modal' to refer to both modal verbs and semi-modals.

1.2.3. 9ala-

9ala- is morphologically different from other modals in being followed either by the subject of the complement-verb or a pronominal-suffix copied from that subject :

9ala Zeidun ?an yafhama. " (roughly) It is incumbent upon Zeid
modal Zeid COMP understand to understand."

9ala-yhi ?an yafhama "It is incumbent upon him to understand."
modal-him COMP understand

9ala is more frequently used with yagib to form a combined modal, namely yagib-9ala, which expresses a kind of necessity requiring the explicit mention of the agent. I shall make a point later that 9ala is an elliptical form of yagib-9ala, meanwhile I will refer to it as one of LA modals.

1.3. Classifying LA modals

Morphologically, LA modals can be classified into two main groups :
 (A) modal verbs and (B) semi-modals, which are further sub-grouped as
 is shown below :

- A) a) Modal verbs with imperfect form only: (yagib, yumkin and yanba&i)
- b) Modal verbs with imperfect and perfect: (yastati:9)
- B) a) Non-inflected semi-modals : (labudda, qad and rubbama)
- b) Inflected with the accusative suffix : (9ala-)

LA modals can also be classified in terms of the following syntactic
 patterns, (where M = modal, V = main verb and ?an a complementizer):

- i. M ?an V
- ii. M V
- iii. M+9ala- ?an V

In terms of these structural patterns, LA modals fall into the following
 three sub-groups :

- a) Pattern(i) only : (yumkin, labudda and 9ala)
- b) Pattern (ii) only : (rubbama and qad)
- c) Patterns (i) and (iii) : (yagib and yanba&i)

1.4. Defining Literary Arabic (LA)

I take the view, which is currently held among educated Arabs¹⁶, that
 in each Arab community there exist at least three varieties of Arabic¹⁷:

- i. Classical Arabic,

- ii. Literary Arabic ,(also called Standard Arabic or Modern Standard Arabic), and
- iii) Colloquial Arabic.

Classical Arabic is the language of the Qur'an, "the Holy Book of Islam". It is mainly used by "people of religion and only when they speak about religious matters", (Badawy, 1973:89). In other words, Classical Arabic is used by people of religion as part of their profession, as teachers or interpreters of Islam. As such Classical Arabic is almost identical in all Arab countries.

Colloquial Arabic is a set of unwritten dialects which differ from one Arabic speaking community to another, (see Bakalla, 1983:xxxv). It is also possible to recognize different colloquial varieties in the same country, e.g., differences can be found between Cairene Arabic, Upper Egyptian Arabic, Lower Egyptian Arabic, etc.¹⁸. Colloquial Arabic dialects are invariably illiterate, i.e., people use their respective colloquial in their everyday communication, but in writing, (e.g., personal or official letter), they resort to Literary Arabic.

Literary Arabic is a modernized form of Classical Arabic. It is used as the written medium of arts, science, literature, economics, etc. in all Arabic speaking countries, (see also Bakalla, 1983:xxxiv-v). It is the kind of language used in newspapers, magazines, periodicals and most publications in Arabic. In its written form, LA is almost identical in all Arab countries, but in its spoken form (i.e., in the reading of a text written in LA), there would be some phonological differences imposed by the interference of regional colloquials. In other words,

whereas it would be difficult to find essential linguistic differences between two texts written by two educated Arabs belonging to two different countries, (e.g., Egypt and Iraq), an Egyptian and an Iraqi would produce two slightly different phonological versions of one and the same written text. This colloquial interference will be reflected on the transliteration of the LA examples in this study, which will be transliterated according to the Cairene way of reading a text written in LA, e.g., as the Cairene newscasters read the Arabic texts.

1.5. The Data

In the preparation of this study, examples of LA modal uses were collected from a variety of written and spoken sources, (i.e., spoken in the sense explained above):

- A): From the three leading daily Newspapers in Cairo, (Al-Ahram, Al-Akhbar and Al-Gomhouryya), were selected thirteen regular columns contributed over a period of a month, (from 6.3.1980 to 5.4.1980).
- B) : From Radio 2 Cairo, (which is specially transmitted to educated people interested in art, literature, science, politics, etc.), were recorded two hours for each of six regular weekly programmes, during August and September, 1980.
- C): In addition to these regular sources, many examples have been collected from i) four plays by Tawfik al-Hakim, ii) two books on literary criticism by Rushy and Enany, iii) A novel by Mahfouz, iv) two travel books by Mansour and v) The Cairene political Weekly, Rose al-Yousef. (A complete list of these sources is provided at the end of this section)

In so far as this study is concerned ,there would be no difference between written and spoken LA texts,since the latter are prepared in writing. I have therefore converted the spoken texts into normal Arabic orthography,in preparation for their transliteration. Examples from different sources are then filed for each modal separately.

It would be obvious from the unsystematic nature of this corpus data that the material has not been collected for textual investigation. This study will not be concerned with characterizing the uses of the modals in terms of the different style of each author. No attempt will be made for providing statistical information about the uses, distribution,frequency,etc. of the modals. The corpus will be used only as an illustrative guidance and for exemplificatory purposes.

It has to be said,however,that using the corpus has been valuable and indispensable in many ways :

- i) It provides most of the modal distinctions recognized in this study. It is more than likely that some of these distinctions would have been overlooked had the present student depended completely on his invented examples.
- ii) It provides,in a variety of ways,useful contextualizations for the different uses of the modals.
- iii) It represents the use of LA modals in a wide range of topics far beyond the linguistic performance of the present student.
- iv)Most important,it provides either the actual examples used in this study,or,(in most cases due to transliteration difficulties),useful models for the invented ones,as will be explained below.

1.5.1. Transliteration

Due to transliteration difficulties, and in order to minimize boring readability of transliterated material, LA examples provided for analytic purposes will be as simple as possible, (normally containing a modal and a main verb in addition to the grammatical subject). They will then be analysed relative to the possible contexts in which they might be used. Contextualization will of course be based on the guidance of the corpus material.

LA examples provided for illustrative purposes, which will naturally be a little bit longer than those mentioned above, can be divided into three categories :

- 1) Full corpus examples, which are short and simple in the original.
- 2) Simplified versions of corpus examples, when simplification can be achieved through deleting some irrelevant expressions in the sentence.
- 3) Invented examples modelled on those of the corpus, this will be done when (1) and (2) are not obtainable.

Only in the first two cases will the source be indicated by means of bracketed abbreviations shown in the following list.

1.5.2. List of sources and their abbreviations

In the following list, particular attention is called for the abbreviations of the first thirteen regular columns. As each column was contributed by the same author on daily basis, the date will not be shown in the list, but it will be indicated with the examples.

<u>Source</u>	<u>Abbreviation</u>
1) <u>Al- Ahram</u> : "Editorial".	H
2) Al-Sawy, "qaṭr innada", <u>Al-Gomhouryya</u> .	AbdG
3) Al-Wardany, "Rockets", <u>Al-Gomhouryya</u> .	AbG
4) Ashour, "A walk with Thought", <u>Al-Akhbar</u> .	NK
5) Tantawy, "The Arab's view", <u>Al-Akhbar</u> .	TK
6) M. Mouhamed, "From the heart", <u>Al-Gomhouryya</u> .	MhG
7) A. Mansour, "Situations", <u>Al-Ahram</u> .	MH
8) M. Z. Abdel-Qadir, "Towards enlightenment", <u>Al-Akhbar</u> .	MK
9) S. Mansour, "It is only a point of view", <u>Al-Ahram</u> .	SH
10) A. Ragab, "Half a word", <u>Al-Akhbar</u> .	RK
11) H. Fahmy, "For tomorrow", <u>Al-Ahram</u> .	HK
12) A. Amin, " An idea", <u>Al-Akhbar</u> .	AK
13) A. Bahgat, "Rag-bag", <u>Al-Ahram</u> .	AH
14) A.S.Mouhamed, "What is least, but significant", <u>Al-Akhbar</u> .	SK
15) Sadat to Press, <u>Al-Akhbar</u> . (Nov. 26th, 1980) p.10.	StoPK
16) Radio 2 Cairo, "Economic Thought".	S.P.E.
17) R 2 Cairo, "Cherry Orchard".	C.O.
18) R 2 Cairo, "Yosef Idris" .	SPY
19) R 2 Cairo, " Humanities " .	SPHS
20) R 2 Cairo, "The book of the week".	SPBW
21) Tawfik al-Hakim, <u>The Sultan's Dilemma</u> . Cairo, dateless.	TH.SD
22) -----, <u>Al-Hakim's Stick</u> , Cairo:1973.	TH.HS
23) -----, <u>The Varied Theatre</u> , Cairo, dateless.	TH.VT
24) N. Mahfouz, " <u>The Crime</u> ". Cairo:1973.	NM.C
25) R. Rushdy, <u>What is Literature ?</u> Cairo: 1971.	RWL
26) M.M. Enany, <u>The Art of Comedy</u> . Cairo: 1980.	MAG
27) A. Khatir, " <u>al-wa9d</u> " , Radio 2 Cairo, July 21, 1981.	SPW
28) A. Mansour, <u>Those who came from the Sky</u> . Cairo:1978.	MC
29) -----, <u>Those who returned to the Sky</u> . Cairo:1980.	MG

1.5.3. Transcription and Transliteration

The following list shows only the transliterational symbols which are used in this study, and which cannot be indicated with ordinary English alphabetical symbols. It is by no means complete. The symbols which are used in the following chapter and which are not shown in this list are to be understood as used with roughly their English phonetic value .

Symbol used	Approximate phonetic value of the symbols used
ʃ	a voiceless alveolar emphatic fricative
ɖ	a voiced dental emphatic stop
ɸ	a voiceless dental emphatic stop
θ	a voiceless interdental fricative
ð	a voiced interdental fricative
ɣ	a voiced pharyngeal fricative
ħ	a voiceless pharyngeal fricative
ʔ	a glottal stop
ʕ	a voiced uvular or velar fricative
q	a voiceless uvular stop
x	a voiceless uvular or velar fricative
ç	a voiceless palatal fricative
i:	long i
u:	long u
o:	long o

Chapter One

NOTES

1. Quirk, et al, (1972:65), divide English auxiliary verbs according to their contribution to the verb phrase. E.g., BE and HAVE contribute aspect to the verb phrase and the modals contribute modality.
2. See Jackendoff, (1971:489-90), where abstract notions like "unrealized", "multiple in addition to "negative" and "future" are recognized as "modal operators".
3. Ibid.
4. See Carnap, (1956:81-3).
5. See Quirk, Op.Cit. Quirk's definition of the English modals is equally descriptive of those of LA, as will be seen in the following chapters.
6. It should be mentioned here that there is no one-to-one correspondence between English and LA modals, and that the translation to be provided at this stage is only tentative. This applies to all the examples in this chapter, which is mainly concerned with establishing the syntactic characteristics of LA modals.
7. yagib and yanba&i are recognized by Snow, (1965:33), as a special sub-category of intransitive verbs. In addition to the list mentioned in this study, Abdel-Hamid, (1972:19), mentions yasih, "it is permitted to" and yatahatama, "it is necessary that", as modal verbs in Classical Arabic.
8. See Quirk (1972:77-82), Huddleston (1976:333), Palmer (1979:9) and Coates (1983:4), where there seems to be a general agreement that English modals are characterized by what are known as Huddleston's "NICE Properties, (Negation, Inversion, Code and Emphasis), and Palmer's modal criteria, (No third person, No non-finite forms and No co-occurrence).

9. Abdel-Hamid, Op. Cit. :19 .
10. A distinction should be made between 'imperative' and 'command'. The latter is an illocutionary act which may be expressed by so many different ways including the imperative, (see Searle, 1975:64-75; reprinted in Searle (ed.), (1979)). The former is a morphological form which is used to express 'command', but it is also used to express other illocutionary acts such as 'advice' and 'request'.
11. In this respect, LA modals are not different from their English counterparts, which do not all satisfy the "tests" or the "modal verb criteria". See Quirk et al, (1972:63) and Palmer, (1979:35).
12. See Honore, (1964:463), and Palmer, (1979:3-4), for detailed comparison between CAN and POUVOIR as modal verbs.
13. See Halliday, (1970:26-33), and Quirk et al, (1972:65).
14. The list of Arabic modal particles recognized by Abdel-Hamid, (1972:19-20), is different from the one provided above. He recognizes qad, rubbama and qala, (included in this study); in addition, he recognizes li-key, li-, key and hatta (all have the same meaning of) "to/in order to/ so as to". The last four are, on my view, complementizers and will not therefore be discussed in this study.
15. These particles have traditionally been treated as a heterogeneous group belonging to different word-classes. rubbama is an adverb, qad a particle and qala a preposition. Tritton, (1972:191), groups labudda with what he calls "auxiliaries" for the only reason that it is translatable into the English MUST, e.g.,

labudda ?an yafhama. "He must understand."

At the same time, he classifies verbs like qaada, "returned" and kaada, "be on the point to.." as adverbs for the same superficial reasons :

e.g. , qaada yalqaba ." He played again."

kaada yalqaba. "He was about to play."

In his revolutionary re-classification of Arabic word-classes, Hassaan (1979:125-29) groups the semi-modals, listed above, together

with kaana, "past-time marker", and other words like mata, "when", ?ayna, "where" among the particle class. Hassaan's classification is based on the view that these words have "functional rather than lexical meaning", (Ibid.).

16. See, e.g., Bakalla's (1983) Introduction and Badawy's (1973) intensive discussion of the different levels of Arabic, and how these levels overlap in everyday usage.
17. Badawy (1973:89), recognizes five varieties or "levels" of Arabic in Egypt. He classifies them, descendingly, as follows :
- i. Classical Arabic.
 - ii. Modern Standard Arabic.
 - iii. Educated Colloquial Arabic.
 - iv. Enlightened Colloquial Arabic.
 - v. Common Colloquial Arabic.
- Discussing Badawy's classification is beyond the scope of the present study, but I have to say that what I call Literary Arabic comprises Badawy's second and third levels. This is not essentially different from Badawy, since he recognises that (iii) is the spoken form of (ii), see (Badawy, 1973:127).
18. For detailed discussion of the structural differences between Literary, Classical and Colloquial Arabic, see Ibid. :88-200.

Chapter Two

A Theoretical Framework

2.0. The aim of this chapter is to establish a pragmatic framework¹ for providing an adequate description of modality and the modals in natural language. This will depend mostly on two programmes : Searle's theories of Speech Acts and Intentionality (1969-1983) and Clark & Carlson's Informative Hypothesis (1982), which is an extension of Searle's Standard Theory.

The modals will be studied as a special Illocutionary Force Indicating Devices, (IFIDs), used conventionally² to indicate a complex set of related, and possibly overlapping, relationships, e.g., speaker-proposition relationship, speaker-hearer relationship, etc.³ . The meaning of the modals will therefore be dealt with in terms of speaker-based 'Intentionality meaning', as will be explained later in this chapter.

The theoretical formulation of the present programme will be preceded by providing an account of how modality has been treated in Arabic. An attempt will also be made to discuss some different approaches to English modality with a view to providing justifying reasons for preferring the programme adopted in the present study. The reference to mainly Arabic data in this work is largely fortuitous. The framework adopted is equally appropriate to a description of modality in English, and it is claimed that the interest of this thesis lies at least as much in the testing of this framework as in the description of Arabic modals themselves. It has to be mentioned that my discussion of the approaches to English modality is to be considered as directed and selective, and not as a

general or comprehensive survey.

2.1. Modality in Arabic Linguistics

2.1.1. No attempt, that I know of, has been made to investigate the modal system of any of the Arabic dialects, a fact that may account for the lack, in Arabic linguistics, of a term corresponding to the English term 'modality' as used by Western linguists. Only occasionally, and more often in footnotes, do we come across the insightful observation that the particle qad indicates 'certainty' with the perfect-verb form and 'possibility' with the imperfect⁴; an observation that, had it been taken seriously, would have been enough to alert Arabic grammarians to study how such notions as 'certainty' and 'possibility' are expressed in Arabic⁵.

2.1.2. nu:n al-tawki:d, "the suffix -n of certainty"

The only feature in traditional Arabic grammar which can be thought of as related, (though in a remote sense), to modality is nu:n al-tawki:d, "the suffix -n of certainty". It is typical of Arabic grammar textbooks to include a chapter on the morphology of nu:n al-tawki:d-affixation⁶, i.e., the way it affects and is affected by the different verb classes. In most cases, the author will be doing no more than re-writing in simplified prose what has been written in verse by such classical grammarians as Sibawayhi and Ibn-malik⁷.

2.1.3. Hassaan's Study

A recent more daring attempt that touches in passing upon something like modality is that of T. Hassaan. This study deviates from the

traditional practice among Arabic grammarians by taking "meaning as its main concern" (Hassaan,1979:9). Hassaan devotes a section,(pp. 240- to 260),to the study of al-zaman wa al-jiha, "tense and aspect",and modality can be regarded,in his view,as constituting a minor part of the latter. He recognizes three kinds of 'aspect' :

- i. Temporal Aspect : "signalled by adverbs of time and some particles, including qad and rubbama",which are recognized in this study as modals.
- ii. Event Aspect : "signalled by verb affixation", and
- iii. Case-relation Aspect : "signalled by prepositions and adverbs of place".

The following table provides a selection of Hassaan's Arabic illustrations,(collected from pages 245 - 60), with the aspect-markers underlined :

Table (2.1) : A Selection of Hassaan's 'aspect'

Kind of Aspect	Example	Aspect Meaning
Temporal Aspect	a) <u>kaana</u> yaf9ala, "do"	Renewable Past
	b) <u>qad</u> fa9ala, "did"	Past-ending at Present
	c) <u>ma9</u> aala yaf9ala	Past related to Present
Event Aspect	a) ? <u>inkasara</u> "was broken"	Passivity
	b) kassara, "cause to break"	Causality
Case. relation Aspect	jalastu <u>hay9u</u> jalasa "I sat <u>where</u> he sat"	Locative

It is not obvious how such unrelatable phenomena as 'temporal relations', 'derivational productivity' and 'case features' can be conflated into one 'aspectual system'. Hassaan's temporal aspect, however, can indirectly be related to modality in so far as qad and rubbama are recognized by the author as ^otemporal aspect markers, i.e., "the particles" which are defined as "those words which share the common characteristic of not having any lexical meaning; their meaning is grammatical, functioning to express such aspects as 'negation' and 'certainty'" (Hassaan, 1979: 125. Emphasis added). Beyond that, the relation between modality and Hassaan's 'aspect' cannot be extended.

2.1.4. Abdel-Hamid's contrastive study, A Transfer Grammar of English and Arabic (1972), deals more directly with modality than any other attempt, though it is not directly concerned with modality as a system. As its title may indicate, the study has the only purpose of finding out Arabic equivalents to the different English structures - including "can+V, must+have-en+V", etc. (Abdel-Hamid, 1972:23-24). As an illustration of the way Abdel-Hamid's argument is conducted I offer this quotation :

" yumkin corresponds to the English MAY when used to express permission :

You may go . = yumkin-uka ?an tazhaba.

yumkin can also be used to express ability (, no examples are given)". (Abdel-Hamid, 1972:33)

From discussions conducted along the line of the above quotation, Abdel-Hamid recognizes the following modal distinctions :

"Assumption and supposition" (page 24)

" Determination, command and promise"(page 26)

"Permission [and] ability" (page 33)

"Necessity and obligation"	(page 42-3)
" Hypothetical possibility"	(page 48)
" Compulsion, obligation and command"	(page 53)
" Strong possibility and necessity of logical inference"	(page 55)

It is obvious, from this section, that there is a great lack of preceding systematic studies on Arabic Modality, which makes it inevitable for the present attempt to depend on approaches of studying modality in other languages, specially English, for reasons of familiarity and depth of previous scholarship.

2.2. Approaches to English Modality

Palmer's (1979:40) remark that "the overall picture of the modals is extremely messy and untidy." and Leech & Coates' (1979:79) saying that " modals in many ways epitomize the problems which beset modern semantics." may well account for the reason why modality has been so differently approached in so many different studies, as table (2.2) may illustrate.

It would not be difficult, though time consuming, to discuss each of the different approaches shown in table (2.2), below. But since opting for one approach or another is always a matter of a priori theoretical preference and/or limitation, there are a few points to be mentioned by way of clarifying the above quotations and showing that the messy, untidy and problematic picture of modality in natural language may be better attributed, in most cases, to the way it has been approached than

modality itself. Before going into these "few points", I have first to mention, as a preliminary assumption, that modality has long been defined (see Halliday, 1970) as the speaker's assessment of the probability of states of affairs, and that in modalizing a proposition, "the speaker associates with the thesis an indication of its validity [relative] to his own judgement" (Ibid. :335). The important point of this assumption is that we cannot talk about modal distinction, i.e., possibility, necessity, etc. in natural language, without getting involved with the potential speaker's belief and relative knowledge. This has been recognized even by some logicians like Karttunen (1972: 8) who asserts that "modal distinctions always involve a covert reference to human knowledge and belief."

Table (2.2): Approaches to English Modality

Kind of Approach	Studies
1) Basic Meaning:	Ehrman (1966), Woisetschlaeger (1976), Kratzer (1977) and Tregidgo (1982)
2) Matrix Analysis :	Teaddell (1960), Joos (1964) and Bouma (1975)
3) Matrix-feature Analysis:	Marino (1973) and Ney (1981)
4) Componential Analysis:	Leech (1969 : 202-38)
5) Scaling Analysis :	Diver (1964) and Lyons (1974)
6) Contrastive Analysis:	Leech (1971) and Riviere (1981)
7) Corpus Analysis:	Leech & Coates (1980) and Coates (1983)
8) Parametric Analysis:	Acker (1981)
9) Stratificational Analysis :	Johannesson (1976)
10) Performative Analysis:	Boyd & Thorne (1969) and Newmeyer (1973)

- 11) Pragmatic Analysis : R. Lakoff (1972)
 12) Contextual Analysis : Palmer (1979) and Palmer (1980)
-

(The labels are in some cases my own, and the classification provided is based either on the authors' stated assumptions, (e.g., Kratzer, Boyd & Thorne and Lakoff), or on the general emphasis adopted in the respective study, (e.g., Diver, Lyons and Palmer).)

In spite of the various kinds of approaches to study the English modality over the last two decades, the result does not seem satisfactory to Palmer who explicitly expresses his feeling of "dissatisfaction with [his] own work as well as that of others." (Palmer, 1979: preface; see also Coates, 1983: 9-10). If there is anything theoretically wrong with these approaches, it must lie in some common assumptions upon which they have been explicitly or implicitly based. What these studies (with the possible exception of Palmer's and Lakoff's) have in common is the simple, but ambitious, goal of providing a semantic description of the modal auxiliaries in English. Such a goal would undoubtedly be motivated by assuming a) that there exists, at least potentially, an appropriate semantic theory with a definable scope or domain, and b) that the modal auxiliaries form a set of expressions whose meanings are part of the semantic domain.

The first assumption is to some extent controversial since the question "what is semantics to be concerned with?" is more debatable in the current literature than it has ever been. Apart from Katz who has more or less constantly held the view that "linguistic semantics" is concerned with "sense relations in terms of synonymy, meaningfulness, redundancy and other semantic properties," (Katz, 1980: 1. Emphasis added to the part which I cannot claim to have understood), other linguists' views differ

considerably. E.g., Chomsky excludes semantics from his 'Sentence Grammar', (cf. Chomsky, 1975:105). To Leech "Semantics (as the study of meaning) is central to the study of communication ... Semantics is also at the centre of the study of human mind." (Leech, 1974:ix-x. Brackets in the original) Palmer sums up the current state of Semantics by saying that "Semantics is not a single well-integrated discipline ... it is a set of studies of the use of language." (Palmer, 1977:144). Going into the question of Semantics and its domain is beyond the scope of this study, but I hold the narrow view that Semantics has as its topic those aspects of meaning which can be accounted for by straightforward reference to the truth conditions of the sentence containing that meaning⁹. What is relevant to the present purpose is to point out some possible reasons for why most of the approaches to the semantics of the modals, (cf. Table 2.2), can be regarded as unsatisfactory, as acknowledged by Palmer (1979) and Coates (1983). This will be followed, in section (2.3), by providing an alternative approach.

The main reason for the inadequacy of some of the approaches so far used to study modality may lie in their overlooking the assumption that 'an exclusively semantic account of the meaning of the modals cannot be the right goal for a study of modality in natural language.'. It has frequently, though ^Pimplicitly, pointed out that the modals involve (in varied degree) the speaker's subjectivity as part of their meanings¹⁰. How much 'subjectivity' is involved, and how it can be accounted for will be the topic of the following section. It would be enough to mention here, (what has been so far overlooked with respect to the modals), that there are some linguistic areas - including the modals - which are best explained not in terms of their semantical components, but in

terms of their 'use conditions', i.e., those contextual and non-truth functional aspects which indicate the speaker's belief, assumptions, etc. about what he is speaking about¹¹. This does not necessarily deny that such expressions have semantical components. To illustrate, (following Posener, 1980), consider a word like but in contrast to and. A full account of the meaning of but would necessarily include its semantical component, which is equivalent to and, plus its 'use conditions', which involve an element of the speaker's subjectivity. E.g., as illustrated by the following, the speaker would have some negative expectation with respect to whatever propositions he conjoins with but, in addition to their truth functional relation, which is revealed by the and-counterpart :

John is poor and happy.

John is poor but happy.

In a similar way, a reasonable account of the meaning of an LA modal like yumkin, "(roughly) can", would have to tell us not only that yumkin expresses possibility, but also what the 'use conditions' of yumkin are.

It would seem that most of the studies mentioned in Table(2.2) have concentrated on the semantical component of the modals (to the exclusion of their use conditions) with the natural result of providing either an oversimplified and, in some cases, artificial, picture of modality, (e.g., Tregidgo and Bouma), or an unnecessarily overcomplicated one, (e.g., Ney and Acker). I shall in the following provide a brief and general review of some of the semantical accounts mentioned so far with a special emphasis on Palmer (1979) and Coates (1983), which for different reasons represent the best attempts to have studied modality in English.

2.2.1. Semantical Accounts of Modality

The basic meaning or monosemantic approach is based on the assumption that " a grammatical form has a basic meaning that is invariable in all its uses."(Ehrman,1966:10)¹². Other meanings expressible by the same form would be explained as 'overtones' derived from the basic meaning. Thus, according to Tregidgo (1982:78), the basic meaning of must is 'DEMAND', i.e., its deontic meaning, which has overtones ending up with the epistemic meaning.

It is not clear to me why it is more plausible that "the epistemic lies at the extremity of the deontic gradient", (Tregidgo, 1982:75), than the reverse, which would be neither more nor less convincing¹³. What can be done, I think, is to assume, (following Palmer, 1979), that must has NECESSITY as its semantic meaning and that, (deviating from Palmer), NECESSITY would be interpreted epistemically or deontically by means of a 'use condition' serving as a function mapping semantic meaning and context into the total meaning or signification of the utterance. This will make it possible to provide an account for other modals or semi-modals, (e.g., ought to and have to), which are used to express various 'overtones' of the "deontic gradient". The same problem exists in LA, where there are four modals used to express, not so much 'overtones' of the deontic gradient, as different kinds of NECESSITY which can be accounted for in terms of some 'use conditions' such as 'felicity conditions', 'sincerity conditions', etc. (See note 11).

Matrix Analysis is a more ambitious version of the basic meaning approach. In addition to the assumption that "a grammatical form has a basic meaning that is invariable in all its uses", the Matrix analyst

assumes natural language as "far more consistent and rational in its expression of modal meanings than has generally been supposed.", (Leech, 1971:67). It follows that there has to be a neat system analogous to something like Von Wright's model of modal logic. Twaddell (1960:10) was the first to make an attempt by setting out ~~the eight English modals~~ (will, shall, can, may, dare, must, need and ought) in a two-dimensional matrix with three terms in each dimension.

It is interesting to notice that although Twaddell does not mention his matrix analysis in the second edition of the same work (1965), possibly as a mark of recognition that it is unsatisfactory, his attempt is repeated by Joos (1964) and reaches its extreme oversimplification in Bouma (1975), where shall, should and ought to seem to be regarded as semantically equivalent, since they are collectively marked Biased and Objective. Must and have to are also treated as semantically equivalent, since they are marked Imminent and Objective, (see note 14). The danger with analyses of this kind is that the investigator may, on account of neatness and simplicity, come to believe that his system has universal application. This is exactly what happens in the case of Bouma, whose English Matrix is no more than an application of his German Matrix (1973) to the English modals ¹⁴.

2.1.11. The quest for 'neatness and simplicity' may in some cases lead to inconsistency and, ironically, to over-complexity. This can be exemplified by the 'matrix-feature analysis' proposed by Ney, (1981), who, having equipped himself with nine matrix names (p. 129) and nine feature names (p. 130), starts with the "two principles" that "(1) each of the lexical forms of the modals should be uniquely specified" and "(2) each of the meanings of the modals should be uniquely specified." (p. 128)

Inconsistency with these two principles is obvious in Ney's configuration of

" +CONTINGENCY -PRESCRIPTION -CERTAINTY "

which is repeated as a "Feature Specification" for each of the epistemic meanings of "POSSIBILITY", "HYPOTHESIS", "FUTURE PREDICTION", and "HABITUALITY", (p. 130). Moreover, in his attempt to make his analysis 'neater', Ney is forced into time-consuming over-complexity by devising thirteen "Semantic and phonological rules" sub-divided into over thirty, hardly explainable, statements. (See Ney, 1981:134-52)

The problem with modality, which may have been overlooked by Ney, lies in the fact that the meanings expressed by the modals are not completely 'semantical', and any attempt at providing a semantic description of the modals, to the exclusion of their pragmatic implications, would most likely run into difficulties. It is not accidental that most of the outstanding investigators of English modality tend to give up their previous conclusions when they try, in their later works, to achieve precision. Compare, e.g., Leech (1969) to Leech (1971) and then to Leech & Coates (1980). In the former proposal, Leech (1969:202-38) provides for the English modals a system based on their "underlying logical relationship" which is comparable to "the structure of the human body". In the latter study, we get the different view that "indeterminacy" should be recognized as "a serious factor in modal semantics and a prerequisite to its precise analysis.", (Leech & Coates, 1980:81). In fact, the notion of 'indeterminacy' in relation to modality has previously been discussed by Palmer (1979:172-3), and it is a major theoretical assumption behind Coates' most recent study, (1983), to which I shall turn

in a moment. It has to be mentioned, however, that there is a difference between recognizing the existence of 'indeterminacy' and trying to account for it. An attempt will be made to show that 'indeterminacy' is best accounted for in terms of pragmatic factors rather than in terms of a semantic framework based on a "fuzzy set theory", as has been attempted by Coates (1983:10-11).

2.1.12. Before discussing Coates (1983) and Palmer (1979a), I would like to briefly mention two more works representing two quite different approaches to English modality: Johannesson (1976) and Acker (1981). These two studies share with the other attempts the common characteristic of following mono-approaches, (i.e., Matrix Analysis, Parametric Analysis, etc.). But they differ from other attempts as well as from each other in that the former is 'stratificational' and the latter is essentially pragmatic. These studies will be mentioned only with a view to showing that there is a current tendency - in the literature - towards contextualizing the modals in order to obtain a better understanding of their meanings.

Johannesson (1976) follows a strategy of verbal contextualization by analysing the modals, through substitution, as 'covert equivalents' to lexical verbs like hope, wish, demand, etc. (see pp. 14-25). He starts by informally discussing what can be called the 'use conditions' of sentence-types like "Sperative hope-sentences" (p. 13), "Desperative wish-sentences" (p.17) and "Desiderative demand-sentences" (p.24). Modals like may, would and must are then dealt with as covert equivalents to hope, wish and demand respectively, (see Ibid. :13-26).

In a monograph dealing with must and have to, (as used in a corpus of 20 British plays), Acker (1981) follows a wider, and somewhat loose,

strategy by equating the meanings of the modals to their various uses in the different interactional situations. Thus, we are told, "in assigning a meaning to a particular sentence, I have relied on the context [which may be] a situation, a setting, the whole play or even the whole socio-cultural background." (Acker, 1981:35). Relying on such undefinable kind of context seems to have forced Acker into recognizing an enormous number of meanings, 44, compared to her representative examples, (90 examples, pp. 35-43), and the number of parameters, 24, used to establish and distinguish between these meanings, (p. 27).

The following are three successive examples (with their original numbers) to illustrate the kind of meaning assigned to each example :

“(25) Some Prescription :

ex. You know you'VE GOT TO go in some times.”

“(26) Social Consideration :

ex. You HAVE TO treat your workers as if they were made of Delft.”

“(27) Against S's [speaker's] Will :

ex. There, I regret, we MUST call a halt to Julian Sorel's narrative.” (See Acker, 1981:40)

It would seem that the danger of relying exclusively on a corpus, (as in the case of Acker and, to some extent, of Coates (1983)), lies in the possibility of forcing the researcher to be concerned more with classification and statistical tabulation than with providing a theoretically adequate (and at the same time descriptive) account of modality in the language concerned. This is particularly the case in Acker's (1981), where almost 1/3 of the work is devoted to tabulation and statistical description of the corpus. It must be said, however, that Acker is well

aware of the theoretical limitation of her work, since nowhere does she claim to be providing a comprehensive description of must and have to in general, neither does she claim to have been able to avoid subjectivity, through the use of the corpus (see also Acker, 1981:35), as is frequently claimed by Coates (1983: 3,4, et passim).

2.2.2. Coates' Study

Palmer's (1979) and Coates' (1983) two full-length studies should be given particular attention for at least two reasons : they are qualitatively and quantitatively the most important recent contributions to the study of English modality, and they can therefore be considered the best examples to be (heuristically) partially followed, or partially avoided, in an attempt at investigating modality in a language, like LA, which has not been treated before. As the two studies differ with respect to their techniques, goals, theoretical claims as well as descriptive precision, I shall start with the one that has more to be avoided.

Coates anticipated her (1983) study by criticising Palmer (1979), in Coates (1980), of relegating "his corpus to the status of example-provider"¹⁵, and "failing to cope adequately with the indeterminacy and untidiness which he recognizes" to be essential characteristics of the English modals¹⁶. Palmer's neglect of the corpus, on Coates' view¹⁷, prevents his study from benefiting "from the statistical vigour" and "qualification clarity" of corpus investigation¹⁸. His failing to cope with modal indeterminacy leads him to the unsuccessful attempt of "establishing discrete categorizations" for English modality¹⁹. (I shall defend Palmer later against some of these accusations.)

It can fairly be said that avoiding the above points, which are seen by Coates as Palmer's (1979) shortcomings, can be regarded as Coates' (1983) major contribution to the work on English modality. She adopts a whole-hearted corpus-based approach with a view to "interpret the data [and] not impose some neat, preconceived system upon it."²⁰ She also succeeds in achieving the "statistical vigour" essential to corpus analysis, by supporting her investigation with no less than sixty tables providing statistical information about the distribution, frequency, comparison, etc. of the modals and their various uses. But it must also be said that depending on a corpus, in the above manner, (specially for a study claiming to be investigating the semantics of the modals, as Coates' title unambiguously indicates), has serious defects, of which I shall mention only three. The first is recognized by Coates (1983:2).

First: The corpus is by nature limited. Even with a very large corpus, such as that used by Coates, there are bound to be areas of meaning which are not adequately covered. In trying to overcome this difficulty, the author supplements her corpus with informant tests. A glance at a representative example of these tests would show, however, that they are geared to the corpus machinery, i.e., used to give us more statistical information than insights about the meaning of the modals. The following quotation is a self-contained example :

" In an informant test devised to check the distribution of 'whimperatives', I found that 17.65 per cent of informants chose CAN when asked to supply the missing form for you give this to Pam for me please. (This compares with 49.02 per cent who chose WILL, 21.57 per cent who chose WOULD and 11.76 per cent who chose GOULD.)" (Coates, 1983:99)

Second: Statistical information and quantitative description of a corpus would probably not be directly related to the purpose of a study aiming at investigating the meaning of the modals. This is particularly the case in Coates' (1983) work, where in the Introduction, we are promised that "The use of corpus data meant that all findings could be quantified, with resulting clarity." (Coates, 1983:4); but later on we read : " I shall not ... however attempt to quantify these grades [of meaning], but I will use descriptive terms like 'strong' or 'weak'", (p. 13). Accordingly, the meaning of each modal is descriptively defined as a gradient from a strong point to a weak point, as the following quotation shows :

" Root MUST (gradient from strong 'Obligation' to a much weaker sense of 'Necessity'),

Root WILL (gradient from strong to weak 'Volition'),

Epistemic WILL (gradient from strong 'predictability' to weak 'prediction')." (Coates, 1983:15)

Two points can generally be taken against Coates' so called semantic descriptions. First, she has nowhere defined notions like 'Obligation', 'Volition', 'Predictability' or 'prediction'. Second, her use of vague adjectives like 'strong' or 'weak', (which are, paradoxically, themselves graded, or in her terms 'indeterminate'), to qualify indeterminate notions makes her semantical account confusing.

Third: The most serious mistake, which is likely to be made by a corpus investigation aiming at studying the meaning of the modals, lies in the possibility of overlooking the pragmatic factors influencing, or forming part of, the context of the corpus. In the case of Coates (1983),

such pragmatic factors have been not only overlooked, but are also used as allegedly semantical feature-criteria associated with the different modals. E.g., the following are provided by Coates as the semantic features associated with "Root MUST", i.e., deontic must :

- "(i) Subject is animate.
 - (ii) Main verb is activity verb.
 - (iii) Speaker is interested in getting the subject to perform the action.
 - (iv) Speaker has authority over subject."
- (Coates, 1983:33)

It is fairly obvious that not all of the above quoted features can be related to the semantic structure of deontic must. Features (iii) and (iv) are unambiguously pragmatic features constituting part of the illocutionary characteristics of requestive illocutions. I have also to say that these two features, as they stand, are not well-formulated. This can be illustrated by the following example and its English translation, (with deontic must) :

- 1) al-baabu yagiba ?an yaku;na maftu;yan tula al-waqt.
 the-door modal COMP be open all the-time
 " The door must be open at all times."

It would be true to say that the speaker, above, has authority to express the deontic necessity in (1), but it would not be accurate to say that he "has authority over subject" in the sense that the "subject" is part of the grammatical structure, which is what Coates means by (iv). It also goes without saying that the speaker, in (1), can not be "interested in getting the subject to perform the action", since there is no "action" which can conceivably be required to be performed by the referent of the

grammatical subject of the above example.

Example (1) would also illustrate the point that neither (i) nor (ii) can be, semantically, a necessary feature of deontic must. At best, they can be regarded as necessary conditions for using a must-utterance as an indirect illocutionary act of 'command', (e.g., You must go out.) . Otherwise, the occurrence of the two features can be considered as fortuitous, since their absence in (e.g., Everything must be in order.) would not make it less deontic than (e.g., You must go out.), given the proper contexts for uttering both examples deontically. I shall not go into this question any further at this stage. Questions related to deontic modality will be discussed in detail in a later chapter.

2.2.21. Indeterminacy and Fuzzy Set Theory

Coates, (1983), makes it explicitly clear from the start that 'Indeterminacy' is the basic feature of modality, and that the best "Semantic Model" capable of coping with modal indeterminacy is Zedah's "Fuzzy Sets", (p.11).

The notion of 'indeterminacy' and its importance to investigating the meaning of the modals, (not, more narrowly, the semantics of the modals), has previously been recognized and discussed by Palmer (1979:172-3). It has also been emphasized by Leech & Coates (1980), where it is analysed as constituting three sub-notions: 'gradience', 'ambiguity' and 'merger', (Leech & Coates, 1980:79-90). It is the notion of 'gradience', however, on which Coates' analysis is based; and it is 'gradience' which, as Coates asserts, "calls for a fuzzy model", (Coates, 1983:22). The other two notions, 'ambiguity' and 'merger', are used only occasionally as parameters to show that 'Epistemic' and 'non-Epistemic' exist as distinct categories.

In the following, I shall discuss the notion of 'gradience' in relation to the 'Fuzzy Model' used by Coates (1983). Agreeing with Coates, I will consider that 'gradience', as an element 'indeterminacy', plays an important role in affecting the meanings of the modals, and this is also true of LA modals. But disagreeing with Coates, I shall attempt to show that 'gradience' itself is, in most cases, determined by pragmatic factors and not by semantic features, and it is therefore better accounted for in terms of a pragmatic model of 'use conditions', (e.g., within a theory of 'Intentionality' and Speech Acts, as that developed by Searle, 1983), rather than in terms of a semantic model based on a theory of Fuzzy Sets.

The concept of linguistic gradience can be said to have long been, explicitly or implicitly, associated with what are traditionally called graded qualifiers like tall, large, strong, red, etc., as opposed to non-graded ones like British, alive, animate, etc. The essential difference between these two groups of qualifiers is that, whereas it is possible to define objects qualified by the latter group in terms of class membership, (e.g., a person can precisely be defined as either British or non-British), it is not possible to provide any precise definition, in this sense, for the objects qualified as tall, large, etc. E.g., ten persons different in height can all be described as tall. In this case, each of the ten persons would have a graded degree of tallness, and tall can be considered as a set of continuously graded degrees of membership. This is the version of 'gradience' adopted by Coates, and it is the version of gradience for which the theory of fuzzy sets is adopted as the most suitable semantic model, (I shall show in a moment that this is an unjustified oversimplification of graded qualifiers like tall, strong, etc., which may pragmatically be similar to the modals but not in the sense of Coates).

According to Coates (1983:12), the adjective tall, like the modals, is a fuzzy set (in the above sense), and since "the characteristic function of the set theory" is a gradient from 0 to 1, (Coates, 1983:12), graded degrees of membership can be quantitatively described, (cf. Ibid). E.g., the ten persons just mentioned would, on Coates' account, be assigned degrees like 0.1, 0.2, 0.3, etc.

In dealing with the modals, however, Coates ignores precise set quantification and divides the modal fuzzy set into "core", "skirt" and "periphery", (Ibid.). Thus, the fuzzy set of "Root MUST" has "strong Obligation" as a "core", "weak Obligation" as a "periphery", and the "skirt" part of the set would be considered, negatively, as whatever does not fit into the "core" or the "periphery", (see Coates, 1983:32-3). On this account, the Fuzzy Set is no more than a simple scale of graded degrees of Obligation, both strong and weak Obligation are within the scale, or the set for that matter. But this is not consistent with the author's definition of the Fuzzy Set in general, where the 'periphery' is defined as "a contrast", (or a 'contradiction' I would say), with the 'core', since

"... as core examples are characterized by properties a and b , periphery examples may be characterized by properties not a and not b." (Coates, 1983:13).

The definition just quoted is illustrated by the following "Root CAN" examples (taken from Ibid. : 14-15) :

" I can only type very slowly as I am quite a beginner." (core)

" You can't see him because he's having lunch with a publisher."
(periphery)

In the above argument, we have two different accounts of the 'fuzzy set', neither of which would support Coates' choice of the 'Fuzzy Set Theory' as a necessary semantic model for discussing modal indeterminacy. On the first account, (i.e., with Root MUST), the fuzzy set functions to represent a simple scale of graded degrees of Obligation. Given that the different graded degrees of Obligation, (e.g., strong obligation, weak obligation, etc.), are provided with labels by the author²¹, and assuming that these label-names are descriptively accurate in representing a continuous scale of Obligation, the choice of a Fuzzy Set, as a semantic model, would be an unnecessary complication for at least two reasons. i) a scale of Obligation, (assuming that it is descriptively adequate), can in itself be regarded as a model capable of providing a description of the Obligation-gradience. If this is the case, using the Fuzzy Set as a model would be pointless. It would amount to no more than describing a well-defined model, (the scale), with a less defined one, (the Fuzzy Set). ii) Coates' labelled degrees of Obligation are, quantitatively, more than can be accommodated by a three-term model, e.g., she recognizes five degrees of Obligation, (see note 12), and the Fuzzy Set contains only three terms: core, skirt and periphery.

On the second account, (i.e., which is connected with "Root CAN"), the Fuzzy Set, as described by Coates (1983:13), contains two contradictory members. The 'core' is defined as having the properties (a & b), and the 'periphery' as having the properties (not-a & not-b). It goes without saying that a 'set' containing such contradiction has to be avoided, to say the least, as a model for describing modal gradience.

The confusion arising in connection with Coates' account of "Root CAN" can be attributed to the author's neglect of Negation, e.g., negative

examples are indiscriminately dealt with as part of the affirmative modalized ones. No attempt has been made by Coates to study the effect of negation on modality,. E.g., the following,(quoted above and repeated), are provided by the author ,(1983:14-15), to illustrate two different degrees of what she calls "General Possibility",which is expressed with "Root CAN" :

" I can only type very slowly as I am quite a beginner."

" You can't see him because he's having lunch with a publisher."

It will be seen,(chapter 5), that negation has a serious effect on modality,and that paying close attention to the meaning of negation in modalized utterances would in most cases lead to better understanding of modality itself ²².

I will not discuss the Fuzzy Set Theory,as represented by Coates,any further,since if it is of any use at all it will be used only in case the meaning of a modal can be represented as continuously graded degrees on a scale,which is not realistic,as will be seen immediately by using Coates' example,namely tall,as illustration. I have first to mention that my using gradable adjectives like tall,big,etc. for the purpose of illustrating the argument should not be understood as an explicit or implicit suggestion that gradable adjectives can be handled by a theory of 'Intentionality' or Speech Acts. Gradables will be used only as illustrations.

2.2.3. Relative Gradience

The term 'gradience',as is applied to gradable terms like tall,large, etc.,is misleading in so far as it suggests a continuous scale of values.

A more precise descriptive term would be 'relative gradience', which would be indicative of the fact that the scale of 'tall-ness', 'largeness', etc. varies according to the context of use. E.g., a person may be qualified as tall in one context (e.g., relative to a five-foot tall lady) and not-tall in another (e.g., relative to a community of basketball players). Relative gradience, in this sense is not confined to adjectives. It can be found in nouns and verbs like love and hate, when used in both categories.

What is relevant to the present argument is the point that the 'graded values' of 'gradable terms' are similar to the meanings of the modals in that they are generally a matter of pragmatic considerations. E.g., it is due to our knowledge of the world and to the relevant context of use that we can understand that the property of being 'big' differs in each of the following :

A big mouse. A big boy. A big elephant. Etc.

It is also intuitive, for the above pragmatic reasons, that what is called big relative to one context (e.g., the context of mice) would not be called big relative to another (e.g., the context of elephants). The 'gradient nature' of the meaning of a modal is more or less similar to the relative values of a gradable adjective like big, i.e., it is determined by pragmatic factors to be found in the context of use, as will be seen in a moment.

2.2.31. Modal (relative) Gradience

Modal gradience is best regarded as relative, in the above sense. An LA modal like ygib, "must", can be assumed to be expressing a continuous scale of NECESSITY, which varies according to the context of use and

ranges from ,say, 'belief-based necessity' ,(Coates' 'Weak Obligation), to 'Command' ,(Coates' 'Performative')²³. 'Belief-based necessity' , 'Command', etc. are to be regarded only as convenient labels which acquire their meaning-values through their association with different sets of speaker-based 'felicity conditions'²⁴. To briefly illustrate, consider an example like (2) in relation to (3) and (4) below . Notice that (3) represents the pragmatic explanatory value of the context of use according to which (2) would be interpreted, and (4) gives merely the semantico-pragmatic label for the use of the modal in a given context:

2) yagiba ?an taxruga .
 modal COMP you-go out
 " You must go out."

3) Felicity Condition of (2)

- a) The speaker believes that p is necessary, and intends to inform the addressee of that belief.²⁵
- b) The speaker desires that p is necessary, and intends to inform the addressee of that desire.
- c) Depending on the addressee's conversational co-operation the speaker uses (3 b) to express an indirect illocutionary act of Command.

4) Sem-Prag. meaning of (2)

- a) Belief-based necessity
- b) Deontic necessity
- c) Command

In order for us to know what is intended by (2), we have to depend on information derived from what the speaker assumes, believes, etc. at the time of utterance. Such information is normally revealed in the context of use, (e.g., by means of stage directions or directly accessible to

the addressee). On this account, (2) would be interpreted as (4a, b or c) given the contexts (3a, b or c) respectively.

The felicity conditions just mentioned are intended to be illustrative and not exhaustive. I have not mentioned, e.g., the source of the speaker's belief or desire, his assumptions about his addressee, etc. These will be discussed in detail later. What is relevant to this argument is that the proposal suggested, (i.e., using the speaker's Intentionality in terms of felicity conditions to provide a pragmatic account of the various modal meanings), would be useful to answer some difficult questions related to modality and the modals. Most important among these questions are :

- i) Whether it is possible to postulate a basic meaning for each modal.
- ii) Whether it is theoretically valid to assume modal categorizations, (e.g., 'Epistemic Necessity', 'Deontic Necessity', etc.).

These questions, as Coates (1983:9) rightly points out, seem to have divided linguists into two different camps : those who assume 'basic meaning' and try to investigate it through 'a matrix model', 'a componential model', etc. ,(see section 2.2., table (2.2.)), and those who dissociate themselves from the existence of basic meaning and try to deal with different modal categories "assumed to be discrete", (see Coates, 1983:9-10, for expressing a similar view).

On the view adopted in this study, (as illustrated by (3) and (4) in relation to (2) above), there would not be a conflict or inconsistency if the two (i.e., semantic and pragmatic) approaches are adopted to provide a joint account of modality. E.g., an LA modal like yagib (as demonstrated above) can be said to have a basic (semantical) meaning, namely NECESSITY, and then the different categorizations of

NECESSITY,(e.g., epistemic necessity, deontic necessity,etc.), would pragmatically be accounted for according to the context of use. Another advantage of the present proposal is the possibility of formalizing the 'felicity conditions' with a limited number of predicates like BELIEVE, DESIRE, etc.(see chapter 3).

2.2.4. Palmer's use of corpus and his theoretical categorizations

I have to mention Palmer (specially 1979a) for two points bearing on the present study,the two points indicated by the sub-title above.

2.2.41. Exemplificatory use of corpus

Palmer's position with respect to his corpus data (The Survey of English,University College, London) is made clear from the start :

" ... this is not a textual study. I am not concerned with characterizing the uses of the modals in terms of the different styles etc. that are found in the Survey,or with giving statistical information about the uses of the modals. The Survey is used for heuristic and exemplificatory purposes only." (Palmer,1979a:21).

By his conscientious use of live data obtained from an actual corpus, Palmer has been able to confer on his essentially theoretical analysis of English modality a high degree of empirical integrity and a wide range of 'non-language specific' application,(see also Givon,1981:379-80,who,for different reasons,holds similar view). This can strongly be contrasted with the studies of Coates (1983) and Acker (1981) which , due to their being strictly corpus-bound and their concern with 'textual' analysis and statistical information,can be regarded as 'research reports' of their respective corpora. The present study follows Palmer's example in this respect , i.e., in depending on the corpus only to the extent to which it can provide exemplificatory guidance without prevent-

ing the researcher from investigating the same corpus-examples in different (non-corpus) environments,(e.g., when modified for negation, tense,interrogation,etc.). It has become clear,from Palmer's study , that negation,tense,etc. tend to interact intensively with,and affect, modal meaning; and that the filtering of the modal meanings through such grammatical environments would provide us with the wider domain within which the modals operate. It would also enrich the range of the data covered by the corpus,(see also Givon,1981:380). It might be useful to compare Palmer's treatment of these topics with that of Coates' (1983),where only five pages (starting from p. 237) are devoted to negation,tense and interrogation,(see also note 22).

2.2.42. Modal Categorizations

Palmer's basic categories of modality are simple and clear. He recognizes two kinds of modality,(Necessity and Possibility),with three degrees for each kind,(i.e., Epistemic, Dynamic and Deontic). This categorization derives from Von Wright's five modalities or modes,(Alethic,Epistemic,Deontic,Existential and Dynamic)²⁶,which are modified and re-defined to suit the actual use of Necessity and Possibility in natural language.

What is interesting about Palmer's modal categorizations lies not in the way they are derived,(since the writer is well aware that logical notions are not suited to actual language usage,see Palmer,1979:2),but in the way they are defined,i.e., they are defined not in semantic but in pragmatic terms. The following quotations,(A) through (C),provide a strong contrast to, and deviation from , Palemr's opening sentence which reads : "The title of this book is designed to indicate that it

will be concerned with the semantic concept of modality ...", (p.1, emphasis added) :

- A) " With Deontic Modality, the speaker performatively creates the possibility or necessity for the coming into reality of [a] conceptual state of affairs." (p. 39. Emphasis added)

The illocutionary implication of modality is also explicitly recognized in connection with 'Epistemic Modality' :

- B) " The clearest evidence of the subjective ('performative') nature of epistemic modality is the fact that the relevant modals occur only in the present tense, for judgement and the act of speaking are simultaneous and so can only be present." (p. 42. Brackets in the original and emphasis added)

'Dynamic Modality', however, is only implicitly explained on the above lines, since it is the modality, and not the speaker, which

- C) " suggests that there are circumstances in the real world which make possible or necessary the coming into reality of this conceptual state of affairs." (p. 39)

Consistency calls for assuming that the grammatical subject of "suggests", in the quotation just mentioned, (C), has to be the speaker, and that the verb itself has to be interpreted as indicating an illocutionary act of 'suggesting'. This will be in keeping with (A) and (B), and Palmer's overall pattern would be illocutionarily formulated as follows, (where SA stands for 'state of affairs' and S for the speaker):

- A') Deontic Modality: In the act of speaking, S creates the necessity/ possibility of SA.
- B') Epistemic Modality : In the act of speaking, S judges the necessity/ possibility of SA.

C') Dynamic Modality: In the act of speaking, S suggests the necessity/ possibility of SA.

It should be mentioned that Palmer's general, but suggestive, descriptions of modality, as quoted above, have not been made use of in the course of his book. It is only in connection with Deontic Modality that the term 'performative' is frequently mentioned as equivalent to, or indicating, 'Deontic' .

I have mentioned Palmer's informal descriptions of his modal categories only to show that modal categorization can be achieved, to some reasonable degree, only on pragmatic basis. This may be attributed not to any semantic apparatus available but to the nature of modality which involves the speaker and his attitude towards what he is saying relative to a potential context. The difficulties facing semantic approaches to modality have always been recognized and found baffling. This point is well expressed by Palmer in saying : "It is not at all clear how, precisely, modality should be described in semantic terms." (Palmer, 1979:1).

I have found that a great deal of difficulties with modality are traceable to pragmatic sources. This is the main reason why the present study is intended to provide a pragmatic speaker-based account of modality, with a special emphasis on data taken from LA.

2.3. A Theoretical Framework

This section will attempt to provide some working definitions and illustrative explanations of four interdependent key topics forming the theoretical framework upon which the analytic chapters of this work, (3-7), will be based. The four topics are i) Meaning , ii) Intentionality as central to Speech Acts, iii) Speech Acts and the Informative Hypothesis



and iv) The meanings of the modals as a sub-set of IFIDs.

2.3.1. Meaning

Following and elaborating on ideas put forward by Bierwisch (1980) , Grice (1978) and Searle (1979 & 1983), I consider that a meaningful utterance has a total signification divisible into a) Sense meaning, b) Referential meaning²⁷ and c) 'Intentional' meaning, as will be explained and clarified in relation to Searle's (1983) theory of Intentionality. I will be particularly concerned with the 'Intentional meaning', the other two kinds of meaning will be briefly discussed to establish a kind of relatedness between the three meanings. I would like also to mention that these three kinds of meaning, as will be explained, may roughly correspond to Halliday's (1973 & 1980) three functions of language, (i.e., ideational function, thematic function and interpersonal function, respectively).

2.3.11. Sense Meaning

The sense meaning of an utterance is that kind of meaning which depends for its interpretation on the lexicon and the grammatical structure of a specific language, i.e., on information derivable entirely from the semantical, syntactical, morphological and phonological sources of the language in which the utterance is produced²⁸. Consider the following example from LA :

5) ?anta mişryi .
 you Egyptian
 " You are Egyptian ."

The native understanding of (5) depends on information about the lexical

meaning of misryi in LA, in addition to some morpho-syntactical information -not available in English- about ?anta . E.g., assuming that (5) can be represented as (6) :

6) misryi (a) .

The semantical structure, (see note 28), of (5), i.e., (6), would give us the following information :

- A) Lexical Information : misryi is a one-place predicate denoting the set of Egyptian persons.
- B) Morpho-syntactical information : i) a is masculine, (as opposed to feminine, which would have been expressed as ?anti). ii) a is singular, (as opposed to plural or dual, which would have been expressed as ?antum and ?antuma, respectively).

Given (A) and (B), the sense meaning of (5) which derives compositionally from the lexical and grammatical information of LA would be something like (6'):

6') \exists a : MASCULINE (a) & SINGULAR (a) & EGYPTIAN (a) .

The semantical structure, however, does not give us information as to the referentiality of (5), for which is needed a referential context, which would be mapped into a different but related level of meaning, i.e., the referential meaning .

2.3.12. Referential Meaning

On the view that referring expressions like ?anta, "SING., MAS. you", do not in themselves refer, but are used by speakers to refer²⁹, the sort of information needed to determine the referential meaning of (5),

i.e., its truth value, cannot be obtained from the semantical structure of (5), but is obtainable by the users of the language from the referential context. This context can be assumed to be accessible to the addressee and other on-lookers in the speech situation and can be provided as stage directions in the written texts.

I shall not go into the question whether 'sense meaning' and 'referential meaning' are to be regarded as part of the domain of linguistic semantics, or whether they constitute two different domains for linguistic semantics and possible-world semantics, respectively. But I take the view that both 'sense meaning' and 'referential meaning' constitute the 'literal meaning' of sentences uttered in natural language, and that both 'meanings' have to be considered by any semantic model aiming at providing a reasonable account of literal meaning in natural language.

2.3.13. Intentional Meaning

By 'Intentional Meaning' I mean the kind of meaning 'Intended' by a speaker producing an utterance, but only to the extent to which that 'Intended' meaning in the utterance is marked by one of the 'conventional' usages of a specific language³⁰. (I shall use 'Intentional', 'Intended', etc., initially capitalized, in the technical sense used by Searle (1983), i.e., as part of 'Intentionality', as will be explained in the following section). The definition provided above is intended³¹ to exclude what Grice (1969) calls the speaker's intended meaning-nn, i.e., the sort of meaning non-naturally intended by the speaker, since Grice's "meaning-nn" derives from the speech situation and not from the conventional linguistic usages .

Natural languages have available varied sets of expressions, (e.g., words like even, but and the modals), which are used to express what I call 'Intentional meaning'. These expressions may, or may not, affect the truth value of the propositional content of the utterance, but they certainly affect the 'conditions of satisfaction' of the utterance as an illocutionary act. E.g., consider (8) and (9), compared to (7) :

7) ?anta kaslaan .
you lazy

" You are lazy ."

8) hatta ?anta kaslaan .

" Even you are lazy ."

9) labudda ?anna-ka kaslaan .
modal COMP-you lazy

"You must be lazy ." (Epistemic must)

As is used in (8), hatta, "even", does not seem to affect the truth value of the proposition, (you are lazy), which would be true or false whether or not hatta is used. In this sense (7) and (8) would semantically, i.e., truth functionally, be equivalent. But seen from a 'conditions of satisfaction' point of view, (as explained by Searle(1983) and to be discussed in detail later), example (8) would differ considerably from (7). The conditions of satisfaction of the former, as an assertive illocution, and due to the Intentional speaker-based meaning implied by hatta, would be met iff :

- i) The speaker believes that there are other people ,in addition to the addressee, who are lazy .

- ii) The state of affairs described, i.e., the addressee's being lazy, has not been expected by the speaker to be the case.
- iii) The addressee is made to recognize or at least is assumed to be able to recognize, (through the utterance of (8)), the speaker's intention of conveying (i) and (ii).

The Intentional meaning, as presented here in terms of the speaker's belief, expectation, intention, etc., is not to be confused with Grice's (1975) 'conventional implicature'. The latter is normally studied in connection with propositions and their truth conditions, e.g., it is the kind of meaning which does not affect the truth conditions with which it is expressed³², whereas the former is intended to be related to illocutionary acts and their conditions of satisfaction. The two kinds of meaning may overlap in the case of expressions like even, but and other expressions mentioned in Levinson (1983:128), but in the case of the modals they are quite distinct, since the Intentional meaning of the modals, in most cases, affects the truth conditions of the propositions it qualifies. I shall not however be particularly concerned with truth conditions. Example (9), repeated below, may provide an illustration for this point :

9) labudda ?anna-ka kaslaan .

"You must be lazy ."

The use of labudda, "must", in (9) implies the speaker's Intention that the propositional content, (you are lazy), is to be regarded as a judgement or conclusion based on some inferential evidence, which is sufficient for that judgement or conclusion. Another element of the Intentional meaning of labudda, above, is that the evidential com-

ponent is assumed to be recognizable by the addressee at the time of utterance, (e.g., it may be understood from the discourse of (9) that the addressee has not done some work which he ought to have done). On this view, epistemic necessity sentences like (9) are best analysed as elliptical versions of conditional structures like (10), where the if-part of the structure is normally deleted³³. Accordingly, the full content of (9) would be something like (11) :

10) If q, then p must be the case.

11) If you haven't done your work, then you must be lazy.

An attempt will be made later to formalize the Intentional meaning of LA modals.

What has to be clear at this point is that this study takes as its basic concern the Intentional meaning without claiming that such meaning can exist independently from the other two kinds of meaning, i.e., sense meaning and referential meaning. Notice that the three kinds of meaning are related to each other in a roughly similar way, i.e., informally speaking, 'sense meaning' comes first, 'referential meaning' determines the truth value of what already has 'sense', and 'Intentional meaning' determines the conditions of satisfaction of what already has 'referentiality'. E.g., in example (9), there is no way of determining the referentiality or truth condition of what is said without first understanding the sense-relations between the different parts of the utterance and their mode of combination. In a roughly similar way, determining the Intentional meaning of the same utterance would be based on its 'referential meaning' plus some inform-

ation about the speaker's belief, intention, etc. at the time of uttering (9).

2.3.2. 'Intentionality' and Speech Act Theory (SAT, hereafter)

SAT has undergone a considerable modification and refinement since it was launched by Austin in (Austin, 1962). It is due to Searle (1969, 1975 and 1979), however, that the Theory has become standardized and has aroused a widespread interest among various disciplines concerned with language³⁴. As the present section is concerned not so much with SAT as a whole, as with some of its developments which are likely to provide modality with a better chance of being analysed and understood, and as most of these 'developments' have become more refined and have acquired more explanatory power in Searle's most recent publication, Intentionality (1983), I will discuss the points of SAT which are relevant to the present study, through Searle's Theory of Intentionality, of which SAT is intended by Searle to be a sub-theory³⁵.

2.3.2.1. Searle's Theory of Intentionality

In so far as Speech Act Theory, SAT, is concerned, Searle's Theory of Intentionality is based on the following assumptions :

- 1) " There are five and only five basic categories of illocutionary act", and these five categories correspond to the way we use language, (p. 166) :
 - i. assertives, where we tell our hearers how things are;
 - ii. directives, where we try to get them to do things;
 - iii. commissives, where we commit ourselves to doing things;

iv. declarations, where we bring about changes in the world with our utterances; and

v. expressives, where we express our feelings and attitudes.

2) The way that "language represents the world is an extension and realization of the way the mind (in terms of Intentional states) represents the world". (Ibid.)

3) It follows from (2) that "the Intentionality of the mind not only creates the possibility of meaning, but it limits its forms." (Ibid.)

So what does Searle mean by "Intentionality" or "Intentional" ?

2.3.22. Intentionality as a complex of psychological states

Searle defines 'Intentionality' as a "property of mental states and events by which they are directed at or about or of objects and states of affairs in the world." (Searle, 1983:1. Emphasis added). Most prominent among these "mental states", and closely related to speech acts, are 'belief', 'desire' and 'intention'³⁶, other mental states such as 'hope', 'fear', 'expect', etc. are analysable in terms 'belief' and 'desire', (see note 36).

It should be understood that Searle's Intentionality is a general Theory of actions, of which speech acts are only one kind. The purpose of the Theory is to explicate the way mental states such as belief, desire, etc. are externalized in physical actions in general. E.g., if I have a desire for the door to be opened, which is a mental state, I may either open the door myself, (a physical action), or request someone to open the door, (an illocutionary act). In both cases, my actions would count as externalizing my mental state, i.e., my desire

for the door to be opened.

2.3.23. Sincerity Conditions³⁷ and Mental States

Within the framework of Searle's Intentionality, 'Sincerity Conditions' can be regarded as a sub-set of mental states specifically connected with illocutionary acts, which are, in turn, a sub-set of actions in general. Accordingly, (12 b) has to be regarded as a physical externalization of (12 a). (I shall follow the notational convention of underlining the content of sincerity conditions) :

12) a) Sincerity Condition : S desires for the door to be opened

b) Request by S to Ad : " Would you please open the door ?"

This is equally applicable to other illocutionary types, as can be illustrated by the following, where (b) is an externalization of (a) :

13) a) Sincerity Condition : S has intention to give Ad £5

b) Promise by S to Ad : " I will give you £5 ."

14) a) Sincerity Condition : S has a belief that the door is open

b) Assertion by S to Ad: " The door is open ."

Examples (12) through (14) represent the illocutionary types of Requestives, Commissives and Assertives, respectively.

If illocutionary acts are to be regarded as physical externalizations of sincerity conditions, as demonstrated above, it naturally follows that sincerity conditions, (e.g., belief that p, desire p, etc.), have to exist prior to and independently from illocutionary acts³⁸. This point

can be supported by the fact that I may have sincerity conditions, (i.e., mental states), identical to those shown in (12) through (14) without trying to externalize them in terms of illocutionary acts . E.g., my desire for the door to be opened may be kept for any length of time as an unfulfilled mental state. In other words, sincerity conditions are necessary but not sufficient conditions for the performance of illocutionary acts, for which Searle postulates another level of Intentionality, i.e., 'intention-in-action', which will be discussed in a moment.

Before discussing the relationship between Searle's two levels of Intentionality : (sincerity condition and intention-in-action), I would like to mention, by way of summing up, that the following are the characteristic features of sincerity conditions, as presented in Searle's work (1983) :

- 15)a) Sincerity conditions are mental states which exist prior to, and independently from, illocutionary acts.
- b) Illocutionary acts are externalizations of sincerity conditions.
- c) It follows from (a) that sincerity conditions may, or may not, be externalized as illocutionary acts.
- d) It follows from (a) and (c) that a sincerity condition, (e.g., having a desire for p), would have its conditions of satisfaction whether or not it is externalized as an illocutionary act.
- e) When a sincerity condition is externalized, "the conditions of satisfaction of the [illocutionary] act and the conditions of satisfaction of [its] sincerity condition are identical."⁴⁰

The five points just mentioned will be more clarified in the following sub-section.

2.3.24. Sincerity Condition and 'intention-in-action'

It has been seen that the existence of a sincerity condition, (e.g., my desire to go to a party for someone's interest), would not guarantee the performance of an illocutionary act, e.g., Promise; since the conditions of satisfaction of my intention can be met (e.g., by my going to the party) irrespective of whether or not my intention is externalized in a Promise.

To solve this problem, Searle postulates another level of Intentionality and calls it "intention-in-action", (Searle, 1983:79-94). This would roughly correspond to Grice's (1969) and Strawson's (1971) notion of "complex intention"⁴¹. Searle's intention-in-action functions to :

- i) cause the performance of the illocutionary act, as an expression of the sincerity condition, i.e., the speaker's mental state of having a belief that p, having a desire for p, etc.
- ii) and by means of (i), it imposes on the illocutionary act the conditions of satisfaction of the respective sincerity condition.
- iii) By (i) and (ii), the intention-in-action confers on the illocutionary act, (which is essentially a physical act similar, e.g., to 'raising a hand' as a communicative signal), the meaning that it intentionally has.

Searle's argument of (iii) is not convincing, or at least less applicable to illocutionary acts than it is to physical actions in general.

He rightly argues that a sincerity condition,(e.g., a belief that p), cannot have meaning, but it can be fulfilled,(e.g., if it is true). But a physical act representing this sincerity condition has Intentional meaning, and its meaning would include the belief that p. That is fairly plausible. The question arises, however, with respect to whether the meaning acquired by the physical act,(specially when it is an illocutionary act), is conferred by the intention-in-action or by the 'conventions' of the language concerned (see note 2). I take the view that the Intentional meaning of illocutionary acts is conferred on them by the conventional usages in natural language, and that the 'meaning-conferring function' of Searle's intention-in-action should be restricted to what Grice (1969) calls 'meaning-nn'.(See 2.3.13.)

What is needed for Searle's intention-in-action to cope with the communication complexity is,(in addition to (i) and (ii)), an informative function, as that set out by Strawson,(see note 41). Thus if I have a belief that Sadat was an honest man, this would be simply a sincerity condition, i.e., a mental state, which in order for it to be expressed I must have, in addition, an intention-in-action whose task is to externalize my belief and, simultaneously, inform someone of that belief. The 'informative function', mentioned above, will be discussed in detail later, in connection with Clark & Carlson's (1982) 'Informative Hypothesis' and Strawson's (1971) 'Complex intention'.

To conclude, in the performance of an illocutionary act, we have to recognize "a double level of Intentionality": "a level of the psychological state expressed in the performance of the act [sincerity condition] and a level of the intention with which the act is performed [intention-in-action]" . (Searle, 1983:164)

2.3.25. The Direction of fit condition

According to Searle,(1979 & 1983), the notion of 'direction of fit' is essential to both Intentionality and Speech Acts. A belief, as a sincerity condition, is said to have a mind-to-world direction of fit. This is to be contrasted with desire and intention which have a world-to-mind direction of fit.

The content of my belief,(e.g., that Sadat was an honest man), has to match an independently existing state of affairs in the world,(e.g., that Sadat was an honest man). "It is the responsibility of my belief, so to speak, to match the world." (Searle,1983:8). It follows that the belief would be satisfied iff its content matches the world or iff the world matches its content. Hence the 'mind-to-world direction of fit' conditions on belief .

The case is reversed with desire and intention ,as sincerity conditions . My desire ,(e.g., that you lend me a book), will be satisfied iff there occurs some change in the world,e.g., by your lending me that book. Hence the 'world-to-mind direction of fit' conditions on desire and intention .

On the view that illocutionary acts are representations of sincerity conditions,it follows that every illocutionary act would have a direction of fit identical to that of its respective sincerity condition . Thus, an assertion which is based on belief would have a word-to-world direction of fit corresponding to the mind-to-world direction of fit. Directives and Commissives would have world-to-word direction of fit corresponding,in a similar way, to that of desire and intention .

It has to be mentioned,however,that for the purpose of this study, no need arises for analysing the direction of fit condition of the

different modal meanings, since they are based on either the speaker's belief ,(e.g., non-deontic modality), or his desire, (e.g., deontic modality). It would be enough for our purpose to analyse the speaker's sincerity condition, (i.e., belief or desire), and its content; and the direction of fit would be understood as explained above in connection with belief and desire.

2.3.26. Preparatory Conditions/ S's assumptions about S's participants

The task assigned by Searle to the Preparatory Conditions, in (Searle, 1969), is not precisely defined. And his detailed discussion of what he calls "the speaker's background assumption", under the heading of "Literal Meaning" (1979:117-31) and "The Background of Meaning" (1980), is too general to be considered as an explanation of what the (Searle, 1969) notion of 'Preparatory Condition' stands for. This lack of precision in defining the illocutionary function of this notion makes it sometimes overlap with what would be understood as 'Sincerity Condition'. This is particularly the case with the assertive illocutionary types, whose Preparatory and Sincerity Conditions are defined, in (Searle, 1969:66-7), as follows :

<u>Preparatory Conditions</u>	<u>Sincerity Condition</u>
" 1. S has evidence (reason, etc.) for the truth of p .	" S believes p ."
2. It is not obvious to both S and H that H knows p . "	

On the assumption that Searle's Sincerity Condition, above, means 'S believes that p is true.', it would be difficult to differentiate

between the first preparatory condition and the sincerity condition. I.e., saying that "S has evidence (reason, etc.) for the truth of p." seems to me a different way of saying that "S believes that p is true .".

In his most recent work, (1983), Searle defines and discusses at length the notion of 'Sincerity Condition' within his Theory of Intentionality, (see section 2.2.22.), and does not discuss the 'Preparatory Conditions' either in general or in relation to the 'Sincerity Condition'. For the purpose of this study, I shall provide a brief account of how Searle's (1969) Preparatory Conditions can be modified so as to be illocutionarily functional within the present framework.

In so far as this study is concerned, a preparatory condition can be informally defined as a set of speaker's assumptions about the other participants' beliefs concerning what he is speaking about at the time of utterance. Accordingly, the task of the preparatory condition would be to explain what the speaker must assume about the beliefs of his addressee and/or other participants in order for his illocutionary act to be felicitous. This rules out Searle's first preparatory condition, quoted above, since it is concerned with the speaker's belief about the propositional content and not about the addressee or other participants. Recall that the expression of the propositional content in an illocutionary act is (according to Searle's Theory of Intentionality) an externalization of the speaker's sincerity condition, and it needn't therefore be part of the preparatory condition.

The second part of Searle's preparatory condition on assertions, repeated below, has to be both simplified, (by deleting the underlined words, below), and extended (to include some relevant elements overlooked in Searle's formulation) :

" 2. It is not obvious to both S and H that H knows p ."

The underlined words in this quotation seem to pose unnecessary complication for a speaker-based analysis, since there is no possible way of the speaker's knowing that 'it is not obvious to H that H does not know p.'. E.g., if I have a belief that John is coming and an intention-in-action to tell you, informatively, about my belief, I will have only to assume that 'You do not know, or are not aware of, the fact that John is coming'; it will not be necessary for me to assume, as a preparatory condition, that 'You are aware of the fact that you do not know that John is coming' .

What is relevant, though overlooked in Searle's formulation, is that there has to be at least one element in p which should be assumed by S to be known to H, otherwise the illocutionary act would be infelicitous. E.g., in order for a simple assertion like (John is coming) to be felicitous, the speaker must assume that his addressee knows John . Assuming that $p = q+p'$, where q stands for whatever has to be assumed to be known to H, the following would be the preparatory condition on simple assertions :

" S assumes that H knows q and S assumes that H does not know p ."

For expository convenience, a distinction has to be made between sincerity condition and preparatory condition, since assuming is a kind

of believing , and in my formal account (the following chapter) BELIEVE will be used in both cases.

A sincerity condition, SC, is a belief which may be externalized in an illocutionary act, given an intention-in-action, (2.2.24), i.e., it is a necessary but not sufficient condition for the performance of an illocutionary act. E.g., I may have a belief that John is coming and not tell anybody.

A preparatory condition, PC, on the other hand, is a belief about other participants' beliefs concerning what is spoken about . The emphasized part is to indicate that PC is more illocutionarily oriented than SC . I.e., it is a belief about how much of what is spoken about is believed by/known to the addressee ,(as opposed to a belief about a state of affairs in the world, which is SC). It would follow that PC is a necessary but not sufficient condition for the performance of an illocutionary act. E.g., in order for me to produce the simple illocution, (John is coming), I must believe that John is known to the addressee, otherwise my assertion would not be felicitous. But my having the simple belief that John is known to my addressee would not in itself, (i.e., in the absence of SC), be sufficient to produce the same illocutionary act.

It has to be pointed out that my analysis of the preparatory condition, in the analytic parts of this study, will not be exhaustive but sufficient to provide a reasonable account of the modal meanings under consideration . I will ignore, e.g., the existential component of PC (e.g., H knows that John exists) unless it is essential to the argument. I have also to say that in my informal account of PC, I shall use the lexical verb assume and its derived noun assumption with the understanding that they stand for believe and belief of PC, respectively.

2.3.3. Illocutionary Acts and the Informative Hypothesis

2.3.31. Searle's formulation of Illocutionary Acts

According to Searle (1983), for a person to perform an assertive illocutionary act is for him to have (i) and (ii) prior to performing the act, with (iii) as the purpose of (ii) :

- i) A sincerity condition, belief, with a mind-to-world direction of fit.
- ii) An intention-in-action to cause the performance of the illocution as an externalization of (i), and to indicate (iii) as the purpose of the illocutionary act.
- iii) An illocutionary point condition counting as informing the hearer of (i) by means of performing the assertive act.

The same formulation would equally apply to 'Directives' and 'Commissives' with minor modifications of (i) and (iii)⁴². The modifications needed for the latter two illocutionary types are (i') and (iii') , respectively :

- i') A sincerity condition, desire/intention, with a world-to-mind direction of fit.
- iii') An illocutionary point counting as an attempt to get the hearer(s) to do a future action/a commitment by the speaker to do a future action in the interest of the hearer(s).

2.3.32. Difficult cases for Searle's formulation of speech acts

It has been noticed by Clark & Carlson (1982) that Searle's formulation of speech acts needs some modification in order for it to be able to

cope with examples like (16), below. This observation seems to hold even after the introduction of Intentionality in (Searle, 1983).

16) A father, to his wife, in front of his daughter, about a son who is not around :

yumkina ?an yaxruga .
modal COMP he-go-out

" He may go out ." (Permission may)

On Searle's account, example like (16) may well be described as a directive illocutionary act with a world-to-word direction of fit, since it is based on the speaker's desire for not preventing someone from doing some future action. Beyond that we can not go any further, for even if we assume that PERMIT is a primitive there would be only two equally unacceptable ways of formulating the illocutionary point condition of (16), namely :

- A) The illocutionary point of (16) counts as 'permitting' the hearer(s) to do some future action.
- B) The illocutionary point of (16) counts as 'permitting' the complement-agent to do some future action.

According to (A), the permission is given to the hearers, (i.e., wife and daughter), which is in keeping with Searle's (iii'), but which does not describe the facts of (16). (B) is also inadequate, in spite of the fact that it assigns 'permission-granting' to the right person, it ignores the existence of the 'Hearer' as an essential element of Searle's formulation of directive illocutionary acts.

To overcome this difficulty, I introduce (following Clark & Carlson, 1982) two minor but necessary modification to Searle's analysis⁴³ :

a) a more realistic definition of the participant roles in the speech act, to replace Searle's simple speaker-hearer dichotomy; and b) some machinery by means of which the speaker, in the performance of his illocution, assigns different roles to different participants.

2.3.33. Participant Roles in a Speech Act

I have first to emphasize that the kinds of speech act with which I am particularly concerned are basically addressee-directed for communicative purposes; this is a deviation from Searle, (see note 39). It would follow that for every speech act, (and even in the extreme cases of internal monologue, which have no place in Searle's analysis), the role of the addressee would be as essential as that of the speaker. E.g., if I tell myself (internally without producing any sound) :

- 17) yagiba ?an ?axrugu al-?aan .
 modal COMP I-go out now
 " I must go out now."

I have thereby performed an illocutionary act with a world-to-word direction of fit, with an illocutionary point counting as an attempt to get myself (the addressee) to do some future action. Further, there has to be some change in the world (e.g., by my going out) in order for the satisfaction conditions of (17) to be met.

Consider also example (16), repeated below, where the role of the agent, who is not part of the set of hearers, affects the illocution in two ways :

- 16) A father, to his wife, in front of his daughter, about a son who is not around :
 yumkina ?an yaxruga .
 " He may go out ."

First: the satisfaction conditions of (16) rest with the agent and not the addressee, i.e., it is up to the agent to bring about the change in the world required for satisfying the illocutionary act. Second ; and more important : as a preparatory condition on the act of 'permission-granting', the speaker must assume that the change in the world required is not -among other things- against the agent's interest . E.g., if the speaker knows that the future action concerned is something that the agent (his son) dislikes, (16) would be inappropriate, as an act of giving permission.

Given the above argument, I consider ,as participants in the speech act, all those intended by the speaker to be affected by or affecting his illocutionary act. And I assume that when a speaker designs his illocutionary act, in terms of a 'double level Intentionality', he assigns different roles to different participants, and then decides - in an intention-in-action sort of way - to perform his illocution on the basis of what he assumes, believes and supposes that his participants, in their respective roles, assume and suppose ⁴⁴.

For the purpose of the present study, the following participant roles have to be distinctively identified for every addressee-directed illocutionary act :

- 1) Speaker, S : (the agent of the illocutionary act)
- 2) Hearer(s), H : (the set of persons intended by S to take part in the illocutionary act)
- 3) Addressee(s), Ad: (a certain sub-set of H whom S intends to take the additional role of addressee)
- 4) Agent, A : (the set of persons whom S - of an illocutionary act with a world-to-word dorection of fit - intends to bring about a change in the world for the satisfaction conditions of the illocutionary act)

There are two points to be clarified with respect to the participant roles, just mentioned. i) The role of the agent, A, is not essential for an illocutionary act with a word-to-world direction of fit, (e.g., an assertion like "John is at home."). The agent of an asserted statement does not take part in the assertive illocution, whose propositional content has to be believed to be independently existing in the world prior to the performance of the illocutionary act. ii) No claim is made that there is a necessity for assigning one role per person, in fact, it is possible for the four roles to be assigned to the same person, e.g., example (17), repeated below :

17) yagiba ?an ?axrugu .
" I must go out ."

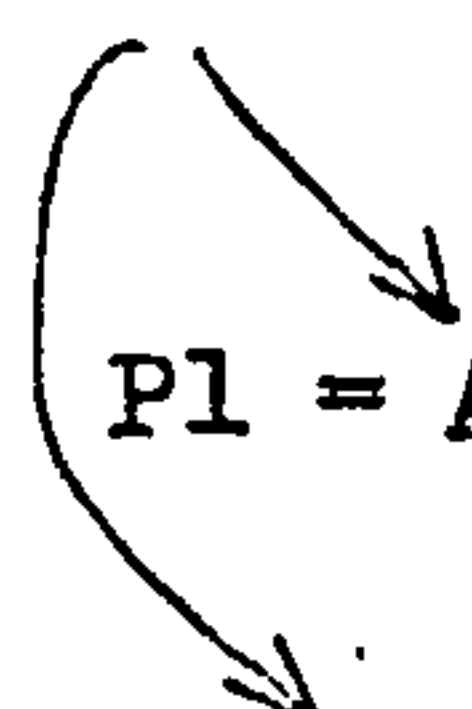
2.3.34. The Informative Hypothesis

The second modification is introduced by Clark & Carlson (1982), (C&C, henceforth), who consider the 'Informative Hypothesis' as a "fundamental extension to Searle's standard theory of speech acts", (C&C: 333). On their view "all addressee-directed illocutionary acts are performed by means of informatives." (Ibid.). The 'Informative' is defined as " a logically-prior illocutionary act that is directed at participants", (C&C: 371). As the authors point out, the introduction of the Informative is particularly useful in dealing with indirect illocutionary acts like (18), (from C&C : 336), where the requestee is not identical with the addressee of the assertive illocution :

18) *Ann, to Charles, in front of Barbara : Charles, I insist
that Barbara tell you who we met at the museum."

The relation between the different participants, in their assigned roles, as well as that between the 'Informative' and the illocutionary acts performed through it can be shown by diagramming (18) as (19), (where INFORM is a three-place predicate, with one or more illocution(s) as its third argument, and the single arrow reads 'by means of') :

19) INFORM (Ann, Charles & Barbara, P1 & P2)

 P1 = ASSERT (Ann, Charles, 'Barbara tell Charles about p')

P2 = REQUEST (Ann, Barbara, 'Barbara tell Charles about p')

What diagram (19) says is that Charles and Barbara are informed, collectively, by Ann of P1 and P2 ; and simultaneously i) an assertion is made to Charles that Barbara should tell him about p , and ii) Barbara is requested to tell Charles about p .

It has been observed that C&C's Informative Hypothesis is very useful to account for the pragmatic complexity of the illocutionary acts of 'permission-granting' and 'Obligation' in which permission or obligation are frequently (at least in LA) given to/laid upon persons other than the addressee, e.g., (20) and (21) :

20) yumkina ?an yaxruga .
modal COMP he-go out

" He may go out ." (deontic may)

21) yagiba ?an yaxruga .
modal COMP he-go out

" He must go out ." (deontic must)

2.3.35. The 'Informative' as a complex 'intention-in-action'

C&C's concept of 'Informative', as a logically-prior illocutionary act, would be more useful if understood as constituting a slightly modified version of Searle's 'intention-in-action', (2.3.24). Recall that Searle's intention-in-action, (IIA, for short), has the two basic functions of i) externalizing the sincerity condition in an illocutionary act, and ii) imposing on the illocutionary act the satisfaction conditions of the respective sincerity condition. On Searle's account IIA would fall short of telling us how the illocutionary up-take, (see note 41), would be secured. E.g., suppose I have a sincerity condition with a world-to-word direction of fit, (e.g., a desire that someone should go out), and an IIA to utter (22) :

22) yagiba ?an taxruga .
 modal COMP you-go out
 " You must go out ."

Suppose also that my addressee does not understand what I am saying but decides, (e.g., on account of my facial gestures), that he must go out to avoid further unpleasant confrontation. Can we say that the addressee's decision, in the above situation, is a proper response to (22) ? I take Strawson's (1971) view that the answer to this question has to be negative, since the addressee's response is not made by means of his recognizing the speaker's 'intention', as manifested in the above utterance.

Notice that Searle's formulation of IIA is not made to cope with situations like that mentioned above, e.g., the two functions of IIA can be fulfilled in (22) without securing the illocutionary up-take on the part of the addressee. In order for Searle's IIA to be able

to provide a full account of the above situation it has to acquire a complex function comparable to that postulated by Strawson (1971) for Grice's concept of 'intention', (see note 41). In view of the proposed modification, in order for a speaker to express a sincerity condition he must have not merely a simple IIA but a complex IIA through which (23) obtains . ((a) and (b) come from Searle (1983) and (c) is based on Strawson (1971:604-7)) :

23)a) S performs the illocutionary act as externalization of S's sincerity condition.

b) By means of (a), the illocutionary act acquires the conditions of satisfaction of the sincerity condition it is used to express.

c) i. S intends his addressee, Ad, to recognize (a) and (b).

ii. S intends Ad to recognize S's intention (c-i) .

iii. S intends Ad's recognition of S's intention (c-ii) to be the reason for Ad's response to the illocutionary act.

The complex intention-in-action, IIA, as set out in (23), is what is to be assigned to the 'Informative' as a logically-prior illocutionary act. In other words, using (24) to represent (22), above, would be as much as saying what is contained in (25), below :

24) INFORM (S, Ad, 'Ad must go out')

25) a) S performs (22) as an externalization of S's desire for Ad to go out .

b) By means of (25a), S intends (22) to have the satisfaction conditions of S's desire for Ad to go out .

c) i. S intends Ad to recognize (25 a and b).

ii. S intends Ad to recognize S's intention (25c-i).

- iii. S intends Ad's recognition of (25c-ii) to be the reason for Ad's going out, or his understanding that he is to go out.

2.4. Modals as a sub-set of IFIDs

The following chapters are intended to investigate the meanings of LA modals as a sub-set of Illocutionary Force Indicating Devices, IFIDs. This approach has been determined by syntactical as well as pragmatic considerations.

2.4.1. Syntactic Evidence

LA modals, (with the exception of yastabi:9), have only the imperfect form, (i.e., the present tense), and they are not inflected, like other verbs, for persons⁴⁵. These two characteristics would be sufficient to make the modals a more formally suitable paradigm for IFIDs than verbs like ya9id, "promise", which, in spite of their syntactic problems, have so far been used for this purpose within the Standard Theory of Speech Acts. Consider, e.g., the following as an illustration for this point :

- 26)a) ?a-9id , "I-promise"
- b) ya-9id , "he promises"
- c) ta-9id , "she promises"
- d) wa9ad-tu , "promised-I, i.e., I promised"
- e) wa9ad-a , "he promised"
- f) wa9ad-at , "she promised"⁴⁶

In contrast to ?a-9id, etc. above, LA modals like yagib, "must", have only one form, namely (yagib), which is invariably used with all complement-subjects. The logical subject of the modal has therefore to

be postulated as the speaker. Further, yagib does not have a perfect form corresponding to (26 d). In other words, the modalized sentence in LA, (and possibly in other languages), can be said to epitomize the formal characteristics of a standard illocutionary act in so far as present tense and first person subject are concerned.

The point related to 'tense' has previously been recognized by Palmer, (1979), in connection with English modality. He observes that with Epistemic Modality, "the relevant modals occur only in the present tense, for the judgement and the act of speaking are simultaneous", Palmer, 1979:42). The same also applies to Palmer's Deontic Modality, in which "the speaker (performatively) creates the possibility or necessity for the coming into reality of [a] state of affairs.", (Palmer, 1979:39. Brackets in the original). English, however, does not have a structural evidence for the point related to person-inflection, for Modern English verbs, unlike their LA counterparts, are not normally inflected for person, (with the exception of third person affixation -s, which also shows a distinction between English modals and English content verbs, but not to the extent to which LA inflection system shows this distinction).

2.4.2. Pragmatic Evidence : Modals and their Meaning

Modals do not seem to have meaning in the sense that content words have, i.e., it is hardly possible, (except in so far as given modals are associated with the senses of POSSIBILITY and NECESSITY), to say what the sense meaning of a given modal is, (cf. 2.3.11). It is for this reason that the present study is intended to approach modal meaning in terms of 'Intentional meaning', i.e., in terms of sincerity conditions

and 'complex intention-in-action', as set out in sections (2.3.23) and (2.3.35). On this account the modals are regarded as constituting that component of the total signification of the utterance where the speaker comes in⁴⁷. The speaker comes in by using a modal when the state of affairs he is speaking about is factually 'uncertain' or, (in a more fashionable term), 'indeterminate', i.e., when he lacks certainty concerning such a state of affairs.

It would be useful and expositoryly convenient to use, (following Palmer's 1979), such labels as POSSIBILITY and NECESSITY as indicating a continuous scale of speaker's certainty or lack of certainty. It would also be more helpful to sub-categorize POSSIBILITY and NECESSITY into Epistemic, Deontic, etc. provided we do not lose sight of the fact that they are merely labels which have to be explained and, possibly, formulated in terms of speaker's Intentionality, (i.e., his sincerity condition + complex intention-in-action).

The above argument can be illustrated by considering the following two examples, which can be assumed to be expressing Epistemic Necessity and Deontic Necessity, respectively :

27) labudda ?anna-ka kaslaan .
 modal COMP-you lazy
 " You must be lazy ."

28) yagiba ?an taxruga .
 modal COMP you-go out
 " You must go out ."

In addition to what would traditionally be said, (e.g., the two examples express two different kinds or degrees of NECESSITY), and in order for

the two kinds or degrees of NECESSITY to be reasonably understood and fully distinguishable from each other, an account has to be provided for some Intentional or illocutionary aspects like the following⁴⁸:

- 29) a) Modal Agent: The modal agent in the above two cases is identical with the agent of the illocutionary act, i.e., the speaker. Given that this is the standard case with all the modals, it follows that whatever meaning is expressed with a modal it has to be illocutionarily attributed to the speaker.
- b) Preparatory Condition: Whereas S of (28) assumes that Ad is able (to go out) and that Ad will not do so in the normal course of events on his own accord, S of (27) would assume that the reason for his inferential conclusion (that Ad is lazy) is recognizable by Ad at the time of utterance.
- c) Sincerity Condition: Whereas (27) is an externalization of the speaker's belief that some state of affairs is necessarily the case at the time of speech, (28) is an externalization of the speaker's desire for some state of affairs to be the case at a time later than that of speech.
- d) intention-in-action: In both cases, the illocutionary act is motivated by an intention-in-action, which functions to i) externalize S's sincerity condition and ii) INFORM Ad of S's complex intention, as explained in (2.3.35), see also (note 41).
- e) Illocutionary Point: Whereas the purpose of (27) is to inform Ad of S's belief, that of (28) is to get Ad to do something.

An attempt will be made in the following chapters to formalize the different Intentional meanings of the modals and to provide each meaning with a descriptively adequate label.

Chapter Two

NOTES

- 1) I adopt Gazdar's (1979:2) view that "Pragmatics has as its topic those aspects of the meaning of utterances which cannot be accounted for by straightforward reference to the truth conditions of the sentences uttered." I shall be concerned, however, with a narrower range of pragmatics, i.e., with the ability of language users to pair utterances with the contexts in which they would be appropriate. For detailed discussion of the different attempts at defining Pragmatics and its domain, see Levinson, (1983:5-34).
- 2) By "convention", and its adjectival and adverbial forms as will be used frequently in this study, I mean generally the most widely established and accepted usages among members of a speaking community. In fact, the term 'convention' has become as vague and as problematic as the term 'meaning', but there is no harm in speaking about 'conventions' in terms of 'established and normatively accepted regularities', in this sense we can speak about Syntactic Conventions, Semantic Conventions, Pragmatic Conventions, or generally Linguistic Conventions as opposed, e.g., to Political Conventions, Medical Conventions, etc.

Problems related to the way linguistic expressions acquire or change their conventional capacity are beyond the scope of the present study. For detailed discussion on the topic, the reader is referred to D. Lewis, (1969:79-90) and D. Wunderlich, (1979:10-14). I quite agree with Wunderlich that linguistic conventions are mutually implicit commitments that, if not fulfilled, would call for immediate socially accepted sanctions such as "corrections and excuses", (see Wunderlich, 1979:10).
- 3) The complex three-sided relationship between speaker, proposition and hearer is best regarded, (for reasons to be clarified later), as having a lateral rather than a linear form, i.e., as an S/(p/H) relationship rather than an S/p/H relationship. An attempt at defining the participant roles of speaker, hearer, etc. is made in section (2.2.33).
- 4) See Al-Samman, (1977:106), where the observation is, characteristically, mentioned in a footnote.

- 5) The neglect of modality (and meaning in general) by modern Arabic grammarians should not be attributed to the Classical Arabic tradition, as has been unjustly claimed. See, as examples, Hassaan (1979:12) and Bakir (1980:2-3) who express the currently held view that Classical Arabic grammarians did not pay any attention to meaning, as they were "concerned with phonology, morphology and syntax. These were the levels of Arabic which were most likely to be corrupted at the hands of the new non-Arab converts to Islam." (Hassaan, 1979:14).

Meaning, at least as understood as sense-relations in modern semantics, was certainly not neglected by some Classical Arabic grammarians like Al-Anbari, Al-Asmu'ī, Al-Sagastani, etc. These authors studied meaning as a branch of ʿulūm al-ʿarab, "sciences of Arabs", and called it ʿilm al-addad, "the science of opposite expressions". Each of the above authors has a book titled Kitaab Al-Addad, "The Book of Opposite Expressions", and the books are differentiated from each other by the name of the author. I shall mention one example, Al-Anbari, to show how meaning was studied by classical grammarians.

In his Introduction to Kitaab Al-Addad, (ed. by M. Ibrahim, 1960), which was written before 927 A.D., Al-Anbari defines the purpose of his book as the study of meaning relations in terms of what we may call now 'ambiguity', (p. 1), 'synonymy', (p.6), 'relatedness', (p.6), e.g., male/female, man/boy, etc. He further subdivides ambiguity into two degrees: weak ambiguity (two different meanings for the same word, e.g., jalal means both "easy" and "great") and strong ambiguity (two opposite meanings for the same word, e.g., jawn means both "white" and "black"), (p. 2-3). The same applies to synonymy which is subdivided into 'sameness of meaning' and 'hyponymy', (p.9).

- 6) See Al-Samman, (1977:102-118) as an example.
- 7) Kitaab Sibawayh and Alfayyat Ibn-Malik are the most well known classical studies in Arabic.
- 8) T. Hassaan, Arabic Language: Its Meaning and Structure, (Cairo:1979). This study, as its author claims, "if taken seriously, should open a new era of understanding the meaning and structure of Classical Arabic", (p. 10). One cannot help, however, being sceptical as to the validity of a study adopting

"the synchronic approach", (p. 10), to investigate the phonology, morphology, syntax and semantics of a language (as the writer is aware) "collected from five or six different dialects over a period of five centuries.", (p. 14).

- 9) For detailed discussed on 'Semantics' and its relation to 'Pragmatics', see Kempson(1975), Gazdar(1979), Kates(1980), Bierwisch(1980) and Levinson (1983).
- 10) See, for example, Halliday(1970), Kattunen(1972), Leech(1971), Lyons(1977) and Palmer(1977 and 1979).
- 11) The expression 'use condition' may not be the right one, but it is used at this stage of the study as a cover term for what is going to be defined as 'the speaker's Intentionality', (section 2.2.22.).
- 12) The same claim is almost repeated by Tregidgo(1982:75) and can be found in Woisetschlaeger(1976:5) and Kratzer(1977:337). For detailed discussion, almost reproduction, of Ehrman(1966), Woisetschlaeger(1976) and Cook(1978), see Ney (1981:70-115).
- 13) See Leech(1969:272) and Palmer(1979:10-11) for criticisms of Ehrman (1966) and Bouma(1975), respectively, along similar lines.
- 14) The following are Bouma's German and English matrices as quoted by Palmer(1979:13) :

<u>GERMAN MATRIX</u>	Imminent	Biased	Precarious
Objective	MUSS	SOLL	DARF
Subjective	WILL	MAG	KANN
<u>ENGLISH MATRIX</u>	Imminent	Biased	Precarious
Objective	MUST/HAVE TO	SHALL/SHOULD/UGHT	MAY
Subjective	WILL/WANT TO	WOULD LIKE TO	CAN

- 15) Coates,(1980), p. 345.
- 16) See Ibid.
- 17) See Ibid. pp.338-9.
- 18) See Ibid. p.338.
- 19) Ibid.
- 20) Coates,1983. p. 247.

- 21) Coates recognizes the following descending degrees for "Root MUST" : "Performative", (p.38), "Strong Obligation", "Subjective Obligation", ".....", "Weak Obligation" and "Objective Obligation", (p. 32 et passim). The dots represent the area of meaning which has not been labelled. I will not go into the question whether these labels have any descriptive adequacy, this will be covered in a later part of this chapter. What I want to say now is that, assuming that these labels are descriptively adequate, the area which is not covered can easily be labelled as "Indeterminate Obligation". This would make the Scale complete without resorting to a Fuzzy Set Model.
- 22) Neglecting, or rather ignoring, Negation and its effect on modality can be regarded as one of Coates' (1983) serious mistakes. It will be seen (chapter 5) that studying negation as a semantic as well as pragmatic environment of modalized statements would enable use not only to better understand the relationship between the different degrees on the same gradient, (e.g., POSSIBILITY), but also to establish relationships between two different gradients, (e.g., POSSIBILITY and NECESSITY). E.g., it would help us to understand why 'Epistemic Necessity', (e.g., He must be at home by now), has as its negative counterpart a negated kind of 'Possibility', (e.g., He can't be at home by now.)
- 23) The label-names provided here, (e.g., 'belief-based necessity', etc.), are only suggestive and tentative at this stage of the study. An attempt will be made in chapter 3 to provide more descriptively adequate labels for the different kinds of necessity or possibility.
- 24) By 'felicity conditions' is meant the speaker's different mental states, as are going to be explained, (section 2.2.2.), within a framework of Searle's (1983) theory of Intentionality. I have to say that they are not identical with those conditions known from Searle's standard theory of Speech Acts, (1969 through 1979).
- 25) The informal explanatory descriptions provided in (2.3) are only suggestive and simplified. For more detailed treatment, see chapter 3, where an attempt is made to formalize these conditions.

26) For detailed and intensive discussion of the development of Classical and Traditional modal categorizations and their impact on natural language modality, see Rivero (1972). And for comparing modal with the use of 'possible and must' in ordinary language, see Karttunen (1972).

It has to be mentioned that Palmer attempts to establish a connection between 'Existential Modality' and the use of can and may when they mean 'some' and 'sometimes', (see Palmer, 1979:152-4), but Existential Modality is not part of his general categorization, and it is not relevant to the present study.

27) The above set of meanings is not to be understood as following automatically from any of the proposals mentioned. E.g., Bierwisch distinguishes between 'meaning' and 'communicative sense', with the former being a sub-set of the latter, which, in turn, would correspond to Grice's 'total signification'. With both authors, A and B are conflated into one element, namely Bierwisch's 'meaning', which corresponds to Grice's 'what is said'. I have also to say that this set is by no means exhaustive, e.g. I have not sub-divided 'Sense Meaning' into 'lexical' and 'grammatical' meanings.

28) By 'semantical sources' I mean the 'compositional make-up' of the linguistic structure, as explained by Carnap (1949) and practised by Montague grammarians, (see Dowty, 1981). On this view the meaning of a sentence derives, compositionally, from the sense of its parts and their mode of combination. For more detail, see Carnap (1949:chapter 1) and Dowty (1981: 144-50).

29) See Searle, (1979:137-9); Tyler, (1978:178-80) and Donnellan, (1971 and 1978).

30) See note 2 above.

31) The capitalization of 'Intentional' and 'Intended', as opposed to the normal usage, (e.g., 'intentiona', etc.), will be kept for reasons to be clarified in the sequel, specially in discussing Searle's theory of 'Intentionality', section (2.2.2.) .

- 32) For detailed discussion on this topics, see Grice (1975 and 1978), Gazdar (1979:39-43) and Levinson (1983:127-31).
- 33) See Riviere (1981) for discussing Epistemic must and should along similar lines.
- 34) See Levinson(1983:226) for bibliographical notes concerning the impact of SAT on Psycholinguistics, Sociolinguistics, etc. For the philosophical development of the Theory see (Ibid. :227-43). See also Gazdar(1979:15-35), Searle(1979:162-80) and Levinson(1983:242-60) for different views on the Generative Semantic Performative Hypothesis.
- 35) See Searle(1983:vii-x). I have to mention that I will discuss only the aspects of Searle's Theory of Intentionality which are closely related to Speech Acts. E.g., I will not be concerned with the question that Intentionality, in terms of belief, desire, intention, etc., originates in Perception (chapter 2), or with the causal factors of Intentionality (chapter 4).

No attempt will be made, in the present study, to discuss the development of Searle's ideas from (1969) to (1983), i.e., no comparison will be made between a notion as introduced in an earlier work and its modified version in a later work. E.g., the Essential Conditions in (1969) have become Illocutionary Point Conditions in (1979); 'Declarations' lack 'sincerity conditions' in (1979) and are assigned two sincerity conditions in (1983). In other words, I will discuss Searle's Theory as presented in its most recent form, namely, (1983).

- 36) See Searle(1983:4) for the complete list of mental states. Only 'belief' and 'desire', however, are recognized as primitives. Other mental states - including 'intention' - derive from the two primitives. E.g., "hope that (p) \longrightarrow \neg Bel(p) & \neg Bel(\neg p) & Bel(POSS p) & Des (p)", (see pp. 32-34).
- 37) I have to mention that the notion of 'sincerity condition' as developed in Searle(1983) is to some extent different from that developed in his earlier work, (1969-1979), and that I will not attempt to survey the development of this notion. See also note 35 above.

- 38) This is Searle's view with respect to mental states in general, see Searle(1983: chapter 1). His brief discussion of 'sincerity conditions', (pp. 165-70), presupposes familiarity with the earlier chapters of the same work.
- 39) Ibid. pp. 27-30. Later in the book,(p. 164), Searle calls this second level of Intentionality "meaning intentions", which is, in turn, divisible into two distinguishable levels : "representing intentions" and "communication intentions", (p. 165). On the first level of 'meaning intentions' one can intend to represent, e.g., a belief, "without caring at all about the effects on one's hearers" (p. 165); and on the second level, one can only intend to represent in order to communicate, i.e., produce some effect on one's hearers. It follows that "representing intentions are prior to communication intentions." (p. 166).

In so far as speech acts are concerned, Searle's distinction between these two levels would seem to be irrelevant, since speech acts are by definition acts of communication, for which only the second level (communication intention) is needed.

The distinction between Searle's two levels of 'meaning intention', however, would be useful for a study concerned with distinguishing between 'meaning', in the semantical sense, and linguistic communication in general. This has been attempted by Bierwisch (1980). Since I am concerned only with illocutionary acts, I will confine my discussion to Searle's second level which I will continue to call 'intention-in-action'.

- 40) Ibid. p.165. See also chapter 6 for detailed discussion of the different features which sincerity conditions share with illocutionary acts.
- 41) See Strawson,(1971:607). Grice,(1969), introduces the concept of 'meaning' in terms of the concept of 'intention'. Using S to stand for the speaker and A for the audience, Grice's argument can be summed up as follows : S means something by his utterance of U if S intends

(I 1) that A will recognize S's intention.

(I 2) that A will recognize S's intention (I 1).

(I 3) that this recognition on the part of A of S's intention (I 1) will function as A's reason, or part of his reason, for A's response, (ie., A's understanding of U). (CON.)

- 41) (CON.) Strawson adds to Grice's conditions the further condition :
 (I 4) that A should recognize S's intention (I 2).

The reason for Strawson's (1971:605) addition is that in order for an illocutionary force to secure up-take, in the sense of Austin, it should be based "not simply [on] an intention to produce a certain response in an audience but [on] an intention to produce that response by means of recognition of the intention to produce that response and the intention that this recognition should ... itself [be] intended to be recognized." (Strawson, 1971:607)

Strawson's postulation of this 'complex intention' would be useful as the second function of Searle's 'intention-in-action'. It can be considered as a logically-prior illocutionary act of 'Informing', as will be discussed in some detail later.

- 42) I will not be concerned with 'Declarations' and 'Expressives' for two different reasons. As exemplified with 'naming' and 'baptizing', etc. 'Declarations' do not seem to be universal. This view is also held by Strawson (1964), as approvingly quoted by Levinson (1983:241). 'Expressives' are to some extent analysable in terms of belief and desire, (see Searle, 1983:32-3), and can therefore be dealt with as elliptical assertives. In fact, 'Declarations', 'Expressives' and 'Commissives' are irrelevant to the present study, and will (irrespective of their illocutionary status) be ignored.
- 43) Searle's analysis, prior to the proposed modifications, would be fairly adequate to account for a considerable portion of LA modality, (e.g., in Palmer's (1979) terms, 'Epistemic Modality' and 'Dynamic Modality'). But it would run into difficulties in the case of Deontic Modality, (i.e., Permission and Obligation). The modifications are therefore needed for achieving generality and unified treatment of modality.
- 44) See also Clark & Carlson (1982:343), for a slightly different view.
- 45) See chapter I for detailed discussion of the formal characteristics of LA modals.

- 46) See chapter 1 for the use of the inflectional prefix ya- with the LA modals as an impersonal, i.e., empty affix. Since this affix is not used co-referentially with the complement subject, it seems reasonable to postulate that the speaker is the modal subject.
- 47) See Halliday (1970:326) for a similar view.
- 48) See also Perkins, (1982), for a different approach but roughly similar results.

In his article, 'The core meanings of the English modals!', Perkins follows a "monosemantic" strategy, (p.242 & 271), with a view to providing a semantic structure for each modal. He tries "to isolate a single core meaning for each of the English modals which is independent of its context of use." (p.242). This is quite different from the strategy adopted in this study, which aims at providing a set of pragmatic implications for each modal meaning which may or may not be represented by one modal, (cf., e.g., 5.3.4).

Interestingly, however, the kind of semantic structure postulated by Perkins is, in its detailed analysis, roughly similar to the general treatment of modal meaning in this study, given that it is composed of "The variables K, C and X" which are pragmatically defined, according to Perkins (pp. 255-7), as follows : K is a variable ranging over sets of pragmatic laws, e.g., "social laws", "natural laws", "rational laws", etc. C is a variable ranging over sets of pragmatically definable aspects like "empirical circumstances", "evidence", "deontic source", etc. (p.255 & 257, respectively for K and C). X is a variable ranging over propositions or events, (p. 255). E.g., to quote Perkins (p. 255) :

"... the semantic structures of MUST and MAY can both be represented as a relationship between the variables K, C and X as follows :

MUST: $K(C \text{ entails } X)$

MAY : $K(C \text{ does not preclude } X)$." See also (p. 260), where

"WILL: $K(C \text{ is disposed towards } X)$ "

In so far as Perkins' semantic structure is represented in terms of the interaction between these variables, it can fairly be said that it covers a considerable cross section of the pragmatic account presented in this study.

Chapter Three

The Meaning of LA Modals

3.0. This chapter investigates the meaning of LA modals just when used with the imperfect verb forms in non-negative, non-interrogative simple sentences.

3.0.1. The Intentional Meaning of Modalized Utterances

It is assumed, in (2.3.1.), that the total signification of an utterance has three elements : sense meaning, referential meaning and Intentional meaning, and that the modal meaning is basically Intentional.

For formal convenience, let the first two elements be assumed to constitute the propositional content, symbolized as p , and the Intentional meaning of the modalized utterance be called its modal implication, symbolized as M . On this assumption, the total signification of an utterance would be represented as

$$M(p)$$

which corresponds to Searle's $F(p)$, with Searle's F narrowed to M , i.e., the modal part of the illocutionary force.

3.0.2. Formalization Conventions

In the following, M will be represented by a two-level formula. The first level, (i), indicates the preparatory condition of the illocutionary act and the second level, (ii), indicates the function of the speaker's 'complex intention-in-action', as explained in (2.3.35). The

formula will invariably take the form of the following diagram, where the two levels of Intentionality are shown in brackets :

- | | | | |
|----------|----------------------|--------------------------------|--------------------------|
| 1) M: i. | BELIEVE (S, '.....') | (Preparatory C.) | |
| | ii. | INFORM (S, Ad, P1 & P2 ... Pn) | (Complex IIA) |
| | | P1= BELIEVE (S, '.....') | (Sincerity C.) |
| | | P2= INTEND (S, '.....') | (Illocutionary Point C.) |

This diagram is based on Clark & Carlson's work, (1982), where INFORM functions as a logically prior illocutionary act represented as a three-place predicate taking a set of propositions as its third argument. P1, P2, etc. are propositions representing the speaker's various Intentional states, e.g., sincerity condition, illocutionary point, etc. It would follow that the Intentional meaning of LA modals will be represented as a set of m's, e.g., (m 1), (m 2), etc. where $m \in M$.

The following notational conventions and abbreviations will also be used :

- 1) S = Speaker .
- 2) H = set of hearers including the addressee.
- 3) Ad = Addressee.
- 4) A = Agent, as explained in (2.3.33).
- 5) p = Propositional Content.
- 6) (...) = set of arguments .
- 7) '...' = a set of propositions functioning as an argument.
- 8) x = a variable ranging over states of affairs. It is intended to correspond to what Palmer (1979) informally calls "external circumstances".

9) BEL(IEVE),INT(END),DES(IRE),POSS(IBLE),NEC(ESSARY),CAUSE and EXPECT will be used as primitive predicates .

10) The following symbols will be used to indicate what is shown in brackets :

@ = (infelicitous)

* = (ungrammatical)

? = (doubtful)

Other notational conventions ,which are not mentioned,will be used standardly .

3.1. LA Modals of Possibility

This section discusses the meaning of four modals, (rubbama, gad, yunkin and yastabi:9), expressing three different kinds of Possibility.

3.1.1. rubbama and gad : Epistemic Possibility

When used with the imperfect verb form, rubbama and gad are interchangeable. There is no difference in meaning or total signification between (1) and (2) :

1) rubbama yabtasima Zeid-un .
 modal smile Zeid-SUB
 " Zeid may smile ." ¹

2) gad yabtasima Zeid-un
 modal smile Zeid-SUB
 " Zeid may smile ."

An LA speaker would normally choose rubbama or gad when he believes that there is nothing to prevent the occurrence of the state of affairs he is describing. In fact, the full Intentional content of (1) or (2) would intuitively be understood as something like (3) :

- 3) It is possible that Zeid will smile, and what makes me think that Zeid's smiling is possible is that there is nothing that I know of which prevents Zeid's smiling.

The only possible difference between rubbama and gad can be accounted for in terms of the users' orientation, e.g., those who are more influenced by Classical Arabic would be inclined to use gad, and those who are less influenced would use rubbama. This is, at least, the only possible difference I am able to detect for these two modals when used with the imperfect verb form. In the following I shall confine the discussion to rubbama, with the understanding that the two modals are interchangeable.

A more illustrative example of the use of rubbama can be provided by (6), where the reasons of S's uttering of it can be specified, in part, by (5) :

- 5) i. The agent of (6), Layla, has recently bought a lottery ticket whose top prize is £1000.
 ii. Ad of (6) believes that it is possible that Layla will not win the prize.
 iii. S believes that there is nothing necessarily to prevent Layla from winning that prize, i.e., S believes that Layla's winning the prize is not impossible.
 iv. S has a 'complex intention-in-action', (see 2.3.35), to inform Ad of S's believe (iii).

- 6) rubbama tarbaħa Layla ?alfa gunayhan . (CO.)
 modal win Layla thousand pound
 " Layla may win a thousand pounds ."

The modal implication of rubbama-meaning, as represented so far, can be

formulated as (m 1) :

(m 1) rubbama : Epistemic Possibility

i. BEL (S, 'BEL(Ad, 'POSS(-p)')')

ii. INFORM (S, Ad, P1 & P2)

P1= BEL (S, ' -∃x: CAUSE (x, '-POSS(p)')')

P2= INT (S, 'BEL(Ad, 'POSS(p)')')

(m 1) is intended to represent two levels of the speaker's Intentionality : (i) represents S's assumption about his addressee's beliefs, which would correspond to Searle's Preparatory Condition, and (ii) represents S's 'complex intention-in-action', as explained in connection with diagram (1 M), section (3.0.2) above.

It has to be mentioned that the modal implication of 'Epistemic Possibility' associated with rubbama, "may", and formulated as (m 1) does not indicate (e.g., as part of S's intention) that Ad is to regard the occurrence of p as a strong possibility, i.e., as a possibility to be expected or to be counted upon. He is intended to consider that p is possible but only to the extent to which he is informed of S's sincerity condition, according to which p is believed to be possible simply because there is nothing to indicate that it is impossible . Accordingly, (m 1) would rightly predict that (6) would be infelicitous if followed by (7) or (8) :

@ 7) wa ta-waqa9a ³aalika .
and you-expect that (she will win the prize)
".... and you expect that (she will win the prize)."

- @ 8) wa laa ta-9ataqida ^ʔaalika .
 . and Neg you-believe that (she will win)
 "..... and (you) don't believe that (she will win)."

I have used 'Epistemic Possibility' as a useful label for the kind of possibility discussed so far, a possibility which can informally be described as 'weak' or 'unreliable'. But there are some cases where the epistemic possibility meaning is shifted - due to some pragmatic reasons - to a point up or down on the scale of certainty. This would not invalidate the formulation of (m 1), since the meaning shift can in most cases be accounted for in terms of Grice's 'Co-operative Principle'. Consider example (10), which can be produced as an answer to either (9a) or (9b) . In each case it will have a different meaning, depending on the kind of question to which it is produced as an answer:

- 9) a) maa^ʔia sa-taf9ala fi-l-?agaazah ?
 what will-you-do in-the-vacation
 " What will you do in the vacation ?"
- b) maa^ʔia taf9ala fi-l-?agaazah ?
 what you-do in-the-vacation
 " What do you (usually) do in the vacation ?"
- 10) rubbama ?usaafiru , wa rubbama ?u^ʔaakiru .
 modal I-travel , and modal I-study
 " I may go abroad, and I may study ."

(10) is unspecified with respect to whether it is an answer to a question about a certain vacation, (9a), or a question about vacations in general, (9b). The two readings can be represented as (A) and (B), respectively :

- A: " It is possible that I will go abroad, and it is possible that I will (stay) and study."

B: " I sometimes go abroad, and sometimes study."²

Both readings can counterargue, but only superficially, (m 1) as a representation of rubbama. On the A-reading, it can be said that rubbama expresses 50% possibility, assuming that only one activity can be done during a vacation. The fact that (10') is acceptable as a continuation of (10), (on the same assumption that only one activity can be done during a vacation), would rule out the observation that rubbama expresses 50% possibility :

10') wa rubbama ?al9abu, wa rubbama ?anaamu, etc.
 wnad modal I-play , and modal I-sleep
 ".... and I may play, and I may sleep, etc."

An LA speaker using (10) would normally intend it to be understood as (10'), depending on the rules of conversational co-operation. In other words, each of the two states of affairs expressed in (10) would be intended to be understood as a weak or unreliable possibility and not as much as a 50% possibility.

The 'sometimes'-meaning of rubbama, in (10), is not essentially different from the meaning formulated as (m 1), since things which happen only 'sometimes' cannot be normally relied on to happen. (See note 2)

Consider also (11) from my corpus, which, out of context, would seem a perfect counterexample to what has been said so far about rubbama :

11) rubbama ?abla&u as-sabi9ata 9a┘ ara ba9d shahrin. (SPW)
 modal I-reach the-seven ten after month

" I may become seventeen (of age) after a month ."

If interpreted literally, assuming that it is uttered seriously and sincerely, (11) would be a case of 'strong predictability', in the sense

of Coates(1983),or even a factual assertion about future certainty. In this case, rubbama would be equivalent to the English 'Root-will', but given the context of this utterance from my corpus,(i.e.,in war-time speaker and addressee are trapped in a completely evacuated area which is exposed to the enemy's continuous shelling), the addressee will not have any difficulty in interpreting (11) as :

11') "It is a weak and unreliable possibility that I will live for another month to be seventeen."

The meaning of rubbama, formulated as (m 1) and labelled as 'Epistemic Possibility', will be further clarified when it is compared to the meaning of yumkin in the following section .

3.1.2. yumkin : Experiential Possibility³

I am using 'Experiential Possibility',as a label for the kind of possibility expressed by yumkin,as will be explained. yumkin corresponds to the English 'Possibility can',it indicates ^{that} the possible occurrence of a state of affairs is determined by what the speaker believes about the outside world. The sense of 'experiential' becomes clearer if it is used to qualify 'belief'. An 'experiential belief' can be defined as a belief held by an expert,i.e,a person knowledgeable of what he is speaking about. E.g.,a mechanical engineer can tell us about the possibilities of how a machine breaks down. An architect can tell us about the possibilities of how to build a house,etc. What the engineer or the architect expresses is an 'experiential possibility' based on his 'experiential belief'. Notice that one needn't be an engineer or an architect to have experiential beliefs,e.g.,my use of the

can-sentences, above, is itself experiential in this sense, i.e., it is based on my experiential belief about what mechanical engineers and architects do in the outside world. In other words, the can-sentences (including this one) can be considered as expressions of 'experiential possibility' based on 'experiential belief'.

As an expression of 'Experiential Possibility', in the sense explained above, yumkin provides a strong contrast to rubbama. The rubbama-sentences are based on the absence of any relevant experience, (i.e., there is nothing in the speaker's experience to indicate that the state of affairs concerned is impossible), whereas yumkin presupposes the positive presence of some relevant experience. The speaker of a yumkin-sentence must have an 'experiential belief' that what he is speaking about is possible, he must also have - as part of his intention-in-action - an intention of making his addressee(s) expect that the occurrence of the state of affairs expressed is more likely than not. In other words, in order for a speaker to produce an utterance like (12), he must be able to defend his belief, (e.g., by answering a question like (13), which is a natural response to (12)). The speaker's defence would be something like (14) :

12) yumkina ?an yazi:da al-?intaagu .
modal COMP increase the-production

" Production can be increased ."

13) kayfa ?

" How ?"

14) bi-l-maykanah / bi-taḥsi:n Ḍru:fa al-ḡamal / etc.

" By mechanization / by improving the conditions of work/etc."

Such a sequence is not normally possible with rubbama, whose possibility is in most cases regarded as a matter of chance. We do not normally ask how chances happen, they just happen. That rubbama-possibility is accepted as such can be revealed by contrasting the above sequence, with its normal interpretation, to the following, whose question, (13'), and answer, (14'), would likely be interpreted as shown in brackets :

12') rubbama tarbaħa Layla ?alfa gunayhan . (CO.)
 modal win Layla thousand pound

" Layla may win a thousand pounds ."

13') kayfa ? (This is a rhetorical question with the force
 "How ?" of denying the possibility of (12'))

14') bi-kasbi al-yanasi:b . (S has to be joking or teasing Ad)
 " By winning the lottery."

The second two exchanges in the rubbama-sequence cannot be interpreted literally because, normally, the addressee of a rubbama-sentence is intended to interpret the state of affairs concerned as a mere, or remote, possibility which cannot be amplified or defended by the speaker, hence the infelicity of (13') as an information seeking question. In contrast, the addressee of an example like (12) feels entitled to ask about the experiential evidence for the possible state of affairs described, on the understandable assumption that he is intended by the speaker to expect or depend on whatever possibility is expressed by a yumkin-sentence.

It is interesting to note that a great deal of yumkin corpus examples anticipate the addressee's response, as presented in the above sequence,

by also expressing the means by which the possibility can be achieved :

- 15) yumkina ?an tanga/ha bi-l9amali -l-gaad . (AK.4.3)
 modal COMP you-succeed with-the-work the-hard
 " You can succeed with hard work ."
- 16) yumkina ?an nu-zi:da az-ziraa9ah bi-l-maykanah .(SPE)
 modal COMP we-increase the-agriculture with-mechanization
 " We can increase the agricultural productivity by using
 machines."

The following example draws on common experience, and the means by which the possibility can be achieved is implicitly understandable :

- 17) /hawaadi/9a at-tari:qi yumkina ?an tu?adya ?ila -l-mawti.(RK.3.9)
 accidents the-road modal COMP lead to the-death
 " Road accidents can lead to death ."

The Intentional meaning of yumkin, as demonstrated so far, can be captured by the following modal implication, (m 2), where x, (as a variable ranging over states of affairs), stands for whatever confers on the speaker's sincerity condition, i.e., belief, an experiential nature :

(m 2) yumkin : Experiential Possibility

i. BEL (S, 'BEL(Ad, 'POSS(-p)')')

ii. INFORM (S, Ad, P1 & P2)

P1= BEL (S, '3x: CAUSE(x, 'POSS(p)')')

P2= INT (S, P3 & P4)

P3= BEL (Ad, 'POSS(p)')

P4= EXPECT (Ad, p)

From what has been said so far in connection with rubbama and yumkin, (as expressions of Epistemic and Experiential Possibility, respectively), it would seem that modal categorization corresponds more or less to the different contents of the speaker's beliefs, which is, in turn, determined by his experience about the world. There is an important point, however, which has to be emphasized. Saying that the speaker's belief in the case of 'Experiential Possibility' is based on his experience, (i.e., his knowledge of the world as it is filtered through his consciousness, see also note 3), should not lead to the misunderstanding that the speaker's belief in the case of 'Epistemic Possibility' is not based on any experience at all. What is more plausible is to assume that both kinds of belief are based on the speaker's experience, but whereas the content (i.e., state(s) of affairs) of the speaker's experience is positive in the former case, it is negative in the latter. Let us illustrate this point by the following examples, which are supposed to be uttered by the same person in two different situations :

18) yumkina ?an tangaha bi-l-9amali -l-gaad .
modal COMP you-succeed with-work the-hard

" You can succeed with hard work ."

19) rubbama tangaha bi-l-yaŋi .
modal you-succeed with-luck

" You may succeed with luck (i.e., without working for it)"

The content of the speaker's experience in (18), on which his belief is based, is positive, (e.g., 'success' is usually associated with hard work). In the latter case, (19), it is negative, (e.g., 'success with pure luck' is not, in the speaker's experience, impossible). This also is a reminder that expressions like 'Experiential Possibility' and

'Epistemic Possibility' are used in this study only as convenient labels intended to indicate the modal implications with which they are associated. If it so happens that a language (e.g., LA) has conventionalized two modals for expressing the two kinds of possibility mentioned above, it will naturally be predictable that the two modals would be pragmatically restricted. This is the point of comparing rubbama with yumkin in the following sub-section .

3.1.21. rubbama and yumkin

It has been postulated that the meanings of rubbama and yumkin can be captured by (m 1) and (m 2), repeated below, respectively :

(m 1) rubbama: Epist. POSSIBILITY

(m 2) yumkin: Exp. POSSIBILITY

i. BEL (S, 'BEL(Ad, 'POSS(-p)')')	i. BEL(S, 'BEL(Ad, 'POSS(-p)')')
ii. INFORM (S, Ad, P1 & P2)	ii. INFORM (S, Ad, P1 & P2)
P1= BEL(S, '¬∃x: CAUSE(x, '¬POSS(p))')	P1= BEL(S, ∃x: CAUSE(x, POSS(p)))
P2= INT (S, BEL(Ad, POSS(p)))	P2= INT (S, P3 & P4)
	P3= BEL (Ad, POSS(p))
	P4= EXPECT (Ad, p)

It is notable that the essential difference between the two modal implications lies in the speaker's sincerity condition, represented as (P1), and his illocutionary point, which is represented as (P2). The difference between the speaker's sincerity conditions has been discussed, above, in connection with the speaker's 'experience'; and it can be briefly mentioned as follows : According to (m 1), there is nothing which would make the occurrence of p impossible. And according

to (m 2) there is, in the speaker's experience, some state of affairs which makes it possible for the coming into reality of p.

Assume, for convenient labelling, that the kind of sincerity condition on which (m 1) is based can be informally described as weak or unqualified belief, in contrast to the equally informal description of 'experiential' or qualified belief of (m 2). Given this assumption, it can be explained how the difference in the speaker's belief (between (m 1) and (m 2)) is reflected on his illocutionary point, (P2). E.g., if I have an unqualified/weak belief that 'p is possible', I would naturally (unless I intend to be misleading) refrain from trying to persuade my addressee to depend on or expect the occurrence of p. It would be co-operatively sufficient to inform him (as part of my intention-in-action) merely that 'p is possible'. Conversely, if I have an experiential/qualified belief that 'p is possible', I would not (and should not) refrain from leading my addressee (as part of my intention-in-action) to expect and possibly depend on the occurrence of p. This point can be illustrated by the following examples, which are identical except that each is expressed by a different modal :

@20) rubbama yuftaḥa al-baabu, (tawaqa9a Ḥaalika).
modal be-opened the-door, (you-expect that)

" The door may be opened, (expect/depend on it)."

20') yumkina ?an yuftaḥa al-baabu, (tawaqa9a Ḥaalika).

" The door can be opened, (depend on it)."

The bracketed clause, "expect/depend on it", which makes (20) infelicitous for the reasons mentioned above, serves to emphasize part of the Intentional meaning of (20').

3.1.22. Pragmatic restrictions on rubbama and yumkin

In spite of the fact that in the majority of cases rubbama and yumkin are interchangeable with the difference in meaning indicated by (m 1) and (m 2), respectively, (i.e., when they are used in situations where the state of affairs described is interpretable as either 'Epistemic Possibility' or 'Experiential Possibility'), there are some cases where one of the two modals is not felicitous or at least odd. In the following I shall demonstrate this point:

A: The following rubbama-examples are infelicitous with yumkin :

21) rubbama taḥdoḥa muḡgizatun ,(man yaḡlama ?)
 modal happen miracle ,(who knows)

" A miracle may happen,(who knows ?)"

22) rubbama taṣbaḥa raʔi:san yawman maa,(man yaḡlama ?)
 modal you-become president day some,(who knows)

" You may become a President one day,(who knows ?)"

The above examples are acceptable with or without the bracketed clauses. And they cannot be felicitous with yumkin for the simple reasons that the possible occurrence of the states of affairs described cannot normally be part of,(i.e., contained in), an experiential belief, in the sense explained above.

B: In the following exchanges, and in the way they are contextualized, rubbama would be pragmatically, or rather socially, unacceptable :

23) S1: kayfa sa-yangaha Zeidun ?
 how will-succeed Zeid

" How will/can Zeid succeed ?"

S2: ʔiḥa ʔaakira yumkina ʔan yangaha .
 if he-study modal COMP he-succeed

" If he studies, he can succeed ."

24) S1: maa faa?idat az-zawaagi ?
 what benefit the-marriage

" What is the benefit of marriage ?"

S2: ?az-zawaagu yumkina ?an yu?adya ?ila al-?istiqrari .
 the-marriage modal COMP lead to the-stability

" Marriage can lead to a stable life ."

The use of rubbama in (23) would be conversationally disappointing on the part of S1, who expects a solution for the problem he asking about. rubbama would have suggested that "there is no foreseeable way of Zeid's succeeding, for even if he studies (the only solution provided) his succeeding will be a matter of chance.". The use of rubbama in (24) would be socially discouraging for similar reasons. In fact, given the interactional situations of (23) and (24), the use of rubbama would be utterly inappropriate.

C: Examples in which rubbama and yumkin are interchangeable with a difference in meaning :

25) rubbama yabtasima Zeidun . (m 1)
 modal smile Zeid

" Zeid may smile ."

25') yumkina ?an yabtasima Zeidun . (m 2)
 modal COMP smile Zeid

" Zeid can smile ."

26) rubbama yaxruga Zeidun. (m 1)
 modal go-out Zeid

" Zeid may go out ."

26') yumkina ?an yaxruga Zeidun. (m 2)
 modal COMP go-out Zeid

" Zeid can go out ."

etc.

It has to be mentioned that most of the states of affairs expressible in language can be described either as 'epistemic possibility' or 'experiential possibility', depending on the speaker's belief with respect to what he is speaking about, and also depending on his intention-in-action of the way in which what he is saying is intended to be counted.

3.1.3. yastati:9 : Agentive Possibility

yastati:9 is best analysed in contrast to yumkin for the reason that the two modals represent a lexical dichotomy, which is contained within the meaning of the English can, i.e., yumkin would correspond to possibility-can and yastati:9 to ability-can. I have been using 'can' as a convenient translation of yumkin; to mark the distinction between the two modals, I shall use 'Can', initially capitalized, as a translation of yastati:9.

The basic, and by no means only, difference between yumkin, "can", and yastati:9, "Can", lies in what can be characterized and formulated as the speaker's intended illocutionary point. yastati:9 would be used by a speaker who intends to emphasize an agent-based possibility rather than an experientially possible occurrence of a state of affairs :

27) yastati:9a ?an yabtasima Zeidun .
 modal COMP smile Zeid

" Zeid Can smile ."

("Can" = ability-can)

It is not part of the illocutionary point, however, that the addressee is intended to expect or depend on the possibility. This is illustrated by the following corpus example :

28) ?astabi:9u ?an ?aqu:lu man ?anta, wa-lakinni lan ?af9alu.(SPW)
 I-modal COMP I-say who you , but-I Neg I-do
 " I Can say who you are, but I will not do."

The above point becomes clearer in situations where the agent is a third party, i.e., where the state of affairs is controlled by an outside agent :

29) tastabi:9a Nora ?an tatahada/da bi sab9 lu&atin . (MC,230)
 she-modal Nora COMP speak with seven languages
 " Nora Can speak seven languages ."

What the addressee is intended to do with an example like (29) is to believe that the possible occurrence of the set of states of affairs, (since it is not humanly possible for anyone to speak seven languages at the same time), is conditioned by the agent's ability, which is intended to be recognized as certain. This is contrasted with cases of 'experiential possibility' in which 'possibility' is emphasized and is intended to be expected or depended upon by the addressee.

The following is the formulation of what I call 'Agentive Possibility' shown in contrast to yumkin 'Experiential Possibility', which is repeated :

(m 2) <u>yumkin</u> : Exp. Possibility	(m 3) <u>yastabi:9</u> : Ag. Possibility
i. BEL(S, BEL(Ad, POSS(-p)))	i. BEL(S, BEL(Ad, POSS(-p)))
ii. INFORM (S, Ad, P1 & P2)	ii. INFORM (S, Ad, P1 & P2)
P1= BEL(S, ∃ x: CAUSE(x, POSS(p)))	P1= BEL(S, ABLE(A, DO(A, p)))
P2= INT (S, P3 & P4)	P2= INT (S, BEL(Ad, ABLE(A, DO(A, p))))
P3= BEL (Ad, POSS(p))	
P4= EXPECT (Ad, p)	

The two formulae just mentioned are capable of accounting for some important distinctions related to the use conditions of yumkin and yastati:9 .

3.1.31. Agentivity Condition

It is notable from (m 2) and (m 3) that the concept of 'agent' is essential to the latter and immaterial to the former. This can account for the fact that examples like the following, whose grammatical subject does not play the part of the agent, would not be acceptable if yumkin is replaced by yastati:9 :

30) ~~h~~awaadi:9a at-tari:qi yumkina ?an tu?adya ?ila al-mawti. (RK.3.9)
accidents the-road modal COMP lead to the-death

" Road accidents can lead to death/can be fatal."

@ 30') ~~h~~awaadi:9a at-tari:qi tastati:9a ?an tu?adya ?ila al-mawti .

" Road accidents Can (i.e., are able to) lead to death ."

This point is more obvious in the passive structures, which cannot be acceptable with yastati:9 :

31) yumkina ?an yu-hzama .
modal COMP he-PASS-defeat

" He can be defeated ."

@ 31') yastati:9a ?an yu-hzama .

32) yumkina ?an ya-qtani9a .
modal COMP he-PASS-convince

" He can be convinced ."

@ 32') yastati:9a ?an ya-qtani9a .

There are some rare cases, however, which may counterargue the observation presented above. The following is one of these cases :

33) *tastati:9a sayarat-i ?an tasbiqa al-qitaara .*
 it-modal car-my COMP outrace the-train

" My car Can outrace the train ."

It goes without saying that neither the car nor the train are 'agents' in any normal sense, but it can be argued that they run by means of their internal energy, (see Coates, 1983: 98, for a similar view); this seems convincing since a car/plane/etc. is used, with yastati:9, as agent only of running/flying/etc. and not in any other case. E.g., the following is unacceptable :

@ 34) *tastati:9a sayarat-i ?an taku:na yamraa? .*
 it-modal car-my COMP be red

" My Car Can be red."

3.1.32. Reliability Condition

As can be seen from the difference between (m 2) and (m 3), 'Experiential Possibility' is distinguished from 'Agentive Possibility' by what can be called 'Reliability or Expectability Condition' I.e., part of the speaker's intention-in-action, in (m 2), is to let his addressee rely on or expect the possible occurrence of the state of affairs described. This is not necessary in the latter which emphasizes the agent's ability without necessarily intending to let the addressee expect or rely on the possible occurrence of the state of affairs. This may account for the fact that yumkin-sentences, and not yastati:9-sentences, can in some cases be interpreted as indirect illocutionary acts of 'promising' . Consider the following simple exchange :

35) S1: yumkina ?an ?a9#i:-ka al-kitaaba &adan .
 modal COMP I-give-you the-book tomorrow
 " I can give you the book tomorrow ."

S2: wa9dan ?
 " Promise ?"

Such contextualization is less likely with ystabi:9, which (if it replaces yumkin) would make S2's response very odd.

To conclude, three kinds of possibility have been recognized so far: (Epistemic, Experiential and Agentive), and they have been characterized on pragmatic basis in terms of the speaker's Intentionality. The last two are distinguished from each other by having 'Reliability' and 'Agentivity' conditions, respectively. Epistemic possibility is characterized by lacking relevant experiential evidence on the part of the speaker.

3.2. LA Modal of Necessity

3.2.1. Necessity and Possibility :General Observations

It can be assumed that non-deontic necessity, (with which this section is concerned), shares with non-deontic possibility, (3.1.), the speaker's sincerity condition of belief . We have seen that in cases of possibility the speaker would have a belief, (for some evidential or experiential reasons), that some state of affairs is possible. The same observations also hold for non-deontic necessity, which is in most cases based on the speaker's belief, (for similar evidential reasons), that some state of affairs is necessary.

It will also be seen that Necessity is similar to Possibility in the way the latter has been pragmatically categorized. To illustrate, let

x and y stand for any different states of affairs contained in the sincerity condition on the part of the speaker, and consider the following three situations :

- A: The speaker may believe that y is a reasonable conclusion following from x ,which factually exists or is assumed to be factually existent in the world. In this case, the relation between y and x would be 'inferential' rather than 'causal',i.e., x may not be the cause of y in spite of the fact that it is the cause of the speaker's inferring that y . This is what I will call 'Epistemic Necessity'.
- B: In a different situation,the speaker may believe , drawing on his own or common experience, that x requires y . In this case,there would exist (in the speaker's set of beliefs) a causal relation between x and y. Since the causal relation between x and y is assumed to be part of the speaker's 'experiential belief' ,the label 'Experiential Necessity' will be used for this kind of necessity. (See also section (3.2.32), below,for detailed discussion and comparison between the term 'Experiential' and Palmer's (1979:91) 'Circumstantial')
- C: Further, the speaker may believe,in addition to B above, that the necessary occurrence of y requires some agent; this will be labelled 'Agentive Necessity',which can be considered a restricted case of 'Experiential Necessity'.

What makes the above categorization possible or acceptable is the non-accidental existence of different sub-sets of modals which seem to have been conventionalized,at least in LA, to express one kind of Necessity or another. One has to admit, however, that there are cases of 'indeterminacy',i.e., it is sometimes difficult to determine whether

the relation between, say, x and y is 'causal' or 'inferential', or whether 'agentivity' is essential for the accomplishment of a given state of affairs. The pragmatic categorization proposed so far should not ignore or exclude the indeterminate cases but should try to account for them in terms of the speaker-hearer assumptions with respect to their relative knowledge of the world. (See also Leech & Coates (1980) and Coates (1983), for a different point of view)

3.2.2. labudda : Epistemic Necessity

labudda is used in LA to express Epistemic as well as Experiential Necessity. This section discusses labudda in connection with Epistemic Necessity, as can be illustrated by the following example :

36) labudda ?anna-hu fi-l-bayti .
 modal COMP-he in-the-home

" He must be at home ."

To follow the pragmatic analysis adopted so far in this study, the speaker of an example like (36) starts from an existing state of affairs ,say x, to conclude inferentially that some other state of affairs (e.g., someone's being at home) must be the case. The premise of (36), x, can contextually be understood as 'seeing the light on in someone's house', 'seeing some indication of his arrival', etc. The full content of this example can contextually be understood as something like (36') :

36') " I can see the light on in his room, and he is always at home when the light is on, so he must be at home now."

The same argument holds for (37), which can be considered as a different way of saying (36) :

37) labudda ?anna-hu waḡala .
 modal COMP-he arrived

" He must have arrived ."

A speaker would normally be motivated to describe a state of affairs as an epistemic necessity when the following obtain :

- a) S believes, as a sincerity condition, that such a state of affairs can be inferentially concluded from some x , (i.e., another state of affairs), which exists or is assumed to exist in the world.
- b) S assumes, as part of his preparatory condition, that the state of affairs concerned is not obvious to Ad at the time of utterance, and that x , (i.e., the premise from which the state of affairs concerned would follow), is recognizable by Ad.
- c) S has an intention-in-action to inform Ad of S's belief.

This can be represented by the following modal implication, (where x is identical in each case) :

(m 4) labudda : Epistemic Necessity

- i. BEL (S, -KNOW(Ad,p) & $\exists x$: KNOW (Ad,x))
- ii. INFORM (S, Ad, P1 & P2)
 - P1= BEL (S, $\exists x$: $x \longrightarrow$ NEC (p))
 - P2= INT (S, BEL (Ad, P1)

As indicated by (m 4), what the addressee is intended to believe is not that A, below, but that B :

A: " 'It is necessary that p', (e.g., he is at home), follows from x , (e.g., the light is on)."

B: " 'The speaker's belief that it is necessary that p' follows from x ."

In other words, the existence of whatever x stands for does not cause 'the necessity of p', but it causes the speaker to infer that p is necessary. This point is particularly important for distinguishing between 'Epistemic' and 'Experiential' Necessity later in the following section.

The following corpus examples provide further illustration of labudda epistemic use :

38) ha^šihi -t-ta?irah labudda ?anna-ha šaqatāt faga?ah. (MG.72)
 this the-plane modal COMP-it fell-down suddenly
 " This plane must have fallen down suddenly ."

39) labudda ?anna sababa al-ħari:qi huwwa xallan maa. (MG.72)
 modal COMP cause the-fire COPULA fault some
 " The cause of fire must be some fault ."

In each of the above cases, the speaker starts from an existing state of affairs to conclude inferentially that some other state of affairs must be the case. The premise of (38) is contextually pointed at by the demonstrative haħihi, "this", (e.g., "given the damaged state of the aircraft, as we can see, it is reasonable to infer that...."). The inferential relation is more obvious in (39) whose reasoning may be externalized as follows : "There is fire here, and there is always a cause for every fire, so there must be a cause for this fire and the cause of this fire must be some fault."

3.2.21. Epistemic vs Experiential Necessity : General Remarks

The following example, out of context, can be interpreted as either epistemic or experiential necessity, as will be explained in a moment :

40) labudda ?an yaku:na fi-l-bayti .
 modal COMP he-be in-the-home
 " He must be at home./ He has to be at home."

When used to express 'Experiential Necessity', labudda is equivalent with yagib, and the characteristic features of 'Experiential Necessity' will be discussed in connection with yagib in the following section, (3.2.3). In the remaining part of this section, I will attempt to provide a general and informal comparison between 'Epistemic' and 'Experiential' Necessity.

Generally, the difference between these two kinds of Necessity can be accounted for in terms of how the speaker conceives of the relationship between two states of affairs, say x and y. In the case of Epistemic Necessity, y inferentially follows from x; and in the case of Experiential Necessity, x requires y. To illustrate, consider the following examples, where what x stands for is provided in brackets, and the y-part of the two sentences is identical :

41) labudda ?an yaku:na fi-l-bayti ,(an-nu:ra mudi:?a).
 modal COMP he-be in-the-home, (the-light on)
 " He must be at home,(the light is on)."

42) labudda ?an yaku:na fi-l-bayti,(walida-hu yuri:da-hu).
 (father-his want-him)
 " He has to be at home,(his father wants him)."

Normally, people go home and then switch the light on, i.e., the state of being at home (y) precedes the state of the light being on (x) . It follows that x of (41) cannot be the cause of y, but it serves to indicate, due to the speaker's belief of what he is speaking about, that y must be the case.

As for the second example, the relationship between x and y is quite different, given that the ambiguous reading of the English translation (e.g., he is at home now and his father wants him somewhere else), does

not exist in the Arabic version. I.e., the state of affairs x, in (42), is conceived of by the speaker as what makes it necessary for the coming into reality of y, (e.g., "his father wants him at home now" necessitates "his being at home at a later time"). Consider also the following examples which may reveal more clearly the relationship between y and the bracketed x, with respect to the two kinds of necessity :

43) labudda ?anna-ha :^šaa^tirah, (?anna-ha kasabata al-gaa?izah).
 modal COMP-she clever , (COMP-she won the-prize)
 " She must be very clever, (she has won the prize)."

44) labudda ?an taku:na :^šaa^titah (likey taksaba al-gaa?izah).
 modal COMP she-be clever (in-order-to win the-prize)
 " She has to be clever (in order for her to win the prize)."

In the first example which represents Epistemic Necessity, x is assumed to be existent at the time of utterance. From x, y (e.g., her being clever) is inferred to be necessarily the case at the same time. x of (44) also exists or is assumed to exist at the time of utterance, as a condition or requirement for winning the prize, (e.g., "in order for anyone to win the prize, he has to be clever"). In this sense, x requires or necessitates y . In other words, there exists or is believed to exist a causal relation between x and y in the case of Experiential Necessity, in contrast to the inferential relation which exists between x and y of Epistemic Necessity. This causal relation will be more clarified in connection with yagib, below .

3.2.3. yagib : Experiential Necessity

The extent to which the speaker is involved in what is called (in this study) Experiential Necessity can be illustrated by the following examples, (where the second is an instruction to a car-driving trainee) :

- 45) yagiba ?an ?uzaakiru , wa-?illa sa-?arsub .
 modal COMP I-study , otherwise will-fail
 " I must study, otherwise I will fail (the exam)."

- 46) yagiba ?an taqifa 9indama tara an-nura al-?amara.
 modal COMP you-stop when you-see the-light the-red
 " You must stop when you see the red light."

The use of wa-?illa, "otherwise", in (45) suggests that the necessity of p ,(i.e., the speaker's studying), arises from his wish to avoid the unpleasant result of not carrying out the action concerned. A similar interpretation can be provided for (46), where p ,(i.e., "you stop the car when you see the red light"), is necessitated by some x, (e.g., " a desire to avoid having an accident"), which is providable by the context, depending on the speaker-addressee's conversational co-operation and their knowledge of the world. The relationship between, say, x and y in the above examples is comparable to that discussed in connection with (44), reproduced below with yagib :

- 47) yagina ?an taku:na :[aa?irah, (likey taksaba al-gaa?izah).
 modal COMP she-be clever ,(in order to win the prize)
 " She must be clever (in order for her to win the prize)."

Each of the above examples is interpretable as expressing two states of affairs : one of them, y, is described as necessary by means of the modalized expression (e.g., yagib-utterance). The other, x, which may or may not be explicitly mentioned, is interpreted as necessitating or requiring y. Thus, assuming that this argument is valid, the above examples would be interpretable as :

- 48) x necessitates y .

It will be seen in a moment that (48), which corresponds to Palmer's (1979:93) account of examples similar to (45) through (47), is only

half way towards providing a descriptively accurate account for these examples.

3.2.31. 'Experiential' vs 'Circumstantial'

On Palmer's view, *x* would stand for "external circumstances" which necessitate *y*, and "there is little or no indication of the involvement of the speaker." (1979:91). Accordingly, the kind of necessity expressed is called by Palmer "neutral or circumstantial necessity", (Ibid.). On the view adopted in this study, *x*, which also stands for some external circumstances, would necessitate *y* but only relative to the speaker's belief and his knowledge of the world, (i.e., his experience, as explained in (3.1.2) and note 3). In other words, the alleged 'causal relation'⁴ which is assumed to exist between 'x' and 'necessary *y*' is not to be considered as objective (e.g., as stated in 48), but as subjective, (i.e., within the scope of S's belief), as can be stated in (48') :

48') S believes that *x* necessitates *y* .

To illustrate this point, let us assume that *x* of the following example is something like "the possibility of Ad's having an accident", which is contextually providable. (The example is supposed to be uttered by a driving trainer to his L driver) :

49) yagiba ?an tasi:ra daa?iman 9ala yami:n at-tari:qi.
 modal COMP drive always on right the-road

" You must always drive on the right side of the road."

On the view adopted in this study, 'the possibility of Ad's having an accident' does not in itself necessitate 'Ad's driving on the right side of the road', but it does so through the following :

50) i. S's relative knowledge, e.g., with respect to the traffic system in Egypt (as opposed to, e.g., that in Britain).

ii. S's experience or, more specifically, S's "experience of causation", (cf. Searle, 1983: 123). E.g., S may have experienced observing people who have had accidents for not driving on the right side of the road.

iii. S's belief or system of belief which is based on (i) and (ii).

This point can be clearer with past-time examples :

51) kaana yagiba ?an yuzaakira Zeidun, likey yangaŋa .
 PAST modal COMP study Zeid , in order to succeed
 " Zeid had to study in order to succeed ."

It can be assumed that x of (51) is interpretable as "Zeid's past desire to succeed", and y is "Zeid studied"; but it cannot rightly be said that there exists an objective causal relation between 'x' and 'necessary y'. E.g., it is possible that Zeid has in fact studied for the sake of studying, i.e., without being aware of having a particular desire to succeed. This may show that the speaker can go wrong in his beliefs, but it does not invalidate the fact that the speaker expresses, by his uttering of (51), a causal relation between 'x' (i.e., Ad's desire to succeed) and 'necessary y' (i.e., Zeid had to study). This is the kind of relation which has been informally stated in (48'), repeated below, and can be formalized as (48'') :

48') S believes that x necessitates y .

48'') BEL (S, $\exists x$: CAUSE (x, NEC (p)))

It would seem from the above argument that the causal relation between x and y is best regarded as part of the speaker's Intentionality,

(i.e., 'Experiential'), rather than as objective or (in Palmer's terms) 'Circumstantial'. The present view would also be in keeping with Searle's general treatment of what he calls Intentional causation, (Searle, 1983: Chapter 4). which is concerned with "ordinary causal explanations having to do with human mental states, experiences and actions", (Ibid.:118). It is for emphasizing the subjective interpretation of x, (i.e., the external circumstances), that the term 'Experiential' is used in this study in preference to Palmer's 'Circumstantial', which may suggest an objective interpretation of whatever x stands for. (See also notes 3 and 4)

3.2.32. Contextualizing External Circumstances

An example like the following would normally be interpreted, depending on the context, as an externalization of the speaker's belief that there are some external circumstances motivating or necessitating "his going out" :

52) yagiba ?an ?axrugu .
 modal COMP I-go out
 " I must go out ."

In most cases, where the addressee is not assumed to be contextually informed, the speaker's believed circumstances would normally be indicated in the utterance, e.g.:

52') yagiba ?an ?axrugu, likey ?a { tarya sagaa?ira .
 modal COMP I-go out, so-that I-buy cigarettes
 " I must go out to buy cigarettes ."

The following are corpus examples in which the speaker's believed circumstances are explicitly mentioned :

53) likey yanga/ha fari:qan, yagiba ?an yata9aawana ?afraada-hu. (AK.3.20)
to succeed team , modal COMP co-operate members-its

" In order for a team to win, its members must co-operate."

54) ?as-salaamu la-hu lamana, yagiba ?an tadfa9a-hu Israel. (MhG.3.17)
the-peace has price , modal COMP pay-it Israel

" Peace has a price which Israel must pay ."

It has to be mentioned that although labudda seems to be interchangeable with yagib in the above examples, without change in meaning, there are no corpus examples , in my data, in which labudda is used with the necessitating circumstances made explicit.

The Experiential Necessity presented so far can be captured by the following modal implication, where x stands for the external circumstances :

(n 5) yagib : Experiential Necessity

i. BEL (S, -BEL(Ad, NEC(p)))

ii. INFORM (S, Ad, P1 & P2)

P1= BEL (S, \exists x: CAUSE (x, NEC(p)))

P2= INT (S, BEL (Ad, P1))

3.2.33. yagib and yanba&i

In so far as simple sentences (the main concern of this chapter) are concerned, yagib and yanba&i are interchangeable without any change in meaning. Difference between these two modals will be revealed in connection with 'tense', 'negation' and 'interrogation' in the following chapters.

3.2.4. yagib-9ala and 9ala : Agentive Necessity

Agentive Necessity, as expressed by 9ala or yagib-9ala (i.e., a combined modal of yagib and 9ala), can be considered as a restricted case of Experiential Necessity as formulated in (m 5). According to the restricted version, there has to be an 'agent' responsible for bringing about the state of affairs believed by the speaker to be necessary. This may account for the fact that 9ala, as observed in the Introduction, is normally suffixed with a pronoun correferential with the subject of the main verb, which has to be an 'agent' and not simply a grammatical subject. The 'agentivity condition', in this sense, is not necessary for similar Intentional meanings expressed with yagib. To illustrate this point, consider the following, (55a-c), compared to their passive counterparts, (56a-c), where only a-examples are yagib-experiential necessity :

- 55) a) yagiba ?an taftaħa al-baaba .
 modal COMP you-open the door
 " You have to open the door."
- b) 9ala-yka ?an taftaħa al-baaba .
 modal-you COMP open the-door
 " You have to, and it is your responsibility to see to it that you do, open the door."
- c) yagiba-9ala-yka ?an taftaħa al-baaba.
 COMB-modal-you COMP open the-door
 "You have to, and it is your responsibility to see to it that you do, open the door."
- 56) a) yagiba ?an yu-ftaħa al-baab-u
 modal COMP PASS-open the-door-SUB
 " The door must be opened."
- * b) 9ala- al-baabu ?an yu-ftaħa .
 modal the door COMP PASS-open

- 56) *c) yagiba-9ala- al-baabu ?an yu-ftaħa .
 COMB-modal the door COMP PASS-open

Examples (56 b-c) are not acceptable for the simple reason that it not conceivable that the door can be the responsible agent for the act of opening itself. The same pattern can also be seen with non-agentive verbs like ta-mu:t, "you-die", compared to its agentive counterpart , ta-qtula nafsa-ka, " you-kill yourself" . Compare the following two pairs of examples :

- 57) a) yagiba ?an tamu:ta .
 modal COMP you-die

" You must die ."

- * b) yagiba-9ala-yka ?an tamu:ta .
 COMB-modal-you COMP you-die

- 58) a) yagiba ?an taqtula nafsa-ka .
 modal COMP kill yourself

" You must kill yourself."

- b) yagiba-9ala-yka ?an taqtula nafsa-ka.
 COMB-modal-you COMP kill yourself

" You have to, and it is your responsibility to see to it that you do, kill yourself."

It must have been noticed that 9ala and yagiba-9ala are given the same translation, i.e., they express identical meaning. Before going into formulating this modal meaning of Agentive Necessity, I want to raise the point that 9ala is an elliptical version of yagib-9ala. This assumption can be supported^{by} negation and interrogation tests, where, as will be seen, negative and interrogative transformations are applicable only to the non-elliptical version. (For translation convenience, I shall use - only in the following tests - HAVE TO, fully capitalized,

to stand for the agentive-meaning of 9ala or yagib-9ala)

Negation Test

Examples like (59a) and (60a) cannot be formally negated, (pre- or post- modally), unless they are restored to their non-elliptical forms, i.e., examples (d) and (e), below :

59) a) 9ala-yka ?an taxruga .
modal-you COMP go-out

" You HAVE TO go out ."

*b) laa 9ala-yka ?an taxruga .
Neg modal-you COMP go-out

*c) 9ala-yka ?al-laa taxruga .
modal-you COMP-Neg go-out

d) laa yagiba-9ala-yka ?an taxruga .
Neg COMB_modal-you COMP go-out

" You HAVE TO not-go out ." (Negation will be discussed in chapter 5)

e) yagiba-9ala-yka ?al-laa taxruga .
COMB-modal-you COMP-Neg go out

" You HAVE TO not-go out."

The same also applies to (60a) which is negated only in its non-elliptical forms :

60) a) 9ala-yka ?an tabqa .
modal-you COMP stay

" You HAVE TO stay ."

b) yagiba-9ala-yka ?al-laa tabqa .
COMB-modal-you COMP-Neg stay

" You HAVE TO not-stay ."

c) laa yagiba-9ala-yka ?an tabqa .
Neg COMB-modal-you COMP stay

" You HAVE TO not-stay ."

Interrogation Test

Asking about whether the states of affairs expressed in (59a) and (60a) exist is normally uttered . . . by the following non-elliptical forms, (i.e., a-examples), compared to their b-,elliptical, counterparts :

61) a) hal yagiba-9ala-yka ?an taxruga ?
Q COMB-modal-you COMP go-out

" Do you HAVE TO go out ?"

*b) hal 9ala-yka ?an taxruga ?
Q modal-you COMP go-out

62) a) hal yagiba-9ala-yka ?an tabqa ?
Q COMB-modal-you COMP stay

" Do you HAVE TO stay ?"

*b) hal 9ala-yka ?an tabqa ?
Q modal-you COMP stay

The observation gained from the negation and interrogation test just applied makes it sensible to postulate that 9ala-structures are elliptical forms of yagiba-9ala; and that the elliptical form of yagiba-9ala is optionally applicable only in non-negative declarative sentences .

3.2.41. Formalization

As briefly mentioned at the beginning of this section, Agentive Necessity, as expressed by yagiba-9ala, can be considered as a restricted version of Experiential Necessity, as expressed and formulated as (m 5). This may well be reflected on the fact that the modal implication of the former is a slightly modified version of (m 5), which is repeated below :

(m 5): Experiential Necessity

- i. BEL (S, -BEL (Ad, NEC(p)))
- ii. INFORM (S, Ad, P1 & P2)
- P1= BEL(S, \exists x: CAUSE(x, NEC(p)))
- P2= INT (S, BEL (Ad, P1))

(m 6): Agentive Necessity

- i. BEL (S, -BEL (Ad, NEC(p)))
- ii. INFORM (S, Ad, P1 & P2)
- P1= BEL(S, \exists x: CAUSE(x, NEC(p by A)))
- P2= INT (S, BEL (Ad, P1))

The only difference between (m 5) and (m 6) lies in the speaker's intention of getting his addressee to recognize or believe that x, (e.g., the external circumstances), not only causes or activates p, but it requires an agent to perform whatever p stands for.

I have also to say that the only motivation for formulating a separate modal implication for Agentive Necessity, (e.g., instead of conflating it with Experiential Necessity), is due to the existence, in LA, of a specially conventionalized form, yagiba-gala, for expressing the restricted version of Experiential Necessity.

3.3. Concluding Observations

In attempting to provide a systematic account of the meaning of LA modality in terms of the speaker's Intentionality, (cf. 2.3.21), it has been observed that LA modality is pragmatically categorizable into :

- 1)
 - a) Epistemic Possibility,
 - b) Experiential Possibility,
 - c) Agentive Possibility,
- 2)
 - a) Epistemic Necessity,
 - b) Experiential Necessity, and
 - c) Agentive Necessity.

The above modal names have been coined as useful labels to be indicative of the different Intentional implications associated with each label .

It has also been observed that the Possibility/Necessity distinctions, mentioned above, share the characteristic of being based on the speaker's sincerity condition of belief,(cf. 1.2.22) . This is to be contrasted with the deontic modal distinctions,(chapter 7), which are based on the speaker's sincerity condition of desire .

The different assumptions which would give rise to the speaker's varied degrees of belief and his intention-in-action,(1.2.21), to convey the content of his belief have been the basic criteria for the above pragmatic categorizations.

It has also been observed that there are some borderline or indeterminate cases which tend,for contextual reasons, to shift their meaning from one category to another. It has been argued,(cf. 2.2.31), that such cases can be accounted for in terms of the context of use, since they pose no problems for the native speakers.

To conclude, This chapter has attempted to provide a systematic picture of Modality as an expression of the speaker's attitudes towards the state of affairs described and the addressee of the utterance. Such attitudes are represented in terms of mental states,(e.g., belief , intention, etc.), which interact with each other to produce the modalized utterance by means of a complex intention-in-action,(2.3.35). The modalized utterance,which is considered as an assertive illocution, is then analysed as an externalization of the speaker's respective set of attitudes,as explained above,(see also 6.1.2). The different formulae are intended to show how the speaker's attitudes are related to each other in the Intentional production of the modalized utterance.

Chapter Three

NOTES

- 1) It has to be mentioned that the English modals used in the example-translations are chosen for meaning approximation rather than meaning equivalence. In most cases, the meaning of LA modals would better be understood from their modal implications and the discussion following rather than from the English translations.
- 2) This translation may sound awkward, specially when may is not (in this particular translation) as contextualized as rubbama for expressing the meaning of 'sometimes'. But see Palmer (1979:22 and 153-4) for the different uses of may and can to express 'Existential Modality', i.e., the meanings of 'some' and 'sometimes'. Palmer attempts to establish a relationship between 'Epistemic Modality' and 'Existential Modality', an effort which is beyond the scope of the present study.
- 3) The term 'Experiential' is used in this study in the sense in which it is frequently used by Halliday in connection with the content of what is said. (See, e.g., Halliday, 1980:34-6, for bibliographical details of the use of this term). It is also used in the sense of Searle, (1983), which is not essentially different from that of Halliday. (See note 4, below).

According to Halliday, (1980:34), language serves for the expression of content through two functions : Logical Function and Experiential Function. It is through the Experiential Function that :

"the speaker or writer embodies in language his experience of the phenomena of the real world; this includes his experience of the internal world of his consciousness: his reactions, cognitions and perceptions and also his linguistic acts of speaking and understanding."

In this sense, 'Experiential' implies the subjectification of the outside world to the speaker's perceptions. Accordingly, the content of what is said indicates not the world as it in fact is, but the world as perceived or experienced to be, (e.g., by the speaker or the speaking community through common experience).

The use of the term 'Experiential' in this sense is in keeping with the Intentional approach adopted in this study, in which the speaker's belief about the outside world, and not the outside world in itself, plays an important part in determining the Intentional meaning of the content of what is said, i.e., the total signification of the utterance. (See also Searle's (1983:123) interpretation of what he calls "experience of causation") I argue later, (3.2.31), that the use of 'Experiential' as a label for NECESSITY is more suited to the present approach than Palmer's (1979) 'Circumstantial', which may imply that the content of what is said is determined by the outside world.

- 4) For detailed discussion of the Standard (Humean) Theory of Causation and its relation to Intentionality, see Searle's (1983) chapter four on 'Intentional Causation'. For the purpose of this study, an informal distinction can be made between 'objective causal relations' and 'subjective causal relations'. The former has nothing to do with Intentionality, but it can be briefly described as follows: Objective causal relations "exist between permanent states of affairs and features of objects", (Ibid. :116). They explain universal regularities, (e.g., "objects are attracted to the centre of the earth by gravity", "metals expand by heat", etc.), which can be accounted for in terms of a general law of causation.

Within the framework of Intentionality, Searle introduces the term causings, (i.e., subjective causal relations), which indicates "very ordinary causal explanations having to do with human mental states, experiences and actions", (Ibid. 118. Emphasis in the original). These causal explanations can be illustrated by statements like "I drank water because I was thirsty.", "He had an accident because he was driving on the wrong side of the road.", etc. Causings or subjective causal relations, in this sense, constitute an essential component within Searle's Theory of Intentionality, since "every experience of perceiving or acting is precisely an experience of causation.", (Ibid.: 123-4). It may be worth mentioning that the notion of 'experience' is a key term in Searle's Intentional Causation. This may provide further support for my choice of the term 'Experiential' to indicate the kind of Necessity/Possibility, as believed or experienced by the speaker rather than as objectively existent in the world. (See also note 3)

Chapter Four

Tense and Modality in LA4.0. Introductory: Tense in Classical Arabic

This section is provided only to show how little from Classical Arabic studies can be taken as a point of departure for studying Tensed Modality in LA .

According to Classical Arabic grammar textbooks, Arabic has three tenses, termed as follows :

- a) fi9l ma:di, "verb of past or Perfect", expressing past-time, e.g., kataba, "(he) wrote"
- b) fi9l mu9a:ri9, "verb of present or Imperfect", expressing present or future time, e.g., yaktuba, "(he) writes"
- c) fi9l ?amr, "verb of command or Imperative", expressing future time, e.g., ?uktub, "write".¹

Very recently, however, Professor T. Hassaan and some of his students have become dissatisfied with the above oversimplification², a dissatisfaction that is strongly felt in Hassaan's work (1979) on the meaning and structure of Arabic. He observes that the so-called semi-verbs in traditional Arabic grammar, (e.g., kaana, "be", kaada, "be about to", etc), are in fact ?af9aal jiha, "verbs of modality", used to express different modal and aspectual meanings³. The following are Hassaan's findings translated into English, with his own examples⁴ :

<u>A: Past-time modalities</u>	<u>Examples</u>
--------------------------------	-----------------

- 1) Interrupted remote past: kaana kataba, "he wrote/had written"⁵

- 2) Interrupted near past: kaana qad kataba, "he had written"
 3) Renewable past : kaana yaktuba, "he was writing"
 4) Past ending at present: qad kataba, "he has written/did write"
 5) Past related to present: ma^ʕala yaktuba, "he has been writing"
 6) Continuous past : ʕalla yaktuba, "he continued to write"
 7) Simple past : kataba, "he wrote"
 8) Prevented past : kaada yaktuba, "he almost wrote"
 9) Past of involvement: tafaqa yaktuba, "he was busy writing"

B: Present-time modalities

- 10) Renewable present : yaktuba, "he writes (habitually)"
 11) Continuous present : yaktuba, "he is writing"

C: Future-time modalities

- 12) Simple future : yaktuba, "he writes "
 13) Near future : sa-yaktuba, "he is going to write"
 14) Remote future : sawfa yaktuba, "he will write"
 15) Continuous future : sa-ya^ʕilla yaktuba, "he will go on writing"

I have to mentioned that beyond Hassaan's labels, (e.g., Interrupted remote past, etc.), and their respective examples, (e.g., kaana kataba, etc), no discussion is provided to justify the validity of this classification.⁵

4.0.1. Preliminary Assumptions

For the purpose of the present chapter, we can start with the following, as preliminary assumptions :

- i. Past, present and future time are expressible in LA.
- ii. Past-time is expressed by kaana (qad)+ Perfect OR kaana + Imperfect.

iii. Present-time is expressed with the Imperfect.

iv. Future-time is expressed with sa/sawfa + Imperfect.

It would seem, from the above assumptions, that the Imperfect is so central in LA that it is used to express not only present and future, but past-time as well, (e.g., examples (3) and (5) above). In the following, the meaning of the modals will be discussed in connection with sentences which would, in their pre-modalized form, express either past-time or future-time, i.e., sentences with Perfect or kaana+Imperfect and sentences with sa or sawfa, respectively). This requires a brief mention of these pre-modalized structures.

4.0.2. Perfect and kaana+Imperfect

The grammatical meaning of these two structures can well be represented, informally, by the English glosses of A and B compared to the present-tense sentence, (1), below :

1) Zeidun yabtasima . " Zeid smiles/is smiling."

A) Perfect : Zeidun ?ibtasama . " Zeid smiled/has smiled."

B) kaana+Imperfect: Zeidun kaana yabtasima ."Zeid was smiling/used to smile."

Three points related to (A) and (B) have to be mentioned. i) What is expressed in English as 'Perfect Present', 'Progressive Present', etc. is not expressed grammatically in LA, although it is always predictable from the context. ii) LA modals do not express 'Habitual' or 'Progressive' in the way other LA verbs do. kaana+modal cannot therefore be expected to express the meaning glossed for (A) and (B). iii) Finally , although questions related to word-order in LA will be ignored in this

study, it should be mentioned that LA has the following structural variations for the above examples⁶, where Z stands for Zeid :

S (<u>kaana</u>) V	(<u>kaana</u>) V S	<u>kaana</u> S V
Z <u>yabtasima</u> .	<u>yabtasima</u> Z
Z <u>?ibtasama</u> .	<u>?ibtasama</u> Z
Z <u>kaana yabtasima</u> .	<u>kaana yabtasima</u> Z.	<u>kaana</u> Z <u>yabtasima</u> .

4.0.3. sa- and sawfa , "future-time markers"

Structurally, sa- and sawfa precede the main verb whether in S V or V S pattern. Thus, example (1), above, would be formed as follows :

- 1') a) Zeidun sa-yabtasima . " Zeid is going to smile."
 b) Zeidun sawfa yabtasima. "Zeidun will smile."

4.1. The Effect of Tense on Modality

In the preparation of the present chapter, it has been observed that the meaning of the different modals is considerably affected when they are used with the 'Perfect' or 'kaana+Imperfect'. E.g., rubbama and qad are no longer interchangeable, and the former would express, among other things, a meaning which can justifiably be conflated with 'Epistemic Necessity' rather than 'Epistemic Possibility'. For this reason this chapter is forced to look like a list of modal entries, i.e., each section deals with the various meanings of one modal and, when appropriate, compares it with other modals.

4.2. rubbama

As interchangeability between rubbama and gad does not go beyond their use with imperfect verb forms (chapter 3), each will be dealt with in a separate section. This section deals with rubbama when it is used with Perfect, kaana+Imperfect and sawfa+Imperfect.

4.2.1. rubbama with Perfect Verb Forms

When rubbama is used with the Perfect, out of context as in (2), the result is an ambiguous sentence with two readings roughly represented by the English translations (a) and (b), below, where x stands for any state of affairs assumed to be the case at the time of utterance :

2) rubbama ?ibtasama Zeidun .
 modal smiled Zeid

a) "Zeid must have smiled (, that is why x)."

b) "It is still possible for Zeid to smile."

Example (2) can easily be disambiguated if followed by (3a and b) for the two readings, respectively :

3) a)..... 9indama sama9a al-xabara.
 "..... when he-heard the-news."

b)..... 9indama yasma9a al-xabara.
 "..... when he-hears the-news."

The distinction between these two readings is more strongly felt with activity verbs, as in the following examples, which are identical except for the bracketed conjuncts :

4) a) rubbama wagada Zeidun nuqu;da-hu (wa raḥala).
 modal found Zeid money-his (and left)
 "Zeid must have found his money(and left)."

- 4) b) rubbama wagada Zeidun nuqu:da-hu (qabl ?an yarhala).
 modal found Zeid money-his (before he leaves)
 " It is still possible for Zeid to find his money
 (before he leaves)."

For convenient reference to the two rubbama-readings (and for lack of better labels), let the former, (a), be called 'rubbama-perfect necessity' or rPN for short, and the latter, (b), 'rubbama-perfect possibility' or rPP.

4.2.2. rubbama-perfect necessity reading (rPN)

With rPN, (a-examples above), there is always the implication that p, (the propositional content qualified with rubbama), is believed to be a reasonable conclusion to account for a state of affairs, say x, which is believed by the speaker (and possibly assumed to be recognizable by the addressee) to be the case at the time of speech. Accordingly, a full specification of the content of (4a) would be something like (4a') :

4a') " I believe that Zeid was prevented from leaving, which he so much wanted, because he had lost his money; now that he is not here, it is reasonable to think that he must have found his money and left."

On this account, rubbama, in its rPN reading, would have a meaning similar to that formulated for labudda-Epistemic Necessity, repeated below :

(m 4) : Epistemic Necessity

INFORM (S, Ad, P1 & P2)

P1= BELIEVE (S, 'NECESSARY(p)')

P2= INTEND (S, 'BELIEVE (Ad, $\exists x:x \longrightarrow$ NECESSARY(p))')

What x stands for is to be understood as part of the context assumed to be recognizable by the addressee, as can be illustrated by the following corpus examples :

- 5) rubbama .. xuyyala li-qyaadati Israel ?anna-ha
 modal was-imagined by-leaders-of Israel COMP-she
 bi-l-qaraari -l-gadi:d tatahadda al-9aalama . (SK.3.25)
 with-the-decision the-new challenging the-world

" It must have been imagined by the government of Israel that they are challenging the world with their new decision."

- 6) rubbama ?adraka al-mu?alifu ?anna hadi:9a-hu ?afdaala
 modal realized the-author COMP talk-his better
 min ?ibdaa9a-hu . (SPY)
 than creation-his

" The author must have realized that his (critical) talks are better than his (dramatic) creation."

According to the contexts from which the above examples are taken, x of (5) is apparently the "new decision" which is assumed to have been publically announced at a time earlier than that of speech. And x of (6) is the fact, (contextually known to both speaker and addressees), that the "author" has not been writing plays for a very long time and has, instead, taken to writing about other people's plays.

It has also to be mentioned that there would not be any change in meaning if rubbama is replaced by labudda in the above examples. This can be shown by the following simpler example :

- 7) a) rubbama xaraga Zeidun .
 modal go-out Zeid
 "Zeid must have gone out."

- 7) b) labudda ?anna xaraga Zeidun.
 modal COMP go-out Zeid
 " Zeid must have gone out."

The only difference, in (7 a-b), is in the structural pattern, because labudda is normally followed by a complementizer.

Another general difference between the two modals is that, out of context, rubbama would be ambiguous between rPN and rPP, but labudda would have only the rPN reading.

4.2.3. rubbama-perfect possibility reading, (rPP)

With rubbama-perfect possibility reading, rPP, there is always the implication that the speaker wants to assure someone, (who desires, but is in doubt about, the possibility of p), that p is still-possible. The pragmatic effect of the use of rubbama to express this reading may well be similar to the use, in English, of may still or may yet in sentences like he may still come or he may yet come. Hence the hyphenation in the English double quoted translation below :

- 8) rubbama ?ibtasama Zeidun 9indama yasma9a al-xabara
 modal smiled Zeid when he-hears the-news
 " Zeid may-still smile when he hears the news."

The meaning conveyed by rPP is not essentially different from the meaning of rubbama-Epistemic possibility, as discussed in chapter 3. The only possible difference can be attributed to the preparatory condition, (i) in (m 1) repeated below, which has to be modified, as (i'), in order to account for the pragmatic 'effect' just mentioned:

(m 1): rubbama-Epistemic Possibility

i. BELIEVE (S, 'BELIEVE (Ad, POSS(-p))')

ii. INFORM (S, Ad, P1 & P2)

P1= BELIEVE (S, '-]x: CAUSE(x, -POSS(p))')

P2= INTEND (S, 'BELIEVE (Ad, POSS(p))')

i'. BELIEVE(S, [DESIRE (Ad, p) & BELIEVE(Ad, POSS(-p))])

To provide a pragmatic evidence for (i'), the following are two successive examples from the same text, in a situation where the addressees, after having been waiting for hours to know from the "author" why he has been silent for a long time (i.e., their desire for p is frustrated), start thinking of the possibility that he is not going to talk and propose to leave. The speaker utters the following to persuade them not to leave :

9) rubbama ?agaaba al-mu?alifu ba9d sanawaatin min as-?amt. (SPY)
 modal replied the-author after years of silence

" It is still possible for the author to reply after these years of silence."

10) rubbama ?agaaba bi-?ayyu ?an na-fhama . (SPY)
 modal replied so-that COMP we-understand

" He may-still reply in order for us to understand."

4.2.4. rubbama and kaana+imperfect

There is an interesting peculiarity about rubbama with kaana+imperfect, stemming not from rubbama, but from a familiar use of kaana+imperfect. It is well known among Arabic grammarians (down to Secondary

School students) that when kaana is used in a sentence like :

- 10) Zeidun kaana yabtasima .
 "Zeid was smiling."

The sentence components are analysed or parsed as follows :

- i. "Zeidun" : ?ism kaana, "(lit.) the name of kaana."
- ii. kaana : fi9l maa'i, "verb of past OR Perfect verb form"
- iii. yabtasima : xabar kaana, "news of kaana". yabtasima is further parsed as (iv).
- iv. yabtasima : imperfect verb form functioning as kaal, "adjectival describing a state".

Odd as it might be seen, rubbama with kaana+imperfect would be interpreted as :

rubbama + Perfect + Adjective/Adverb

This can be supported by the fact that an imperfect like ya9mala, "works", in (11) acquires an adjectival function and becomes interchangeable with adjectives like maʃ&u:lan, "busy" or mari:dan, "ill", in (12 a-b).

- 11) rubbama kaana Zeidun ya9mala 9indama zurta-hu.
 modal kaana Zeid working when you-visited-him
 " Zeid must have been working when you visited him (this would explain why he didn't pay attention to your visit)"
- 12)a) rubbama kaana Zeidun maʃ&u:lan 9indama zurta-hu.
 " Zeid must have been busy when you visited him."
- b) rubbama kaana Zeidun mari:dan 9indama zurta-hu.
 " Zeid must have been ill when you visited him."

On the account demonstrated above, rubbama + kaana-imperfect can be dealt with as a special structure of rubbama-perfect, where the perfect is the copula, kaana.

4.2.5. rubbama kaana vs rubbama-perfect

Dealing with kaana as a perfect copula expressing (in combination with rubbama) epistemic necessity, rPN would inevitably raise the question whether kaana, which is grammatically perfect, would be used to express a rubbama-possibility reading, rPP. The answer to this question cannot be positive for the simple reason that kaana (in combination with rubbama) is not acceptable if reference is made to future time. Compare :

13) rubbama ?ibtasama Zeidun &adan.
 modal smiled Zeid tomorrow
 " Zeid may-still smile tomorrow."

*14) rubbama kaana yabtasima Zeidun &adan .
 modal kaana smiling Zeid tomorrow
 * " Zeid must have been smiling tomorrow."

I have also to say that (14) cannot possibly be translated into "Zeid may-yet be smiling tomorrow." because kaana is normally understood as indicating past-time.

4.2.6. rubbama with sawfa

The use of rubbama with the future-time marker, sawfa, is not essentially different from rubbama-imperfect. If it is produced, which is possible but very rare, it would be interchangeable with the latter :

15) rubbama yabtasima Zeidun.
 " Zeid may smile ." (epistemic may)

16) rubbama sawfa yabtasima Zeidun .
 modal FUTURE smile Zeid

" It is possible that Zeid will smile."

I cannot find any difference between (15) and (16), this may be attributed to the fact that rubbama+imperfect, (like the modals in general), is likely to imply futurity. What I have to say is that although examples like (16) are possible and acceptable, they are not normally used. I have not seen a single example in the various sources of my corpus, and I prefer using rubbama+imperfect to using rubbama sawfa. This may be a common tendency among Arabic speakers.

4.3. yumkin and yastati:9 with kaana-imperfect

With kaana-imperfect, yumkin and yastati:9 are more or less interchangeable, specially with examples which are not agentivity-sensitive. The following section will discuss other uses of yastati:9, specially in its perfect form, ?istata9. Recall that, for syntactic reasons discussed in the Introduction, yumkin or yastati:9 cannot be followed by kaana, e.g., LA modal verbs can be followed only by COMP-imperfect and kaana is grammatically perfect. The structural pattern expected would invariably be (A) and not (B) :

A: kaana yumkin / kaana yastati:9

B: *yumkin kaana / *yastati:9 kaana

I have also to mention that for expository convenience only yumkin will be used in this section, with the understanding that it is interchangeable with yastati:9 in the examples provided.

The nearest English translation of kaana yumkin is "it was possible for to...", which may not share the pragmatic implication of the LA expression, as will be seen in a moment :

17) kaana yumkina ?an yaxruga Zeidun .
 PAST modal COMP go-out Zeid
 " It was possible for Zeid to go out."

18) kaana yumkina ?an yabtasima Zeidun .
 PAST modal COMP smile Zeid
 " It was possible for Zeid to smile."

Neither of the above examples tells us about the actualization of the state of affairs in the past. Each of them can be followed by either (a) or (b) in the following :

19) a)....., wa qad fa9ala .
 "....., and he actually did."
 b)....., wa lam yaf9ala.
 "..... , and he did not."

Con conversationally, however, the above examples would have an implicature, (in the sense of Grice's (1975)), that what was possible in the past is no longer possible at present. Consider the following corpus examples which are, (in their contexts), lamenting the reality obtainable at the time of speech :

20) fi ma-mada, kaana yumkina ?an ta-nṣiḥa ash-shabaaba. (MhG.3.29)
 in-the-past, PAST modal COMP you-advise the-youth
 " In the past, it was possible to give advice to young people!"
 21) qabl -aalika, kaana yumkina ?an na-ṣila ?ila ḥallan. (StoPK)
 before that, PAST modal COMP we-arrive to solution
 " Before that (happened), it was possible for us to solve the problem."

The pragmatic implication of kaana-yumkin can be better understood in the following invented dialogue between two speakers looking at a teenager smoking while talking with his father. The second speaker had the same experience as a teenager:

22)

S1 : ?al-?aan yudaxina al-waladu ?amaama walida-hu, hal kaana yumkina
 now smokes the-boy before father-his, Q PAST modal

?an yahdu[∅]a haa[∅]a fi ma-ma[∅]a ?
 COMP happen this in-the-past

" Now, the boy (generic) smokes in front of his father, was that possible in the past ?"

S2: ??(1) : na9ama, kaana yumkina .

"Yes, it was possible."

(2) : ?a9taqidu ?anna haa[∅]a kaana yahdu[∅]a ?ahyaanan .
 I-believe COMP this PAST happen sometimes

" I believe that it happened sometimes ."

In trying to construct the situation and act the part of S2, I have found myself unable to use (1) as an answer without being conversationally aggressive or at least disappointing, since by using kaana-yumkin in his question, S2 sounds protesting and expecting a negative answer. Hence the preparatory, ?a9taqidu, "I-believe", is a polite preliminary step towards providing a disappointing positive answer.

Apart from the problem of interrogatives which will be discussed in chapter six, it seems to be the case that the LA speaker uses kaana-yumkin when he intends (at least conversationally) to convey to his addressee the belief that what was possible in the past is no longer possible at the time of speech.

4.3.1. sawfa yumkin : future possibility

sawfa can be used with yumkin or yastati:9 to express future possibility in a conditional sense :

- 23) sawfa yumkina ?an yaxruga Zeidun &adan .
 FUTURE modal COMP go out Zeid tomorrow
 " It will be possible for Zeid to go out tomorrow."
- 24) sawfa yastati:9a ?an yaxruga Zeidun &adan .
 FUTURE modal COMP go out Zeid tomorrow
 " Zeid will be able to go out tomorrow."

The "conditional sense" can be explained by the fact that what is regarded as future possibility may or may not be possible at the time of speech, this is not part of the speaker's intention. What the speaker, of a sawfa-yumkin utterance, intends to convey is that the future possibility concerned obtains, given some contextually recognizable conditions, (e.g., the time, facilities, etc.). Thus a contextually reasonable interpretation of the content of (23) would be something like (23') :

- 23') " It will be possible for Zeid to go out tomorrow if he has got the time, expenses, etc."

What has to be emphasized is that, (in the above examples which represent the use of sawfa with yumkin/yastati:9 in general), possibility is within the scope of futurity. This is revealed in the syntactic structure, which would not be acceptable if yumkin or yastati:9 precedes sawfa :

- * 23'') yumkina sawfa ?an
- * 24'') yastati:9a sawfa ?an

4.4. ?istata9 ,i.e., the Perfect of yastati:9

It has been mentioned,(see Introduction),that yastati:9 is the only modal verb in LA which has a perfect form,i.e., ?istata9 .This section discusses the different implications of ?istata9 in contrast to kaana-yastati:9,which is equivalent to kaana-yumkin .

4.4.1. ?isata9 vs kaana-yastati:9

The corpus offers example (25),which is reproduced as (26) to show the difference in meaning between the two structures :

25) ?istata9a al-?imbarator ?an ya?raqa al-ma9bada. (MC.25)
perf-modal the-emperor COMP set-to-fire the-temple

" The emperor could(and did) burn the temple."

26) kaana yastati:9a al-?imbarator ?an ya?raqa al-ma9bada.
PAST modal the emperor COMP burn the-temple

" It was possible for the emperor to burn the temple."

As is obvious from the translations,whereas (26) is neutral with respect to the actuality of the proposition "the emperor burnt the temple", (25) cannot be uttered by a speaker who is not committed to the truth of the unmodalized proposition found in this sentence. The following is another ?istata9a-example from the corpus :

27) ?istata9a Galileo ?an yan?ura na?ariyata-hu. (MC.27)
perf-modal Galileo COMP make-known theory-his

" Galileo could(and did) make his theory known ."

It would be more illuminating to compare an ?istata9-sentence to its unmodalized counterpart. For this purpose a simpler example will be used :

28) 28) ~~Y~~araqa Zeidun al-kitaaba .
 burnt Zeid the-book
 " Zeid burnt the book ."

29) ?istata9a Zeidun ?an ya~~y~~araqa al-kitaaba .
 perf-modal Zeid COMP burn the-book
 " Zeid could (and actually did)burn the book." ⁷ OR
 " Zeid managed to burn the book."

Sentence (28) simply asserts a proposition that actually,(in so far as the speaker is committed to its truth),took place at a moment earlier than that of speech. Sentence (29),in addition to asserting the same proposition,conveys the following pragmatic implications :

- 30)a) Zeid burnt the book intentionally .
 b) He burnt it through his ability.
 c) The burning of the book was not expected,for one reason or another.

In other words,an ?istata9-sentence contains four implicated components : actuality,intentionality (on the part of the agent),ability and counter-expectation. As 'ability',which is part of 'agentivity', has been discussed in connection with the imperfect yasta9i:9, the rest of this section will discuss the three other components .

4.4.2. Actuality

The existence of the actuality component in ?istata9-sentences can be illustrated by the following contradictions,(29) stands for its respective sentence :

@ 31) (29) wa lam ya~~y~~araqahu .
 ".... and he did not burn it."

- @ 32) ?ista~~t~~a9a Zeidun ?an yabi:9a al-kitaaba,wa lam yabi:9a-hu.
 perf-modal Zeid COMP sell the-book, and Neg sell-it
 "Zeid could(and did)sell the book,and he did not sell it."

4.4.3. intentionality

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That the agent's intentionality is implied by ?ista~~t~~a9 and not by unmodalized structures can be shown by the contradiction of (33 a) in contrast to (33 b) ,which is acceptable :

- 33)@a) ?ista~~t~~a9a ?an ya~~h~~araqa al-kittaba bila qaṣḍin .
 Perf-modal COMP he-burn the-book without intention
 "He could (and did) burn the book without intention." OR better,
 " He managed to burn the book without intention."
- b) ~~h~~araqa al-kitaaba bila qaṣḍin.
 he-burnt the-book without intention
 "He burnt the book without intention."

It is not difficult to contextualize different situations where the acceptability of (33b) can be accounted for, e.g., ~~a cigarette and may~~ be forgotten on the book,etc. Such contextualization is not possible for an ?ista~~t~~a9-sentence.

4.4.4. Counter-expectation

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LA speakers sense an element of counter-expectation when they are exposed to an ?ista~~t~~a9-sentence. Thus in a sentence like (34 a) is implied the proposition that, in normal circumstances, 'selling the book was not expected' due to some reasons known in the universe of the discourse, (e.g., its being badly printed, unreadable , other people failed to sell it, etc.) .:

- 34)a) ?istata9a Zeidun ?an yabi:9a al-kitaaba.
 perf-modal Zeid COMP sell the-book
 " Zeid could(and did)sell the book."

If this example contains counter-expectation, it has to be unacceptable when followed by (34 b) :

- 34)b) ,kama tawaqa9-na .
 as expected-we
 "....., as we expected

Paradoxically, the conjoined sentence, (34 a-b), is acceptable by the same informants (four LA speakers including me), who suggest the existence of counter-expectation in (34 a). Notice also that the sentence would be acceptable if followed by the negation of (34b) :

- 34)c) ,kama lam na-tawaqa9a.
 as PAST-Neg we-expect
 "..... as we didn't expect ."

There are two ways to go about providing an account for this problem. First, the easier but wrong one is to judge by the surface structure and against the intuition of the native speakers. This judgement would say that there is no element of counter-expectation in ?istata9-sentences. The second is to provide a judgement based on the semantic structure of the sentence and the scope of the conjuncts. Accordingly, sentence (34a) can be assumed to contain (among other things) two propositions to the effect of :

1. the selling of the book (by someone, in the past).
2. Zeid's having the ability for (1).

Now, the element of counter-expectation, which is intuitively felt by LA

speakers, could be an attribute of (1), and not of (2). The latter, in fact, pragmatically implies the speaker's expectation (that Zeid has ability), i.e., unless one is inconsistent, one cannot say that someone has ability without expecting him to have it. If this argument is valid, the problem arising from LA speakers' intuition, (i.e., their sensing counter-expectation in (34a) and their accepting (34b-c)), can be explained as follows : When LA speakers are exposed to conjoined sentences like (34a-b) or (34a-c), repeated below, they intuitively, (due to a mechanism attributable to something like Katz's (1977) projection rule selection), assign to the following conjunct, depending on whether it is positive or negative, a different scope. Thus the positive conjunct, "as we expected", would have as its scope, "Zeid's ability", and its negative counterpart, "as we did not expect" "the selling of the book" :

34a-b) ?ista9a Zeidun ?an yabi:9a al-kitaaba, kama tawaqa9-na .
 " Zeid could (and did) sell the book, as we expected."

34a-c) ?ista9a Zeidun ?an yabi:9a al-kitaaba, kama lam natawaqa9a.
 " Zeid could (and did) sell the book, though we did not expect
 (it to be sold)."

As has implicitly been hinted in connection various ?ista9-examples, this modal sounds very much like the English manage, which can be used to provide the following as alternative translations, for the above respectively :

35a) " Zeid managed to sell the book, as we expected (that he would
 .. be able to."

b) " Zeid managed to sell the book, although we didn't expect (it
 would be sold)."

4.5. qad and certainty

It has long been recognized, in Classical Arabic textbooks, that qad, when used with the perfect, is a 'certainty' or rather emphatic marker⁸. What has to be mentioned in this respect is that qad is rarely used in this sense unless it is prefixed with la- or fa-, (e.g., la-qad or fa-qad). This may be due to some stylistic or other reasons whose discussion is beyond the scope of this study. Henceforth, laqad will be used as the emphatic form of qad, and fa-, (in, e.g., faqad), will be ignored for convenience.

4.5.1. laqad

On Hassaan's view, (1979), laqad would correspond to the English emphatic DO, (but only in its past-form, did), specially as explained by Diver, (1964), as expressing a degree of 'certainty' that comes nearest to factual assertion. Thus (36) would be equivalent to its English translation:

36) laqad ?ibtasama Zeidun .
 modal smiled Zeid
 " Zeid did smile :"

This view, (i.e., Hassaan's and/or Diver's), would face the difficulty of confusing what is emphasized with the proposition or the state of affairs expressed by the sentence. The question "What is emphasized with laqad ?" is best initiated by answering a simpler one, namely, "why does a speaker resort to using a structure like laqad ?ibtasama, "he did smile", instead of ?ibtasama, "he smiled" ?" Is it because he is less committed to the truth of what he speaks about than if he would have expressed it as a 'factual assertion' ? Diver, (1964), would answer

this question positively, since being 'nearest to factual assertion' is by definition 'less than factual assertion'. On my view, a positive answer to the above question would falsely predict that the following is not a 'pragmatic contradiction', (in the sense of Fauconnier, 1980: 57-9):

@37) laqad ?ibtasama Zeidun, wa-lakin-ni laysa muta?akid ?anna-hu ?ibtasama.
 modal smiled Zeid , but-I Neg certain COMP-he smiled
 @ " Zeid did smile, but I am not certain that he smiled."

Assuming that the temporal reference for both cases (i.e., did smile and smiled) is the same, the above example would be a contradiction because both did smile and smiled would have the same belief-commitment on the part of the speaker, namely "I believe that p", (where p = Zeid smiled).

Given that (37) is a pragmatic contradiction and assuming that the speaker's commitment to what he is speaking about is a kind of relation, (e.g., between speaker, S, state of affairs, SA, and other things), we can say that the difference in meaning between :

?ibtasama Zeidun. "Zeid smiled," and

laqad ?ibtasama Zeidun. "Zeid did smile."

does not lie in the S/SA relation, but somewhere else. Where? The answer to this question is, to put it informally, in the discourse. By the 'discourse' I mean the speech situation which includes speaker, addressee(s), hearer(s), (see 2.3.33) and possibly other people known to both speaker and addressee. More specifically, I mean that part of the discourse concerning the speaker's assumptions about other participants in the speech event, and possibly other people known to these participants. To illustrate this point, consider (38) :

38) S may assume that Ad, or some set of hearers, H (known to S and Ad), or some other people, say H' (known to S and Ad), have a 'counter-expectation' towards SA, (e.g., misinformed about SA, think it difficult for SA to take place or that it did not take place).

To further illustrate, let us assume a situation in which the following obtain:

- 39) 1. The proposition "Zeid smiled" is true, and S is committed to its truth.
2. Ad1 and Ad2 are two addressees.
3. Ad1 is assumed, by S, to be neutral with respect to (38), i.e., he is not likely to be surprised about (1), nor is he misinformed about it.
4. Ad2's attitude meets (38), i.e., he is assumed to be misinformed and is not likely to easily believe that (1)
5. S wants, in an intention-in-action sort of way, to inform Ad1 and Ad2, separately, about (1).

From the assumed situation, (39), one would predict (40):

- 40) a) S, to Ad1 : ?ibtasama Zeidun. "Zeid smiled."
- b) S, to Ad2 : laqad ?ibtasama Zeidun. "Zeid did smile."

Given the above argument, including (38) and (39), the speaker qualifies (40 b) with laqad not because of any uncertainty concerning what he is speaking about, (since nothing is contained in (40 a) which is not included in (40 b)), but because of his assumptions about Ad2. He uses laqad to express what is in (40 a) and, in addition, a personal

or interpersonal assurance that SA is the case.

This account can be supported by the fact that the following a-examples, with laqad, are more natural than their b-counterparts. (Recall that, according to (38), the speaker's assumptions can be directed at people other than the addressee):

- 41) a) laqad ?ibtasama Zeidun 9ala-r-ra&mi min tawaqu9aata-ka.
 modal smiled Zeid in spite of of expectation-yours
 " Zeid did smile in spite of your expectation."
 b) ?ibtasama Zeidun 9ala-r-ra&mi min tawaqu9aat-ka .
 " Zeid smiled in spite of your expectation."
- 42) a) laqad ?ibtasama Zeidun 9ala-r-ra&mi mi-maa qaalu .
 modal smiled Zeid in-spite of-what they-said
 " Zeid did smile in spite of what they said."
 b) ?ibtasama Zeidun 9ala-r-ra&mi mi-maa qaalu .
 " Zeid smiled in spite of what they said."
- 43) a) laqad nagaḥa Zeidun 9ala-r-ra&mi mi-maa ?i9taqada 9ali.
 modal succeed Zeid in-spite of-what believed Ali
 "Zeid succeeded in spite of what Ali believed."

I would not say that b-examples are unacceptable, but they are less natural and less comfortable, in the above situations, than their a-counterparts. I have also to say that the use of the emphatic laqad is highly contextual and can be detected only in situations where the participants's Intentional states, (cf. 1.2.22), are to some extent recognizable. E.g., The following is a corpus dialogue between S1, (a sceptical newspaper man), and S2, (a minister):

- 44) S1: hal ?angaztuma ^ʃaalika bi-l-fi9l ? (ROSE.27.17)
 Q achieved-you(plur) that in-the-fact
 " Have you actually achieved that(work) ?"

S2 : na9am, laqad ?istakmalna haa^Xa al-9amala bi-l-fi9l.
 yes , modal completed-we this the-work in-fact
 " Yes, we did actually complete this work ."

4.6. labudda : Experiential and Epistemic Necessity

The following examples illustrate the two kinds of necessity expressed by labudda when it modalizes sentences expressing past-time states of affairs. :

45) kaana labudda ?an yaxruga Zeidun li-yuqaabila 9omran.
 PAST modal COMP go-out Zeid to-meet Omar
 " It was necessary for Zeid go out to meet Omar."

46) labudda ?anna Zeidan xaraga li-yuqaabila 9omaran.
 modal COMP Zeid went-out to-meet Omar
 " Zeid must have gone out to meet Omar."

The proposition expressed in these examples is the same, namely, "Zeid's going out to meet Omar", and as the English translations show, there does not seem to be any question of ambiguity between 'Experiential Necessity', (45), and 'Epistemic Necessity', (46). Given that the two examples differ only in their syntactic structures, it would be reasonable to conclude that labudda expresses 'Experiential Necessity' when it is used with kaana-imperfect and 'Epistemic Necessity' with the perfect form of the main verb.

The validity of this observation can be proved by analysing the intuitive understanding of a sentence like Zeidun &aniyan, "Zeid is rich", when used in identical structures. (Notice that the main verb in this case will be, kaana, "PAST-be" and its imperfect, yaku:n, "PRE-SENT-be".):

47) kaana labudda ?an yaku:na Zeidun &aniyan .
 PAST modal COMP is Zeid rich

" Zeid had to be rich/it was necessary for Zeid to be rich."

48) labudda ?anna Zeidan kaana &aniyan .⁹
 modal COMP Zeid was rich

" Zeid must have been rich."

These two examples are interpretable only elliptically, i.e., the first is in the context of a 'purpose-clause', and the second is part of a 'conditional'. Thus, using numbers to stand for their respective sentences, the following may represent the way in which these sentences are intuitively interpreted :

49) (47)- li-key ya tariya haa Ja al-yaxt .
 in-order-to buy this the-yacht

"..... in order for him to buy this yacht."

50) ?iza kaana Zeidun ?i tara haa Ja al-yaxt, fa- (48) .
 if PAST Zeid bought this the-yacht, then ..."

" If Zeid bought such a yacht, then"

The relationship between the two clauses expressed in these sentences, (i.e., "he is rich" and "he bought a yacht"), has to be clarified. In (49), the speaker expresses his belief that buying a yacht requires being rich. This belief, on the part of the speaker, can be expressed whether or not any of the two states of affairs is or was actually the case. The utterance can be produced as a response to a statement like " Zeid wanted to buy a yacht last year." This is strongly contrasted to the latter case of 'Epistemic Necessity', (50), in which the speaker starts from a hypothesis ('if it is actually the case that Zeid bought a yacht), and comes to a reasonable conclusion, (then it must be the case that he was rich). In some cases, speakers start

from recognizable facts, as in (46), repeated as (51) :

51) labudda ?anna Zeidan xaraga li-yuqaabila 9omaran.

" Zeid must have gone out to meet Omar."

The "recognizable fact" in this example would be understood as 'the absence of Zeid, who is supposed to be present in the speech situation'. The utterance is produced as a reasonable explanation. I have also to say that the purpose-clause, "to meet Omar" is interpreted in (51) as part of the explanation or conclusion. This is to be contrasted to the understanding of the (identical) purpose-clause in (45), repeated as (52) :

52) kaana labudda ?an yaxruga Zeidun li-yuqaabila 9omaran.

"Zeid had to go out to meet Omar."

'meeting Omar' in this example is the 'external circumstances' believed by the speaker to have required 'Zeid's going out'. The difference between these examples is the difference between 'Epistemic and Experiential Necessity' in general, as explained in chapter three.

4.7. kaana yagib : Experiential Necessity

Past-time modification of sentences modalized with yagib or yanba&i is possible only with the past-time marker, kaana. yagib, like other LA modal verbs, is normally followed by the complementizer, ?an, which accepts only the imperfect form of the main verb, (see Introduction). The meaning contributed by kaana to a yagib-sentence will therefore be discussed, and the difference between yagub and yanba&i, if any, in this environment will be mentioned at the end of this section.

4.7.1. yagib vs kaana-yagib

Comparing (53) with its kaana-counterpart may be a useful starting:

53) yagiba ?an taxruga .
 modal COMP you-go out
 " You must/have to go out."

53') kaana yagiba ?an taxruga .
 PAST modal COMP you-go out
 " You ought to have gone out."

It is obvious ,from the glossings, that yagib is translatable into the English MUST or HAVE TO, and kaana-yagib into OUGHT TO HAVE-en ; but this would not tell us enough about the difference between the two structures .

As has been briefly mentioned,(3.2.3),a sentence like (53) is,out of context,ambiguous between two readings :

- i. a deontic reading in which the speaker desire to performatively activate the necessity for something to be done,(to be discussed in a later chapter),and
- ii. an experiential reading based on the speaker's evidential or experiential belief that there are external circumstances necessitating the coming into reality of some state of affairs.'

In contrast,a sentence like (53'),the same sentence modified with kaana, would have only the latter interpretation,i.e., there is no possible context where (53') can be interpreted as expressing a 'deontic necessity' based on the speaker's desire.

It might be argued that there are cases in which the necessity expressed in (53') would stem from or traceable to the speaker's desire

in the past. This argument, however, would miss the point, since the speaker's past-desire in (53') is only reported, i.e., not expressed or externalized at the time of uttering (53'). It is for this reason reduceable to the set of past-circumstances contained in the speaker's experiential belief at the time of speech. I have to admit that the possibility, of a necessity stemming from past-desire, is there; but it does not provide enough motivation for drawing a distinction between two kinds of necessity for kaana-yagib.

4.7.2. Actuality and temporal Implications

A more important distinction between yagib and kaana-yagib is related to actuality. For convenience, the following are repetitions of (53) :

- 54) yagiba ?an taxruga .
 " You must/have to go out."
 54') kaana yagiba ?an taxruga .
 " You ought to have gone out."

Whereas the question of actuality does not arise in connection with (54), it seems to be negatively assumed in the case of kaana-yagib, (54'). The latter would most likely be interpreted as, " In view of my experiential belief, it was necessary for you to go out, but you didn't." This assumption is explicitly mentioned in the following corpus-example, (in which, for orthographical convenience, NIRC stand for what is translatable into "The non-Islamic Religious Courts") :

- 55) baqyata NIRC ,wa kaana yagiba ?an tul&ya . (MhG.4.6)
 remained NIRC ,and PAST modal COMP be-eliminated
 " The non-Islamic Religious Courts remained(functioning),
 and they ought to have been eliminated ."

In the following, the speaker depends on the common experience for the understanding of his negative assumption which, for political reasons, is not less obvious than that explicitly mentioned in the example just quoted :

- 56) haa~~ja~~ al-guhda kaana yagiba ?an yuwagaha ?ila as-salaam.(H3.7)
 this the-effort PAST modal COMP be-directed to the-peace
 " This effort ought to have been directed to (establishing)
 peace ."

What has to be emphasized in this respect is that a native speaker does not need a context to understand the negative assumption concerning the actualization of a state of affairs expressed with a sentence modalized with kaana-yagib. The natural and more obvious interpretation of (57), below, is provided as its translation :

- 57) kaana yagiba ?an ?a?xuza-ha ma9i . (SPW)
 PAST modal COMP I-take-her with-me
 " I ought to have taken her with me, but I didn't."

Due to the retrospective nature of kaana-yagib meaning and the speaker's assumption associated with it, its modal implication will be a slightly modified version of (m 5), which has been formulated in (3.2.32) and repeated below :

(m 5) yagib : Experiential Necessity

INFORM (S, Ad, P1 & P2)

P1= BEL (S, \exists x: CAUSE(x, NEC(p)))

P2= INT (S, BEL(Ad, P1))

The modified version would reveal both the speaker's assumption, as

a preparatory condition, and the temporal relations between the different predicates. The latter is shown as a subscript over the respective predicate, (where t^0 = the time of speech and t^i = past-time):

(m 5') = kaana(m 5)

i. $BEL^{t^0}(S, (-p)^{t^i})$

ii. INFORM (S, Ad, P1 & P2)

P1 = $BEL^{t^0}(S, \exists x: CAUSE^{t^i}(x, NEC^{t^i}(p)))$

P2 = $INT^{t^0}(S, BEL^{t^0}(Ad, P1 \& i))$

The speaker's assumption, (i), is a conjoined argument in P2, because it is logical to assume that the speaker would have, as part of his illocutionary point condition, the intention of informing his addressee of his assumption. It can also be said that the speaker's assumption needn't be part of the speaker's intention-in-action, since it can be understood through the addressee's conversational cooperation. I do not see any harm in adopting the latter view, but the view taken in (m 5') is more descriptively accurate.

4.7.3. yagib and yanba&i

In the environment of kaana, yagib and yanba&i are pragmatically interchangeable, i.e., what has been said, so far, of the former is equally applicable to the latter. It has been observed, however, that the only possible difference between these two modals can be attributed to the users' educational orientation, e.g., those who are more versed in Classical Arabic tend to use yanba&i more frequently than yagib,

and when they use the latter they produce it in its phonologically Classical form, namely, yajib and not in its LA normal form, yagib .

4.7.4. yagib and labudda

It may be appropriate to end this section by briefly mentioning some basic differences between yagib and labudda when used in the syntactical environment of Tense.

The two modals are syntactically different in that labudda is used with both kaana and the Perfect of the main verb, see (4.6.), whereas yagib is used only with kaana, (4.7.).

When the two modals are used to express Experiential Necessity with kaana, labudda does not normally express the negative assumption associated with yagib . It has been discussed in (4.6.) that a speaker of a labudda-sentence like (58), below, does not normally assume that the state of affairs described did not take place. He merely expresses his belief that at some past moment of reference there were some external circumstances requiring the coming into reality of such a state of affairs.:

58) kaana labudda ?an yaxruga Zeidun.
 PAST modal COMP go-out Zeid
 " Zeid had to go out ."

In contrast, the same sentence expressed with yagib would normally be interpreted as including the speaker's assumption that the state of affairs concerned did not take place, see (4.7.2.) for details :

59) kaana yagiba ?an yaxruga Zeidun.
 " Zeid ought to have gone out."

A third difference which has not been mentioned is related to expressing Experiential Necessity with a sentence modified with sawfa, "future-time marker". In this environment only yagib is normally used; labudda would be odd. In fact, it is not acceptable to me as well as to a few Arabic speakers asked to give an intuitive judgement :

60) sawfa yagiba ?an yaxruga Zeidun.
 FUTURE modal COMP go-out Zeid
 " Zeid will have to go out ."

?? 61) sawfa labudda ?an yaxruga Zeidun.

What has to be said at this point is that the pragmatic implications of (60), with sawfa, is not essentially different from the normal Experiential Necessity, as discussed in (3.2.3). The use of sawfa can be regarded as emphasizing what would in most cases be expressed contextually. E.g., each of (63a-c), but not (63 d), is a possible continuation of (62), which is supposed to be uttered by a father by way of requesting his son to perform some future action :

62) ?uxta-ka sawfa ta?tiya &adan, wa.....
 sister-your will come tomorrow, and..
 " Your sister is coming tomorrow, and..."

63)a) yagiba ?an tuqaabil-ha .
 modal COMP you-meet-her
 " You have to meet her ."

b) labudda ?an tuqaabil-ha.
 " You have to meet her."

c) sawfa yagiba ?an tuqaabil-ha.
 FUTURE
 "You will have to meet her."

?? d) sawfa labudda ?an tuqaabil-ha .

Chapter Four

NOTES

1. See El-Samman,(1977:51),and Hassaan,(1979:241),as two examples . New researchers tend to ignore the question of tense-distinction in Arabic,either completely as Bakir,(1979),or partially as Travis,(1979),who simply mentions that Arabic verbs have 2 forms "Perfect and Imperfect",(*Ibid.* :23). It seems curious for tense to be ignored in a study of "Inflectional Affixation" as that of Travis,(1979).
2. See Hassaan's Introduction,(1979:10),where he refers to seven dissertations he has supervised. A look at the titles of these dissertations,(*Ibid.* :8), shows that the writers are critical of the way Arabic grammar has been written.
3. See(*Ibid.* :240-60). It is worth mentioning that these 20 pages are the only space devoted to Tense, Aspect and Modality in Hassaan's 380-page study.
4. Where two meanings are provided for the same example,it is to be understood that the structure is,out of context,ambiguous between these two meanings. It has also to be mentioned that there is no structural correspondence between the English aspectual expressions,(e.g., have-en, be-ing,etc.),and the LA structures glossed.
5. See Hassaan,(1979:245). As the author does not provide any paraphrases or illustrations for his examples,the double quoted translations are provided according to my knowledge of Arabic and English and are entirely my responsibility.
6. For detailed discussion of this topic,see Bakir's (1979) study on "Word Order Variations in Literary Arabic." It is the general practice of this study to present corpus or invented examples without commenting on their word-order.
7. Using the English 'was able to' for ?istata9 would lead to translation difficulty. It has been recognized by Abdel-Hamid,(1972:30-35),and accepted in this study,that the imperfect yastati:9 (and yumkin) can be expressed in English by 'be able to'. The case different with the perfect ?istata9,which implies actuality.

8. Hassaan,(1979:246), sees that qad is used as an emphatic marker to the fifteen past-time structures mentioned at the beginning of this chapter. E.g., qad kaana kataba and qad kaana yaktuba are, according to him, "emphatic remote past(of the act of writing)" and "emphatic renewable past", respectively.

Chapter Five

Negation in Modalized Sentences5.0. Introductory : Negation

Within a framework of Intentionality, Negation, (which is not mentioned in Searle, 1979 or 1983), can be accounted for in terms of what the speaker assumes about his addressee's beliefs concerning what is spoken about and the speaker's intention-in-action, as explained in (2.3.35). This is not to be understood as dismissing the importance of the semantic issue of the scope of negation as "an operation that applies to a single expression", (Lyons, 1981:132. See also Halliday, 1970:333, Leech, 1971:87 and Palmer, 1979:26-7). The Intentional approach adopted in this study is only to emphasize the following three related points, which will be discussed immediately :

- i. A semantical, (i.e., truth-functional), account of negation which excludes the speaker's Intentionality would in some cases fall short of providing an adequate description of the use of negation in natural language. (See also Lyons, 1981:129-31, for a similar view).
- ii. The scope of negation is in most cases determined by the speaker's assumptions about his addressee and by his intention in what he wants to convey. This roughly corresponds to Kempson's (1975:169-73) pragmatic universe of discourse, which, on the present view, is explainable in terms of 'S's preparatory condition and illocutionary point'.
- iii. The interaction between negation and modality is more than could be accounted for by simply considering the scope of negation relative to modality, as is the general practice in, e.g., Leech (1971) and Palmer (1979).

5.0.1. Semantical vs Intentional account of negation

A semantical account of negation, (e.g., based on Russell, 1971), would amount to no more than providing the referential interpretation of a given sentence, (cf. 2.3.12. for what is meant by 'referential'). This would not help us understand the total signification of the utterance, (including the 'sense meaning', (2.3.13), of negation), which is to a great extent Intentional, i.e., depends on what Kempson (1975) calls the pragmatic universe of discourse. To illustrate, consider the following example :

- 1) al-waladu laysa mari:dan .
 the-boy Neg sick
 "The boy is not sick."

Without going into the Russell/Strawson debate on 'referring', which is beyond the scope of the present study, (see e.g., Russell (1971) and Strawson (1971)), the above example would referentially be interpreted as either (2a) or (2b) :

- 2) a) $\exists x: \text{BOY}(x) \ \& \ \text{-SICK}(x)$
 b) $\text{-}(\exists x: \text{BOY}(x) \ \& \ \text{SICK}(x)).$

The referential account tells us about two possible scopes of negation of (1), which is useful, but it does not tell us what use conditions must obtain in order for negation to be used. Consider also, e.g., (3), which would referentially be identical with (1), (assuming that the two referring expressions are identical), since sick = not in good health :

- 3) al-waladu tayiban .
 the-boy well
 "The boy is well(healthy)."

Are we then to assume that the boy is not sick and the boy is well are both negative statements? Or that they are 'positive in themselves' but negative in relation to each other? And if the answer is one way or the other, why should the speaker spend "more linguistic effort", (McCawley, 1978: 51-5), by using a sentence like (1) when he could have expressed the same referential meaning had he used (3)?

There do not seem to be satisfactory semantical answers to the above questions. As a preparation for a pragmatic answer, I would like to mention the following cross-cultural situation. When I first came to this country I used to order my tea, (in a cafeteria, etc.), by the simple request: "Tea, please.". I was always amazed to get my tea with milk and without sugar. I was then told that in order to get my tea without milk and with sugar I had to mention that explicitly, because a normal request for tea, in Edinburgh, is a request for tea with milk and without sugar. This is quite the reverse of where I came from, where a normal request for tea is a request for tea without milk and with sugar. This situation may provide a useful analogy to the question in hand. In a situation where it is the normally expected case for a given door that it is usually open, and that it is not open at the time of speech, (4), and not (4'), would most likely, at least in LA, be uttered; although both examples are referentially equivalent:

4) al-baabu laysa maftu;han .

"The door is not open."

4') al-baabu mu&laqan ."

" The door (is) closed ."

The reverse is also true. I.e., in a situation where a given door is normally expected to be closed and it is unusually open at the time of speech, (5) and not (5'), would be preferred as an expression of the unusual state of the door :

5) al-bbabu laysa mu&laqan .

"The door is not closed ."

5') al-baabu maftu:han .

"The door (is) open."

It would seem from the above argument that negation is normally used in natural language to express the contrary of what is expected. I.e., the speaker would use a negative statement when he assumes that its positive counterpart is believed by the addressee or someone else to be the case. In providing an Intentional answer to the initial question concerning the boy is not sick and the boy is well, I would say that the two sentences , which may be semantically equivalent, are quite different in their total signification, since each is based on a different set of assumptions. To illustrate, the translations of (3) and (1) are repeated below as (A) and (B), and the set of assumptions for each case as well as what is intended to be conveyed by the speaker, depending on what is assumed, are shown as (i.) and (ii) respectively :

A: "The boy is well ."

- i. What is assumed : The existence of the referent, the boy, is recognizable by Ad.
- ii. What is conveyed: Ad is INFORMed by S of P1 and P2, (where P1= S believes that the boy is well, and P2= S intends Ad to believe that P1).

B: "The boy is not sick."

- i. What is assumed: (i) as above, and someone's mistaken belief that 'the boy is sick' .
- ii. What is conveyed: Ad is INFORMed by S of P1 and P2,(where
P1= S believes that the boy is not sick.
P2= S intends Ad to believe that the belief
that the boy is sick is not true).

It would follow that the full Intentional content of (3) and (1) would be something like (A') and (B') respectively :

A') " The boy,whom you know,is well."

B') " The boy, whom you know, is not sick as you think/believe/
his teacher thinks/believes/ etc."

Before,and as a preparation for, discussing the next point, I would like to mention an argument conducted along the lines proposed above, namely that of Givon,(1978), who claims that only presupposed information can be negated and presents the following sentence to illustrate his point :

6) My wife is not pregnant . (Givon's sentence 7)

He rightly argues that the utterance of (6) is infelicitous unless the speaker thinks that the addressee believes that the speaker's wife is pregnant,or it is possible that she is; he also notes that (6) would be infelicitously uttered if the addressee does not have or is not assumed to have this belief.

The essential difference between Givon's view and the one adopted in the present study lies in his considering presupposition,(or the

presupposed information), as the target of negation. On the present view, the target of negation is the speaker's assumptions about his addressee's beliefs. Without going into details, the essential difference between Givon's 'presupposed information' and the speaker's assumptions, (in the sense of this study), can be briefly stated as follows : Givon's (1975) 'presupposed information' constitute the conditions which must be met in order for an utterance to have truth-value. And 'the speaker's assumptions', (i.e., Preparatory Conditions), are the conditions which must be met in the universe of the discourse in order for an utterance to be felicitous. In other words, the present view is more explicitly pragmatic than that of Givon.

5.0.2. Negation scope is determined by the speaker's intention

I hold the view that the scope of negation, i.e., the way negation operates on different parts of an utterance (e.g., by means of stress, etc.), would be better understood through analyzing the speaker's intentions, which are based on his beliefs and assumptions. (See also Kempson, (1975:169-71), for a roughly similar view but a different analysis) To illustrate this point, consider the following different utterances of (7a), which is the LA version of Givon's sentence. (the underlined in LA for emphasis is capitalized in the English translations) :

7) a) zawga-ti laysat yaamil .
 wife-my Neg pregnant
 " My wife is not pregnant."

b) zawga-ti laysat yaamil .
 " My WIFE's not pregnant ." (e.g., my sister is)

- c) zawga-ti laysat Yaamil.
 " My wife's not PREGNANT ." (e.g., she is only sick)
- d) zawga-ti laysat Yaamil .
 " MY wife's not pregnant ." (e.g.,...Karim's wife is)

The difference in negation scope (or target of negation) in the above utterances is determined by what the speaker intends to say, (i.e., by the assumed information which is intended to be negated). If this is the case, analysing the speaker's Intentional states (i.e., preparatory, sincerity conditions, etc.) would be a better way of understanding the total signification of the utterance, including the negation scope and its significance.

5.0.21. Negation vs Denial

Saying that negation is pragmatically directed at some information assumed by S to be believed by Ad is not to be understood as confusing negation with denial. Informally speaking, denial can be regarded as a self-contained illocutionary act performed to reject an existing assertion. Like most illocutionary acts, denial can be performed explicitly, (i.e., with an IFID), as in (8) or indirectly, (i.e., by means of another illocutionary act, which would normally be a negative assertion), as in (9) :

- 8) ?ankiru ?anna-ni ?axa[?]tu al-kitaaba.
 I-deny COMP-I took the-book
 " I deny that I took/have taken the book."
- 9) lam ?a?xu[?]tu al-kitaaba .
 Neg I-took the book
 " I did not take the book ."

Negation, on the other hand, is part of an illocutionary act and is not in itself an illocutionary act. It has also to be clear that the indirect illocutionary act of 'denying' is normally performed not by means of negation in itself, but by means of the negative assertion as a whole. This can be achieved elliptically, (e.g., by using "No." in a situation like (10), where the use of "No." can be interpreted as an elliptical negative assertion) :

10) S1 : ?anta ?axa^Øta al-kitaaba .
 " You took the book ."

S2 : laa .
 "No."

5.0.3. Negation and Modality

The pragmatic implication of negation of simple assertions, as discussed in (5.0.1), affects and is affected by the modal implications, (chap. 3 & 4), in different ways. In order to provide some general remarks on the possible interactions between Negation and Modality, let us assume the informal discussion of negation (of simple assertions) can be formalized as NEG, below :

NEG : Simple Assertion

i. BEL (S, BEL (Ad,p))

ii. INFORM (S,Ad,P1 & P2)

P1= BEL (S, -p)

P2= INT (S, BEL(Ad,P1))

In the case of the kinds of modality which are not semantically or pragmatically negatable, (e.g., Epistemic Necessity and Possibility. See also Palmer (1979) and Leech (1971), for a similar view), the pragmatic implication of negation, i.e., NEG, which would occur only internally, seems to be neutralized. E.g., compare the following examples, where (11) is a simple assertion negated in (12), modalized in (13) and both negated and modalized in (14) :

11) al-baabu maftu:han .
the-door open

" The door is open ."

12) al-baabu laysa aftu:han .

" The door is not open ."

13) labudda ?anna al-baaba maftu:han .
modal COMP the-door open

" The door must be open ." (Epistemic must)

14) labudda ?anna al-baaba laysa maftu:han .

" It must be the case that the door is not open."

Whereas -p is asserted in (12) on the assumption that Ad believes that p, (which would be in keeping with NEG), it is offered in (14) as a reasonable explanation for some contextually recognizable x, (e.g., someone's knocking at the door, someone's asking for the key to the door, etc.). In other words, there is no essential difference in the modal implication between the modalized positive assertion, (13), and the modalized negative assertion, (14). In the former, positive p is offered as a reasonable explanation for some contextually recognizable state of affairs, and in the latter negative p is offered for a similar

reason. It would follow that the pragmatic implication of negation of simple assertions, i.e., NEG, is neutralized when negation occurs within the scope of Epistemic Necessity.

Another but different case of modal-negative interaction can be shown by Agentive Possibility, as expressed by yastati:9, "Ability-can", which ^{is} negatable internally as well as externally. Compare the following examples, where (15) is a simple assertion negated in (16) and modalized in (17). (18) and (19) represent internal and external negation respectively. (Notice that the translations will be provided with be able to to avoid the ambiguity of the English can) :

- 15) Zeidun yatakalama al-?inglizyyah .
Zeid speaks the-English
" Zeid speaks English ."
- 16) Zeidun laa yatakalama al-?inglizyyah .
Neg
" Zeid does not speak English ."
- 17) Zeidun yastati:9a ?an yatakalama al-?inglizyyah .
modal COMP
" Zeid is able to speak English ."
- 18) Zeidun yastati:9a ?al-laa yatakalama al-?inglizyyah .
modal COMP-Neg
" Zeid is able not to speak English ."
- 19) Zeidun laa yastati:9a ?an yatakalama al-?inglizyyah .
Neg modal COMP
" Zeid is not able to speak English ."

With respect to example (18), which is internally negated, NEG seems to be neutralized in a way similar to that discussed in connection with (14). I.e., the act of not-speaking in (18) is within the scope of modal-

ity in exactly the same way as the act of speaking in (17). In other words, if we assume a kind of English in which the act of not-speaking is lexically expressible by a backward spelling of speak, the two examples, (17) and (18), would be expressed, in this assumed kind of English, as (17') and (18'), respectively :

17') "Zeid is able to speak English."

18') "Zeid is able to kaeps English."

When modality is within the scope of negation, as in the case of (19), NEG seems to operate on modality in the way it operates on simple assertion, i.e., NEG of simple assertions, repeated below, is similar to NEG of Agentive Possibility, except that the latter would be emphasizing the agent's ability rather than the propositional content, p.

NEG: Simple Assertion

- i. BEL(S, BEL(Ad, p))
- ii. INFORM(S, Ad, P1 & P2)
- P1= BEL(S, -p)
- P2= INT(S, BEL(Ad, P1))

NEG: yastati:9

- i. BEL(S, BEL(Ad, ABLE(A, DO(A, p))))
- ii. INFORM(S, Ad, P1 & P2)
- P1= BEL(S, -ABLE(A, DO(A, p)))
- P2= INT(S, BEL(Ad, P1))

The modal-negative interactions will be discussed in more details in connection with the different LA modals, sections (5.2) through (5.6). As a point of departure for these analytic sections, I will provide in the following a general picture of how LA modals are structurally negated.

5.1. Formal Negation of LA Modals

LA modals do not have negative forms corresponding to the English can't, mustn't, etc. instead, they are negated or used in simple sentences negated with negative particles like laa, "do/does not", lam, "did not" and laysa, "is/are/am not", (see also section (1.3.)).

The negative structural patterns of LA modalized sentences can be shown in the following table, where (A) represents the negative versions of the modalized structures discussed in chapter three, (i.e., simple present tense sentences), and (B) represents those discussed in chapter four, (i.e., past-time sentences). In each part of the table, the modals are divided into two groups according to their structural acceptability of the different negative patterns. V stands for the imperfect main verb, M for the modal shown to the left of the pattern and ?an is an LA complementizer.

Table (5.1) : Negative Patterns of LA Modalized Structures

(A):	Negative Pattern
1) <u>yumkin</u> , <u>yastati:9</u> , <u>yagib</u> , <u>yanba&i</u> and <u>labudda</u> (pattern b only)	a) Neg M <u>?an</u> V b) M <u>?an</u> -Neg V
2) <u>rubbama</u> , qad	a) b) M Neg V
.....	
(B): 1) <u>yumkina</u> , <u>yastati:9</u> , <u>yagib</u> and <u>yanba&i</u>	a) kaana Neg M <u>?an</u> V b) kaana M <u>?an</u> -Neg V
2) <u>rubbama</u> , <u>qad</u> and <u>labudda</u>	a) b) M Neg V

Note that with respect to sub-group (1), (with the exception of labudda), patterns (a) and (b) in (A) are physically repeated in (B) with kaana, the past-time marker, inserted in initial position.

Judging from table (5.1.); it can be said that LA modals are subdivisible into two sub-groups : group (1) is negated pre- and post-modally, and group (2) is negated post-modally only. Semantically, however, the picture is quite different, as will be seen in detail later. E.g., negation in yagib- and yanba&i-sentences is always semantically internal irrespective of which negative pattern is used. External negation, in the semantical sense, is possible only with yastabi:9 and yumkin, (see sections (5.3.3) and (5.4.1) respectively): In other words, a classification of LA modals based on the semantic scope of negation would be as follows :

- i. LA modals which accept external as well as internal negation : (yumkin and ystati:9) .
- ii. LA modals which accept internal negation only, i.e., they are not themselves negatable¹ : (yagib, yanba&i, rubbama, gad and labudda).

The question of how the modality of the modals in sub-group (ii) is externally negated will be discussed with the respective modals in the following sections.

5.2. rubbama in Negative Structures

I would like to start the analytic sections of this chapter by raising the point that there is a certain pragmatic asymmetry between the use of positive sentences to express believed truths and the use of negative sentences to draw attention to believed falsehoods. The importance of this point, should it be proved valid, is that it would call for

re-considering the general practice of regarding negative sentences as derived from their positive counterparts. I shall in the following provide structural evidence for this point.

5.2.1. Structural Evidence

Consider the following rubbama positive examples, repeated from the sections shown to the right of each example, (translations provide approximate Intentional content of each example, as explained in the respective sections) :

20) rubbama waṣala Zeidun &adan . (4.2.3)
modal arrived Zeid tomorrow

" There is still a chance for the possibility of Zeid's arriving tomorrow."

21) rubbama wagada Zeidun nuqu:da-ha wa raḥala . (4.2.2)
modal found Zeid money-his and left

" Zeid must have found his money and left, that is why he is not around now (I know that he wanted to leave but was prevented to do so because he lost his money)."

The main verbs, waṣala and wagada, in (20) and (21) are grammatically perfect and are therefore expected to have the following negative derivations, (where \rightarrow reads 'derived into') :

22) a) waṣala $\xrightarrow{\text{Neg}}$ lam yaṣila
"arrived" "didn't arrive"

b) wagada $\xrightarrow{\text{Neg}}$ lam yaḡida
"found" "didn't find"

This, however, is not the case, i.e., there is no possible way of providing a negative version of (20) corresponding to (22 a), e.g.,

*20') rubbama lam yašila Zeidun &adan .
 modal didn't arrive Zeid tomorrow

The nearest possible negative version of (20) would be something like (20'') with laa, "doesn't", or lan, "won't", but then the result would be pragmatically different with different Intentional meaning, (as may be indicated by the translation, and will be discussed in (5.2.2.)) :

20'') rubbama lan/lan yašila Zeidun &adan .
 " It is possible that Zeid doesn't/won't arrive tomorrow."

Example (21) is even more problematic, since there is no rubbama negative sentence which can be used to express an inferential kind of necessity. The negation of this sentence would confer on it a possibility meaning, and notice that the two main verbs have in this case to be negated :

21') rubbama lam yagida Zeidun nuqu:da-hu wa lam yarhala.
 modal Neg find Zeid money-his and Neg leave
 " It is possible that Zeid didn't find his money and didn't leave."

It is not possible to say that (21') is derived from (21). The negation of 'necessity', as expressed in the latter, is normally expressed with a negative form of yumkin²:

22) laa yumkina ?an yaku:na Zeidun wagada nuqu:da-hu wa rahala.
 Neg modal COMP COPULA Zeid found money-his and left
 " Zeid can't have found his money and left."

A similar problem exists in English with respect to the epistemic-must, which is said to have can't as its negative form, (see Leech, 1971:87 and Palmer, 1979:26-7). Palmer attempts to provide an account of this problem on logical grounds. E.g., since 'necessary not-p' = 'not-possible p'

the use of can't, (with the meaning of not-possible), is therefore logically justified as the negative of must. Palmer's analogy is mistaken in one important aspect : the equivalence between the two LOGICAL expressions, i.e., (NEC not-p = not-POSS p), can be established by the correspondence between two existing options. In other words, the fact that 'NEC not-p' and 'not-POSS p' cover an identical possible-world domain of application, (see Hintikka, 1969:8-9), makes it possible to say that, LOGICALLY, the two expressions are equivalent. This correspondence is lacking in natural spoken English, e.g., English does not have a negative expression for 'epistemic necessity', since can't, even as a negative form of epistemic-must, is paraphrasable into 'it is not possible that...', (see Leech, 1971:87). The same problem exists in LA, where laa yumkin, "it is impossible that" is the normal way of expressing, not the negation of epistemic necessity, but an Intentional belief intended to counterargue a mistaken belief that some state of affairs is possible.

It may be worth emphasizing that the behaviour of the negative operator in Logic would be misleading if thought of as suitable to explain the ordinary use of negation in natural language, (see also Lyons, 1981: 129). E.g., negation in Logic operates on complete proposition, with the natural result that a negative p is a straightforward composite of its positive counterpart, (e.g., p vs -p). This characteristic is lacking in natural language, as can be seen from the discussion connected with examples (20) and (21) above. This point has clearly been explained by Lyons in his observation that :

" There are various ways in which negative sentences are constructed in natural languages. Only rarely, however, is there any reason to say that a negative sentence is grammatically composite by contrast with the corresponding positive sentence." (Lyons, 1981:130)

5.2.2. rubama : Intentional implication of negation

rubama itself is not negatable, (i.e., it is not used in sentences externally negated), but it is used to modalize negative sentences .

Compare (23) to its negative counterpart :

23) rubama yaxruga Zeidun .
 modal go-out Zeid
 " Zeid might go out ."

24) rubama laa yaxruga Zeidun .
 Neg
 " Zeid might not-go out ."

In so far as rubama modal meaning, (see 3.1.1.), is concerned, there does not seem to be any essential difference between these two examples, since the propositional content, (e.g., whether 'Zeid's going out' or 'Zeid's not going out'), is within the scope of rubama. In other words, the two examples can be represented as follows :

23') rubama p .
 24') rubama -p .

Further, the content of both examples can be informally described as :

" Zeid's going out/Zeid's not-going out is a weak and unreliable possibility."

The two examples, however, would differ with respect to the speech situation which would determine that one and not the other would be more expressible of the speaker's intention. E.g., in a situation where two persons are waiting at college for the possibility that the exam results will be out an hour later, and only one of them is anxious

to know the results while the other is waiting against his will and is therefore seeking reasons to leave. In this situation, only the second person would utter (25') in contrast to (25) which is most likely to be uttered by the first :

25) rubbama ta^hhara an-nati:gah ba9d saa9ah .
 modal come-out the-result after hour

" The results may come out after an hour."

25') rubbama laa ta^hhara an-nati:gah al-yawm .
 modal Neg come-out the-result the-day

" The results may not come out today."

Given this contextually based use of rubbama, it would be realistic to postulate ^{that} the speaker would use 'rubbama p' or 'rubbama -p', depending on whether he has 'encouraging' or 'discouraging' intentions towards his addressee. In other words, the speaker would pragmatically use a positive statement qualified with epistemic rubbama if the following, (i.e., a simplified version of (m 1), see (3.1.1)), obtain :

rubbama p

i. BELIEVE (S, BELIEVE(Ad, POSS(-p)))

ii. INTEND (S, BELIEVE (Ad, POSS(p)))

Alternatively, the speaker would use a negative statement qualified with epistemic rubbama if the following obtain :

rubbama -p

i. BELIEVE (S, BELIEVE(Ad, POSS(p)))

ii. INTEND (S, BELIEVE (Ad, POSS(-p)))

Notice how the formulations of rubbama p and rubbama -p are asymmetrically related; the content of S's belief in the former is the content of S's intention in the latter, and the reverse also holds. This may provide some semi-formal support for the point raised at the beginning of this section : that there is a certain pragmatic asymmetry between the use of positive sentences and the use of negative sentences.

5.3. Negation with yumkin-sentences

5.3.1. Negative patterns and scope of negation

Two kinds of negation are expressed, and structurally marked, in sentences modalized with yumkin : external and internal negation, as in (26a) and (26b), respectively :

26)a) laa yumkin ?an V
Neg modal COMP imperf-verb

b) yumkin ?al-laa V
modal COMP-Neg imperf-verb

This equally applies to sentences modified with the past-time marker, kaana, which would normally occupy the initial position, e.g., of (26):

26') c) kaana laa yumkin ?an V
PAST Neg modal COMP verb

d) kaana yumkin ?al-laa V
PAST modal COMP-Neg verb

The above patterns can be exemplified by the following, where yabtasima, "he smiles", replaces V above :

27) a) laa yumkina ?an yabtasima .
" It is impossible for him to smile."

b) yumkina ?al-laa yabtasima .
"It is possible for him not to smile."

27) c) kaana laa yumkina ?an yabtasima .

" It was impossible for him to smile."

d) kaana yumkina ?al-laa yabtasima .

" It was possible for him not to smile."

Since there is no problem connected with the scope of negation in the above structures, the remaining part of this section will discuss two related topics : the Intentional meaning of negation, as used above, and the range of application of yumkin negative sentences .

5.3.2. The Intentional meaning of negation in laa yumkin

Let us start by comparing the following ,(positive and negative), examples which are assumed to be uttered by different speakers in different situations. Each example will be followed by :

- a) its illustrative, not necessarily full, Intentional content,
- b) the speaker's assumption about his addressee,(i.e., his illocutionary point or purpose), and
- c) the speaker's intention,(i.e., the effect he intends to produce).

28) yumkina ?an na-^Xhaba bi-l-qitaari .
modal COMP we-go by-the-train .

" It is possible for us to go by train."

- a) ' I have a belief based on personal experience that it is possible for us to go to x,(e.g., a place known to both S and Ad), by train.'
- b) ' S assumes that Ad believes that p,(i.e., "our going by train"), is not possible.'
- c) ' S intends to get Ad to believe that p is (experientially) possible.'

29) laa yumkina ?an na-^Xhaba bi-l-qitaari .
Neg

" It is not possible for us to go by train."

- a) 'I have a belief based on personal experience that p is not possible.'
- b) 'S assumes that Ad believes that p is possible.'
- c) 'S intends to get Ad to believe that p is not (experientially) possible.'

The main difference between the two examples, just mentioned, lies in S's assumption about Ad. This gives rise to S's different intentions. Notice also that, with respect to Intentional meaning, the two utterances are asymmetrically related, (e.g., (28b) becomes (29c), and (28c) becomes (29b)). That each assumption is essential for its respective example can be shown by the following, where numbers stand for their examples, (pragmatic effect is provided in brackets below each example) :

30) : (28)- wa ?a9lamu ?anna-ka laa ta9taqida δ .aalika.
and I-know COMP-you Neg believe that

".... and I know that you don't believe that p is possible."

(This example is pragmatically redundant for what is assumed in (28))

@ 30') : (29) wa ?a9lamu ?anna-ka laa ta9taqida δ .aalika.

..... the same as (30).....

(This is Intentionally odd, unless the speaker is expressing his agreement with what his addressee does not believe)

@ 31): (28) wa ?a9lamu ?anna-ka ta9taqida δ .aalika.
and I-know COMP-you believe that

"... and I know that you believe that(p is possible)."

(This is as odd as (30'), unless the speaker is expressing his agreement with what his addressee believes)

31'): (29) wa ?a9lamu ?anna-ka ta9taqida δ .aalika.

.. the same as (31)....

(This example is pragmatically redundant, since the conjunct is supposed to be assumed in (29))

I have been using "the addressee believes" in a very loose sense, because the content of the speaker's assumption may, (and it often does), include a very common belief. E.g., in the following example, from my corpus, the speaker is trying by his utterance to refute a common belief that 'it is possible to draw a distinction between the meaning and the form of an objet d'art or artistic creation' :

32) laa yumkina ?an yanfaşila al-ma9nah 9an aŞ-Şakli. (RWL.23)
Neg modal COMP be-separated the-meaning from the-form

" It is not possible to separate the meaning (of a work of art) from its form."

So far, the Intentional meaning of negation in yumkin-sentences has been analyzed in terms of i) the speaker's assumption, (that there exists a belief contrary to his own that a state of affairs is possible), and ii) the speaker's intention to correct the assumed belief in order for it to be identical with his own belief 'that the same state of affairs' is not (experientially) possible. This observation, which is based on analyzing laa-yumkin as is used to express a kind of 'Negative Experiential Possibility', (see section 3.1.2), has to be tested against a wider range of application of laa-yumkin. (I am using "range of application" in the sense of Hintikka, 1969)

5.3.3. laa yumkin : Its range of application

To illustrate what is meant by laa-yumkin range of application , consider examples (33) through (35), which can be regarded as three different assumptions for three different utterances of (36) :

- 33) yumkina ?an yaku;na Zeidun fi-l-bayti. (Experiential. POSS)
 modal COMP be Zeid at-home
 "Zeid can be at home." (possibility-can)
- 34) labudda ?an yaku;na Zeidun fi-l-bayti. (Epistemic NEC)
 modal COMP be Zeid at-home
 "Zeid must be at home."
- 35) yastati:9a ?an yaku;na Zeidun fi-l-bayti. (Agentive POSS)
 modal COMP be Zeid at-home
 " Zeid Can be at home." (Ability-can)
- 36) laa yumkina ?an yaku;na Zeidun fi-l-bayti.
 Neg modal COMP be Zeid at-home
 " Zeid can't be at home.

As an expression indicating a kind of not-possibility based on the speaker's experiential belief, laa yumkin can be used, depending on the pragmatic context, to correct or counterargue the kinds of belief expressible in sentences like (33) through (35). It has to be mentioned, by way of eliminating misunderstanding, that 'to correct an assumed belief' is quite different from 'to reject an assumed or existing assertion'. The former is normally achieved by means of a negative assertion, e.g., (36), and the latter by an illocutionary act of 'denying', (see also section 5.0.21). In fact, there is no possible context, that I know of, in which laa yumkin can be used, even indirectly, to perform an illocutionary act of 'denying', (i.e., to reject an existing or assumed assertion). And I think that this is also not possible for the English can't.

Instead of saying that laa yumkin is used as the negative form of yumkin, labudda and yastati:9, (e.g., in the above examples respectively), it would be more realistic to say that the varied degrees of

belief expressible by these modals can be regarded as the pragmatic range of application of the 'Experiential not-Possibility' expressed by laa yumkin .

This view is motivated by structural as well as pragmatic considerations. Structurally, laa yumkin is not the negative form of labudda or yastati:9, though it can be the negative form of yumkin. Pragmatically, the negative sentence, as has been demonstrated above, is based on a set of assumptions different from that on which its positive counterpart is based. This point is even clearer with laa yumkin. E.g., the speaker may utter (36) on the assumption that (33) is an existing belief. He would then have the intention explained in (5.3.2). Or, he may, in a different situation, use the same utterance to correct the assumed belief contained in (34); and the same applies to uttering (36) on the assumption of (35).

It may be worth mentioning that a similar phenomenon exists in English in connection with 'Root-can', 'Ability-can' and 'Epistemic-must', which are negatable with can't, (see e.g., Leech, 1971 and Palmer, 1979). On the present account, can't would be regarded, not as the negative form of the three modals, but as expressing an Intentional meaning, (similar to Experiential not-Possibility), with a range of application including the varied degrees of belief expressible by the three modals as a set of alternative assumptions. The same account would apply to needn't, which is said, (Ibid.), to be the negative form of deontic-must .

5.3.4. yumkin-laa : Internal negation of yumkin-sentences

Discussion has so far been devoted to external negation for reasons of frequency. In fact, I have not come across a single corpus example, where yumkin is used in a sentence internally negated. The following rather brief discussion will therefore be conducted with a view to showing simply that explicitly marked internal negation is perfectly acceptable in LA sentences modalized with yumkin.

- 37) maa yuqaalu fi-l-&arbi yumkina ?al-laa yuqaalu fi-~~l~~-~~l~~arqi.
 what is-said in-the-West modal COMP-Neg is-said in-the-East
 " What is sayable in the West may not be sayable (i.e., acceptable) in the East."

The internal negation in (37) is explicitly marked by the post-modal position of the negative particle, laa . Notice that the translation is provided with may, in the epistemic sense. This may show that when yumkin is used in a sentence which is internally negated, the Intentional meaning of yumkin, (3.1.2), is weakened so as to be more or less equivalent to that expressed with rubbama-laa, (5.2). In other words, there is no perceptible change in meaning between (37) and its rubbama-counterpart :

- 37') maa yuqaalu fi-l-&arbi rubbama laa yuqaalu fi-~~l~~-~~l~~arqi.
 " What is sayable in the West may not be acceptable in the East."

Depending on the context, yumkin-laa can also be used to express " be able not to..". In this case it will be equivalent to yastabi:9 when used in a similar environment, i.e., in a sentence internally negated. The following examples, (i.e., a yumkin-laa sentence and its yastabi:9-counterpart), are interchangeable without change in meaning or

total signification :

38) yumkina ?al-laa ?a-xrugu .
 modal COMP-Neg I-go out
 " I can not-go out ."

38') ?astati:9u ?al-laa ?a-xrugu.
 " I can not-go out."

5.4. yastati:9

It has been mentioned,(3.1.3), that the meaning expressed by yastati:9 is a restricted case of that expressed by yumkin. This observation is equally applicable to the use of these modals in negative examples. I.e., when agentivity is not particularly emphasized or deemphasized the two modals would be interchangeable without change in meaning, as is shown in connection with (38) and (38'). When the agentivity component is contextually lacking, as in the following example, yastati:9 would not be pragmatically acceptable :

39) laa yumkina ?an yanfašila al-ma9nah 9an a-š-šakli.(RWL.23)
 Neg modal COMP be-separated the-meaning from the-form
 " Meaning can't be separated from its form."

@39') laa yastati:9a ?an yanfašila al-ma9nah 9an a-š-šakli.
 @ " Meaning is not able to be separated from its form."

The same acceptability pattern is revealed in the following non-passive example :

40) laa yumkina ?an ya9u:da at-tari:xu ?ila al-xalfi.(AK.4.4)
 Neg modal COMP return the-history to the-back
 " History can't go backward."

@40') laa yastati:9a ?an ya9u:da at-tari:xu ?ila al-xalfi.
 @ " History is unable to go backward."

5.4.1. lam yastati9 vs ?istata9, (i.e., the perfect of vastati:9)

lam yastati9 is the negative form of the perfect ?istata9, "was able to and did", (see 3.1.3). It has been mentioned, (Ibid.), that an affirmative example like (41) would be intended to inform the addressee that the action, (e.g., of burning the book), did actually take place in the past and that it was done by the agent intentionally, (e.g., Zeid, in (41), did not forget a cigarette end on the book) :

- 41) ?istata9a Zeidun ?an ya?raqa al-kitaaba .
 perf-modal Zeid COMP burn the-book
 " Zeid was able to (and did) burn the book (and he did that intentionally)."

The negative counterpart of (41) would negate the actuality but affirm the agent's unfulfilled intention :

- 42) lam yastati9 Zeidun ?an ya?raqa al-kitaaba.
 PAST-Neg modal Zeid COMP burn the-book
 " Zeid could not burn the book (though he intended to do so)."

The element of 'agent's intention' may well be the only possible difference between (42) and its unmodalized version :

- 43) lam ya?raqa Zeidun al-kitaaba.
 PAST-NEG burn Zeid the-book
 " Zeid did not burn the book."

This point can be illustrated by the fact that (42), and not (43), would be infelicitous if followed by (44) :

- 44) wa lam yaqsida ?an ya?raqa-hu.
 and PAST-Neg intend COMP burn-it
 "..... and he did not intend to burn it."

In other words, in order for a speaker to use Neg-?istata9, (i.e., lam-yastati9), he must believe (as a preparatory condition) that there exists a mistaken belief, on the part of the addressee or someone else, that an action was intentionally actualized in the past. He must also believe (as a sincerity condition) that the same action was intended but not actualized. Finally, he must have an intention-inaction to correct whatever belief he thinks to be mistaken. This can be formalized as (45), where H stands for whoever is assumed to hold the mistaken belief, A for the agent and ^{Pt} for past-time :

45) lam-yastati9 : modal implication

i. BEL (S, BEL (H, INTEND(A, ACT)^{Pt} & DO(A, ACT)^{Pt}))

ii. INFORM (S, Ad, P1 & P2)

P1= BEL (S, INTEND(A, ACT)^{Pt} & -DO(A, ACT)^{Pt})

P2= INT (S, BEL (Ad, P1))

5.5. labudda : Negation of Epistemic Necessity

5.5.1. External Negation

It has been mentioned, (5.1.), that labudda, "epistemic-must", is not structurally used in sentences negated pre-modally. It has also been observed in (5.3.3) that the external negation of epistemic necessity, as expressed by labudda, is part of the range of application of 'Experiential non-Possibility', as expressed by laa-yumkin. Instead of repeating what has already been argued in connection with laa-yumkin, (5.3.2) and (5.3.3), the remaining part of this section discusses labudda only when used to qualify negative sentences, i.e., the internal

negation of sentences modalized with labudda.

5.5.2. Internal Negation

When labudda is used with a negative sentence like (46) there would be no problem in identifying the internal negation, since labudda will be understood as qualifying a negative proposition, (-p), as an epistemic necessity in the same way as it qualifies a positive one, (p), e.g., 'labudda -p' and 'labudda p' respectively. Compare (46) to its positive counterpart, (47) :

46) labudda ?anna-hu laysa ma:ʃ&u:lan .
 modal COMP-he Neg busy

" He must be not-busy" OR " It must be the case
 that he is not busy."

47) labudda ?anna-hu ma:ʃ&u:lan .
 modal COMP-he busy

" He must be busy."

The negation in (46) is more or less similar to the morphological negation of adjectival structures in English, (e.g., happy vs unhappy, able vs unable, etc.), but this should not lead to the misunderstanding that labudda-internal negation is confined to relational or attributive sentences, (i.e., NP + Adj.). Compare the following :

48) labudda ?anna-hu waʃala .
 modal COMP-he arrived

" He must have arrived."

49) labudda ?anna-hu lam yaʃila .
 modal COMP-he PAST-Neg arrive

" It must be the case that he has not arrived."

Notice that the agent's 'arriving' or 'not-arriving' is analysable in both cases as a state and not as an action. E.g., waşala and lam yaşila, in the above examples, would syntactically and pragmatically be interchangeable with something like fi-l-maktabi, "at the office", laysa fi-lmaktabi, "not at the office", respectively. Compare the above examples to the following :

50) labudda ?anna-hu fi-l-maktabi .
 modal COMP-he in-the-office
 " He must be in the office ."

51) labudda ?anna-hu laysa fi-l-maktabi.
 Neg
 " He must be not in the office."

In each of the above cases there is expressed an inferential necessity definable as a reasonable conclusion, based on some actually existing state of affairs, that p or -p must be the case. Thus (48) and (50) would be inferentially concluded from ,e.g.,

- i. seeing the light on in the office of whoever spoken about.
- ii. seeing his coat in the place usually connected with his arrival.
- iii. seeing his brief-case on his desk, etc.

The conclusion of (49) and (51) would be based on not seeing (i through iii).

In other words, the modal implication of labudda, (formalized in 3.2.2), does not seem to be affected in any way by internal negation, except that what is modalized in the case of negation is a negative p , as opposed to a positive p .

5.6. Negation and Experiential Necessity

Negating Experiential Necessity of labudda-sentences will be dealt with in the following section in connection with yagib. This is for the reason that the result of negating a labudda or yagib-sentence is invariably a negative structure which is related more to yagib than to labudda. Recall that labudda and yagib have been assumed to be interchangeable when used to express Experiential Necessity in affirmative sentences,(3.2.22). To illustrate, a labudda-example like (52), from the corpus, or its yagib equivalent,(53), are negatable into (54) or some other structure related to it, as will be seen in the following section :

52) labudda ?an na-9rifa mawqifa ?amri:ka . (MhG.4.5)
 modal COMP we-know view America

" We have to know the American point of view."

53) yagiba ?an na-9rifa mawqifa ?amri:ka .

" We have to know the American point of view."

54) yagiba ?al-laa na-9rifa mawqifa ?amri:ka .
 modal COMP-Neg we-know view America

" We are obliged not to know the American point of view."

The external negation of the two examples is also identical, but it is not expressed with laa-yagib as would be expected. It is expressed with a structure corresponding to the English needn't or there is no need to. The following is the external negative-counterpart of both (52) and (53) :

55) laa daa9i ?an na-9rifa mawqifa ?amri:ka .
 Neg need COMP we-know view America

" There is no need to/ we needn't know the American point of view."

5.6.1. Scope of Negation

It is nowhere (in this chapter) more ~~appropriate to emphasize~~ the importance of the scope of negation than with yagib when used to express Experiential Necessity. The problem of the negation-scope of yagib-sentences arises from complete lack of correspondence, in this instance, between the syntax and semantics of negation. Syntactically, external and internal negation are clearly marked by the pre- and post-modal position of the negative particle, laa, e.g.,

(Syntactic) External Negation : laa-yagib
Neg-modal

(Syntactic) Internal negation : yagib-laa
modal-Neg

Semantically, however, the case is quite different. It is the event, and not the modality, which is always negated no matter which position is occupied by the negative particle. In other words, irrespective of whether laa-yagib or yagib-laa is used the negation will invariably be semantically internal. Compare (56) to its slightly modified negative counterparts, i.e., the pre-modal, (57), and the post-modal, (58) :

56) ?al-guhdu yagiba ?an yuwagaha ?ila binaa?i -s-salaam . (H2.7)
the-effort modal COMP be-directed to building the-peace

" The effort must be directed/devoted to peace-making."

57) ?al-guhdu laa yagiba ?an yuwagaha ?ila ad-damaari.
the-effort Neg modal COMP directed to the-destruction

" The effort mustn't be directed to destruction."

58) ?al-guhdu yagiba ?al-laa yauwagaha ?ila ad-damaari.
the-effort modal COMP-Neg be-directed to the-destruction

" The effort mustn't be directed to destruction."

The two negative examples, (57) and (58), are semantically equivalent; there is no possible context where one is true and the other is false. In each case the speaker reports the existence of some x, (e.g., in the corpus context, the Middle East troubles), necessitating the propositional content, (e.g., Everyone's effort is not directed to destruction). The full content of (57) or (58) can be provided, from the context of the corpus, as :

- 59) "The circumstances surrounding the Middle East war make it necessary for the effort of the governments concerned not to be directed towards more destruction."

As is the case with affirmative examples, (3.2.31), the external circumstances necessitating the state of affairs described are sometimes explicitly mentioned, as the following corpus example shows :

- 60) Clay kabara, wa laa yagiba ?an yulaakima al-?aan. (SK.3.17)
 Clay got-old, and Neg modal COMP fight now
 " Clay has become old, and he mustn't fight now."

There would not be any change in meaning, should the above example be produced with the negative particle in a post-modal position :

- 61) Clay kabara, wa yagiba ?al-laa yulaakima al-?aan.
 COMP-Neg
 " Clay has become old, and he mustn't fight now."

It should be mentioned at this point that although examples like (60) and (61) are semantically equivalent, (and possibly equivalent in terms of modal implication in so far as the negative statement is within the scope of modality), there is in the normal way of usage a pragmatic or conventional preference for pre- to post-modal negation with yagib. As can be expected, a pragmatic preference for one linguistic

structure to another, which is semantically equivalent to it, would only arise from or be based on a pragmatic difference in signification between the two structures. Such a difference is best assumed to be related to the phenomenon of Neg-raising in general rather than to the use of laa-yagib, (which is Neg-raised)², to express the semantic meaning of yagib-laa, (since negation is in both cases internal).

In other words, yagib can be considered as a Neg-raiser with the generally assumed characteristics of Neg-raisers in natural language³. It has been noticed by Poutsma, Bolinger, Horn and others, (see note 3), that Neg-raisers have the characteristic of 'weakening' or 'softening' the tone of the expression in which they are used without changing its semantic contribution to the meaning of that expression.⁴ This pragmatic view amounts to saying that predicates like BE CERTAIN and MUST, when used in sentences like (62) and (63), would contribute to the Neg-raised versions, (e.g., (b) below), some pragmatic implication like those shown in brackets :

62) a) I am certain that he is not coming.

b) I am not certain that he is coming. (S wants to sound less certain by way of softening his judgement)

63) a) You must not-come.

b) You mustn't come. (S wants the obligation 'not-to-come' to be seen as out of his control or authority)

In a similar way, the following examples (the first from the corpus) are interpreted as semantically internal, with the latter being weaker in tone than the former. (I.e., the potential speaker of (65) wants to sound less involved in the circumstances which necessitate the state

of affairs concerned):

64) yagiba ?alla na-ta^hada^h 9an ma^haaakili gaanibyaa.(MhG.4.1)
modal COMP-Neg we-talk about problems subsidiary

" We must not talk about subsidiary problems."

65) laa yagiba ?an nata^hada^h 9an ma^haaakili gaanibyaa.
Neg modal COMP we-talk about problems subsidiary

" We mustn't talk about subsidiary problems."

Curiously enough, it is the Neg-raised version,(65), which is normal-interpreted by the native speaker as 'unmarked', because it is the more frequent. This view is assumed on basically conventional (and not structural) grounds. To illustrate, structurally, (according to McCawley, 1978:248-9), a speaker using(65) instead of the straightforwardly negated version (64) would be spending more linguistic effort by choosing a structure with more transformation,(e.g., Neg-raising). As a consequence, (65) would be structurally marked in contrast to the non-Neg-raised sentence,(64). Conventionally, however, the case can be (and it is here) reversed, since due to its frequent occurrence among LA speakers, laa yagib,(i.e.,the Neg-raised form), has become the easier and more normal.

In a speaking community where a 'syntactically marked' form has long been in use and has become preferred to its 'syntactically unmarked' counterpart, and where that 'counterpart' is used only for some pragmatic reasons; it would be more realistic to say that the 'syntactically marked' form, (e.g., laa yagib), has become conventionally 'unmarked' in the general practice of such community. At least this is the case with laa yagib vs yagib-laa in LA. The frequent occurrence of the former indicates that it has become the structurally easier in usage. It is only when the latter is used, which is very rare, that a sort of

emphasis is sensed. Such an emphasis would be indicated (in the spoken text) with a relatively high stress on the negative particle, which would then be contracted with the complementizer, ?an, and together would be produced as ?alla, (i.e., ?an+ laa).

It must be pointed out here that the contracted form ?alla is by no means confined to spoken texts, as it is very often encountered in written examples such as (64), which is repeated below as (66) :

- 66) yagiba ?alla na-ta~~h~~ada~~ða~~ 9an ma~~h~~aakili gaanibyaa. (MhG.4.1).
 " We must not talk about subsidiary problems."

The above argument will not invalidate the Poutsma-Bolinger-Horn view, (see note 2), that a raised negation is weaker, in some sense, than its non-raised counterpart. It is easily conceivable that a speaking community would be culturally accustomed (e.g., as a mark of politeness) to preferring a less straightforward, though weak, expression to its more straightforward, but strong, counterpart. Assuming that English is a language of such a community and (67) - (68) are the two expressions respectively :

67) I am not certain that he is a nice person.

68) I am certain that he is not a nice person.

On the above assumption, it would follow that an English speaker would use (68) only when he has good reason to deviate from the more conventionally acceptable usage, namely (67).

Finally, it has to be mentioned that the use of yagib to modalize negative statements does not seem to affect the modal implications, with which it is associated, (see sections 3.2.3 and 3.2.21). As negation

is semantically and pragmatically internal, it can be said that with positive statements yagib implies that there is some x, (external circumstances), necessitating some positive p. And in the negative cases, it implies that there is some x necessitating some negative p. In other words, the only modification needed for (m 5), (i.e., the modal implication of yagib : Experiential Necessity, repeated below), can be indicated in the p-part of the formula, as is shown below :

(m 5) yagib :Experiential NEC

INFORM (S,Ad, P1 & P2)

P1= BEL (S,∃x:CAUSE(x,NEC(p)))

P2= INT (S, BEL (Ad, P1)

(m 5) laa-yagib/yagib-laa

INFORM (S,Ad, P1 & P2)

P1= BEL(S,∃x:CAUSE(x,NEC(-p)))

P2= BEL (S, BEL (Ad, P1)

5.6.2. External Negation/Negation of Modality

By external negation I mean specifically the kind of negation that can be illustrated by (69b) as the negative counterpart of (69a), where for identifying the 'experiential' nature of Necessity, the two examples are assumed to be uttered by a doctor about one of his patients :

69) a) He must stay in bed.

b) It is not the case that he must stay in bed.

External negation in the sense shown above is expressed in LA by means of periphrastic expressions such as :

i. laa daa9i ?an
Neg need COMP

" No need to.."

ii. laysa hunaaka daa9i ?an
Neg there need COMP

" There is no need to.."

The following are the LA versions of (69) :

70) a) yagiba ?an yabqa fi-l-firaaḥi . .
 modal COMP he-stay in-the-bed

" He must stay in bed."

b) laa daa9i ?an yabqa fi-l-firaaḥi . .
 Neg need COMP he-stay in-the-bed

" There is no need for him to stay in bed."

The point I want to re-raise briefly here, by way of a reminder, is that laa daa9i, "no need to/needn't", is best analysed not as the negative form of yagib, "must", but as an expression conventionally used to counterargue or correct a mistaken belief (on the part of Ad or some other party in the discourse) that there exists a necessity for the coming into reality of some future action. This would be in keeping with what has so far been assumed that a certain pragmatic asymmetry exists between the use of positive sentences to express believed truths and the use of negative sentences to draw attention to believed falsehoods. The negative sentences, (e.g., (70b)), are best regarded as informative on their own right. E.g., the speaker of (70b), above, would not simply design his utterance as a negative counterpart of (70a), (e.g., as in a class-room activity), but he would most likely design it to correct a mistaken belief that (70a) exists. Recall also that according to the treatment of negation in connection with laa-yagib and yagib-laa , using (71) as the negative of (70a) would not be a negation of Necessity, but rather a different Necessity for the patient 'not to stay in bed' :

71) laa yagiba ?an yabqa fi-l-firaaḥi . .
 Neg modal COMP he-stay in-the-bed

" He must not stay in bed."

Finally, it has to be pointed out that the pragmatic asymmetry between negative and positive cases can be detected between yagib, "must", and laa daa9i, "no need to/needn't", rather than between yagib and laa yagib. This can be shown by comparing (m 5) to its negative counterpart, Neg-(m 5), where the asymmetric relation is obvious between what is assumed,(i), and what is believed and intended,(ii), in each case :

(m 5) yagib : Experiential NEC

i. BEL(S, BEL(Ad, -NEC(p)))

ii. INFORM (S, Ad, P1 & P2)

P1= BEL(S, }x: CAUSE(x, NEC(p)))

P2= INT (S, BEL (Ad, P1)

Neg-(m 5) laa-daa9i, "needn't"

i. BEL(S, BEL(Ad, NEC(p)))

ii. INFORM (S, Ad, P1 & P2)

P1= BEL(S, -}x: CAUSE(x, NEC(p)))

P2= INT (S, BEL (Ad, P1)

According to Neg-(m 5), above, the speaker of (70b), repeated as (72), would felicitously utter this assertion iff (73 a-c) obtain :

72) A doctor, about a patient: laa daa9i ?an yabqa fi-l-firaashi.

"There is no need for him to stay in bed."

73) a) S assumes that Ad (or someone else) believes that there is a necessity for the agent, (i.e., the patient) to stay in bed.

b) S has a belief based on his experience, (e.g., as a doctor), that there is nothing requiring/necessitating p, (i.e., 'he stays in bed').

c) S has an intention-in-action to inform Ad of (73 b).

5.7. yanba&i and yagib

This section will attempt to provide a distinction between yagib and yanba&i when used in negative sentences. In the examples discussed so far, the two modals are more or less interchangeable without perceptible change in meaning or total signification. The difference arises when any of them combines with a modal particle and is used as a compound modal, (cf. 3.2.4). The section just referred to discusses the combinability of yagib and yanba&i with the modal particle 9ala, (e.g., yagib-9ala expresses 'Agentive Necessity'). In this section a new particle, la-, "(roughly) it is permitted for..", has to be introduced. It has been noticed (in the corpus examples) that whenever yanba&i occurs as a compound modal in a negative structure, it invariably chooses la- and not 9ala-. It is possible however for yanba&i to combine with 9ala- in negative structures, but such an occurrence is very rare, and if it takes place yanba&i-9ala and yagib-9ala would be interchangeable without any change in meaning. I have also to mention that yagib does not combine with la- in negative or positive structures. In fact it is not grammatically acceptable, as can be seen in the following possible structural patterns :

- 74) a) Neg yagib-9ala
- b) Neg yanba&i-9ala
- *c) Neg yagib-la
- d) Neg yanba&i-la

Since (74c) is ungrammatical, and (74 a and b) express the same modal implication, I shall discuss in the following the difference between (74 a) and (74 d), i.e., laa yagib-9ala and laa yanba&i-la.

The difference in meaning between the two combined modals can be shown in the following simple examples :

75) laa yagiba-9ala-yka ?an tatakallama .
 Neg COMB-modal-you COMP talk
 " You must not talk."

76) laa yanba&i-la-ka ?an tatakallama.
 Neg COMB-modal-you COMP talk
 " You shouldn't be permitted to talk."

To illustrate the meaning of laa yanba&i-la, the following is a corpus example uttered by an aristocratic lady to her maid who, to the utter disapproval of her lady, frequents playhouses :

77) laa yanba&i la-kuma ?an tu saahidu ar-riwayaati. (CO.)
 Neg COMB-modal-you COMP watch the-plays
 " It shouldn't be permitted for you (you-plural, i.e., you and your likes) to watch the plays". OR better " You shouldn't be permitted to frequent playhouses."

Frequenting playhouses, to the speaker in the text, is a mark of social distinction, or rather once was a mark of social distinction that has passed away with the golden age of aristocracy.

To conclude, in the above rather sketchy discussion I have attempted to show the only possible distinction, I am aware of, between yagib and yanba&i. Apart from the use of the latter as a combined modal with la in negative sentences, (to express a sense of 'a permission that shouldn't have been given), it is more or less equivalent to yagib in all other uses.

Chapter Five

NOTES

- 1) The fact that some of LA modals are not negatable is not a peculiarity of this language. The English 'epistemic-may' and 'deontic-must' are not semantically negatable. They are negatable with can't and needn't, respectively. (See Palmer, 1979:26-7)
- 2) The two related points raised above : (A) the tendency of negation to be raised in natural language, with particular verbs, and B) the pragmatic difference in meaning between raised and non-raised negation), have long been observed by a number of scholars who can be sampled below :
- A) In Negation in English and Other Languages (1917:53), Jespersen observes "the strong tendency in many languages to attract to the main verb a negation which should logically belong to the dependent nexus.". In Word and Object (1960:145-6), Quine notes "the familiar quirk of English usage whereby 'x does not believe that p' is equated to 'x believes that not-p'". Fillmore (1963:220) stipulates that "under certain conditions (e.g., after verbs like want, think, etc.) a NOT in the embedded sentence may be moved in front of the main verb.". This fact has not been passed without regret on the part of some philosophers like Hintikka (1962:15) who notices that "the phrase 'a does not believe that p' has a peculiarity ... in that it is often used as if it were equivalent to 'a believes that not-p'". (Emphasis added)
- B) Poutsma (1928:102) finds that "the shifting of NOT often has the effect of softening down the negating of the sentence.". Bolinger expresses the same view that "the negative force in the transported reading is perceptibly weaker than in its non-transported congener.". Similar views are expressed by Partee (1970:335-6), Wise (1976:548) and others. See Horn (1978:129-37) for bibliographical details.
- 3) See Horn (1978:78-82), where he discusses in detail this phenomenon in French and Spanish. He also finds that Neg-raisers are classifiable into the following classes :

- "a. (OPINION) think, believe, suppose, imagine, expect, reckon...
 a'.(PERCEPTION) seem, appear, look like, sound like, feel like ...
 b. (PROBABILITY) be probable, be likely, figure to
 c. (INTENTION/VOLITION) want, intend, choose, plan.
 c'.(JUDGEMENT/(WEAK)OBLIGATION) be supposed to, ought, should,
 be desirable, advise, suggest " (Horn,1978:187)

It is interesting to note that 'Intentional expressions', (in the sense of Searle,1983), and modal expressions in particular form the majority of Horn's classes of Neg-raisers.

4. A semantic change of meaning of a sentence like (b) compared to (a), below, has always been dealt with in terms of the scope of negation :
- a) S believes that not-p .
 - b) S does not believe that p .
 - c) It is not the case that S believes that p .

(b) is considered ambiguous between the two readings expressed by (a) and (c). For detailed discussion of the controversy connected with this question, see (Horn,1978:133 et passim) and (Givon,1978:89-90).

Without denying the logical implications of this view, I would rather follow Givon's pragmatic view that "in general, while linguists and philosophers find it easy to recognize the external sense of negation, most speakers of human languages do not ... they tend to view negative constructions almost always as internal operations." (Givon,1978:88)

Chapter Six

Interrogative Questions in LA Modalized Sentences6.0. Introductory

The title of this chapter is designed to be as indicative as possible of its descriptive delimitations, i.e., it will not be concerned with questions in general or with interrogative structures used to express indirect speech acts or rhetorical questions. In other words, it will be concerned with what Searle (1968:65) calls "real questions", but only to the extent to which these "real questions" are expressed with interrogative structures. Further, it will not be concerned with interrogative questions produced by a person who believes that he is more knowledgeable than his addressee with respect to what counts as an answer to the respective question, (e.g., exam questions). To be more specific, this chapter is concerned with the modalized versions of sentences like (1 a) and (2 a) when used in situations similar to those indicated by the following examples (notice that it is pragmatically possible for the addressee to produce (b), (c), etc. as felicitous answers to (a)) :

- 1) a) man ?axa^χa al-kitaaba ?
 who took the-book
 " Who took the book ?"
- b) 9aly-un./ 9aly-un ?axa^χa al-kitaaba.
 Aly-SUB/ Aly-SUB took the-book
 " Aly. / Aly took the book."
- c) laa ?a9rifu .
 Neg I-know
 " I don't know."

- 2) a) hal gaa?a Zeid-un ?¹
 Q came Zeid-SUB
 "Did Zeid come ?"
- b) na9am./ na9am gaa?a Zeid-un.
 yes/ yes, came Zeid-SUB
 " Yes./Yes, Zeid came."
- c) laa ?a9rifu .
 " I don't know."

In this chapter, questions will be dealt with as expressions of mental states, i.e., sincerity conditions (2.3.23), in which the speaker, (in so far as the information needed is concerned), subordinates himself to his addressee², i.e., he will only ask a question of someone whom he believes to be capable of providing an answer to his satisfaction. The possibility that c-examples, above, can occur as answers to a-examples would not detract from the validity of this statement; it would merely show that the speaker can be wrong in his beliefs³.

Within the theoretical framework adopted in this study, the speaker's sincerity condition is assumed to be externalized in an illocutionary act through his 'complex intention-in-action' which is formally representable as an 'Informative', i.e., a logically prior illocutionary act, as explained in (2.3.35). Before going in any detail into analysing LA modalized questions, (sections (6.2) through the end of this chapter), three preparatory topics have to be discussed : (i) the place of questions in Arabic linguistics, (ii) the syntactic patterns of interrogatives in LA and (iii) a working definition of questions as a sub-set of requestive illocutionary acts.

6.0.1. The Place of questions in Arabic Sentence-types

Although not much, if anything, has recently been written about questions in Arabic, the traditional Arab grammarians' view on questions (relative to Arabic sentence-types) is interestingly in keeping with the currently held view, (within the standard theory of speech acts), that questions are a sub-category of the requestive type ⁴.

According to this traditional view, (as expressed in Arabic grammar textbooks, see also Hassaan, 1979), Arabic has two major sentence-types: Enunciative and non-Enunciative ⁵. The Classical Arabic dichotomy of Enunciative and non-Enunciative would roughly correspond to the currently accepted dichotomy of Assertive and non-Assertive. The Enunciative type includes those utterance sub-types which would, (in modern terms), express propositions analysable in terms of their truth functions ⁶, and the non-Enunciatives include those utterances which are analysable in terms of their felicity condition or satisfaction conditions, (see the diagram accompanying note 5).

Studying Arabic sentence-types or even Arabic questions in general is beyond the scope of this study, which is concerned only with the interrogative question counterparts of LA modalized sentences and the pragmatic implications of these questions. The Classical general view on Arabic questions has been mentioned merely as a point of departure for the way in which modalized questions will be dealt with in this chapter, i.e., they will be studied as illocutionary acts of the requestive type. I shall not be directly concerned with other syntactic or semantic features of Arabic questions. These features will be studied only to the extent to which they are likely to shed more light on the

pragmatic aspects of questions ⁷.

6.0.2. The Syntactic Patterns of Modalized Interrogative Questions

6.0.21. LA Interrogative Markers

Questions are formed in LA by simply inserting an interrogative marker in initial position and no 'inversion', as in English, is involved. For the purpose of this chapter, LA interrogative markers can be sampled as follows :

- 3) a) hal = yes-no question indicator
 b) mata = when
 c) ?ayna = where
 d) kayfa = how
 e) maa ^χ a = what
 f) man = who

To illustrate the way in which LA interrogative sentences are formed, compare (4) with each of (5 a through c) :

- 4) ya-btasima .
 " He-smiles ."
- 5) a) hal ya-btasima ?
 Q he-smile
 "Does he smile ?"
- b) mata ya-btasima ?
 when he-smile
 " When does he smile ?"
- c) ?ayna ya-btasima ?
 where he-smile
 " Where does he smile ?"

The same structural pattern is found with modalized sentences, e.g., compare (6), which is a modalized version of (4), with its interrogative counterparts :

- 6) yumkina ?an ya-btasima .
 modal COMP he-smile
 " It is possible for him to smile."
- 7)a) hal yumkina ?an ya-btasima ?
 Q modal COMP he-smile
 " Is it possible for him to smile ?"
- b) mata yumkina ?an ya-btasima ?
 when
 " When is it possible for him to smile ?"
- c) ?ayna yumkina ?an ya-btasima ?
 where
 " Where is it possible for him to smile ?"

The observation based on (7) compared to (6) should not lead to the misunderstanding that all LA modalized sentences can automatically be transformed into interrogative sentences . It will be seen in a moment that there are some pragmatic restriction on this process.

6.0.22. Pragmatic Restrictions on LA Modalized Questions

It has been general practice in analysing the formal structures of questions to compare them to their affirmative counterparts. This is what will be done, only in this section, by listing all the syntactically possible sentences which would represent LA modalized structures. Each modalized sentence (on the left column) is followed by its potential interrogative counterpart (on the right column). The questions provided are those which would have been used to elicit a number of answers of which the one on the left is the most likely. In most cases, as will

be noticed, the modal used in the affirmative will not be identical with the one used in the interrogative counterpart. In the following, I shall use one simple sentence, namely yabtasima, "he-smiles", and its perfect-version, ?ibtasama, "he-smiled"; and only one interrogative marker, the yes-no question indicator (hal), will be used as a syntactical representative of LA question markers in general ⁸.

8) <u>Affirmative</u>	<u>Interrogative</u>
a) rubbama yabtasima . "He may smile."	hal yumkina ?an yabtasima ? " Is it possible for him to smile?"
b) rubbama ?ibtasama . " He must have smiled."	hal yumkina ?an yabtasima ? " Is it possible for him to smile?"
c) yumkina ?an yabtasima . " He can smile."(POSS- <u>can</u>)	hal yumkina ?an yabtasima ? " Is it possible for him to smile?"
d) kaana yumkina ?an yabtasima. " It was possible for him to smile."	hal kaana yumkina ?an yabtasima ? " Was it possible for him to smile?"
e) ?istata9a ?an yabtasima . "He was able to smile."	hal ?istata9a ?an yabtasima ? " Was he able to smile ?"
f) labudda ?an yabtasima . " He must smile."(epistemic)	hal yumkina ?an yabtasima ? " Is it possible for him to smile?"
g) kaana labudda ?an yabtasima . "It was necessary for him to smile."	hal kaana yagiba ?an yabtasima ? " Was it necessary for him to smile ?"
h) yagiba ?an yabtasima . "He must smile."(deontic)	hal kaana yagiba ?an yabtasima ? "Is it necessary for him to smile?"

It would follow from (8) that LA has only (for modalized interrogative questions) the interrogative structures repeated in (9), where the past-

time marker, kaana, is bracketed as an optional element :

- 9) a) hal (kaana) yumkina ?an yabtasima ?
 Q (PAST) modal COMP he-smile
 " Is (PAST) it possible for him to smile?"
- b) hal (kaana) yagiba ?an yabtasima ?
 Q (PAST) nodal COMP he-smile
 " Is (PAST) it necessary for him to smile?"
- c) hal ?istata9a ?an yabtasima .
 Q PAST-able COMP he-smile
 " Was he able to smile ?"

An attempt will be made, in the appropriate sections, to attribute the lack of correspondence between affirmative and interrogative structures, (indicated in (8)) to some pragmatic factors determining the way of asking questions related to possibility and necessity. What is relevant to mention at this point is that the interrogative structures formally corresponding to rubbama-examples (8a-b), as well as that of labudda, (8f), are not acceptable, as is shown in (10).

- 10) *a) hal rubbama yabtasima ?
 Q . modal he-smile
- *b) hal rubbama ?ibtasama ?
 Q modal he-smiled
- *c) hal labudda ?an yabtasima ?
 Q modal COMP he-smile

6.1. Towards an Intentional Definition of Questions

This section is intended to provide an Intentional working definition of questions based on the speaker's 'sincerity condition', (2.2.23), and his 'complex intention-in-action', (2.2.24) and (2.2.35). This will be

done against, and elaborating on, a background of many recent proposals which have approached 'the question of questions' from different points of view and through various analytic methods ¹⁰. Of particular interest to the present study are :

- 1) Hausser's (1980) intensional analysis,
- 2) Kiefer's (1980 & 1981) and Levinson's (1983) pragmatic analyses, and
- 3) Aqvist's (1965) and Hintikka's (1978) imperative-epistemic analysis.

6.1.1. Analysing Questions as open structures

Working within a framework of Montague's Intensional Logic, Hausser defines a question as "an interrogative denoting a function from points of reference to sets of corresponding non-redundant answer constituent denotations." (Hausser, 1980:89, emphasis in the original). Without using the intensional formalism, Hausser's "points of reference" can be illustrated, linguistically, by (11 a,b,c,etc.) and his "non-redundant answer constituent denotations" by (12 a,b,c,etc.) respectively :

- | | |
|------------|----------------------------|
| 11) | 12) |
| a) who ? | a) John/Bill/etc. |
| b) when ? | b) early/yesterday/etc. |
| c) where ? | c) at home/ at college/etc |
| etc. | etc. |

It follows that a question like (13a)/(14a) together with its non-redundant answer,(13b)/(14b), would compositionally constitute a proposition denoting a truth value, These are Hausser's (1980:89) :

- | | |
|----------------------------|------------------|
| 13) a) <u>"Who came ?"</u> | b) <u>John."</u> |
| | |

14)a) "When did John arrive ? b) Early."



Apart from technical details, Hausser's Intensional approach to questions is not essentially different from Kiefer's semantical view that :

"The propositional content of questions is an open structure, i.e., a structure containing one or more variables. By filling in the variables we get a proposition which can be true or false."

(Kiefer, 1981:161)

It is notable that Kiefer's "variables", as dealt with in details in an earlier work, (Kiefer, 1980), would correspond to Hausser's "points of reference", as can be illustrated by (11) above. Also, Kiefer's "variables" would be 'filled in' by something like (12) above.

As is noted by Kiefer, (1981:161), the question-as-an-open structure approach would tell us more about the proposition, (which constitutes the question and its answer), than it would tell us about how the question itself works. E.g., it would tell us that the set of questions in (15), below, would provide (16) as a possible set of topics for the proposition expressed in (17). (The examples are based on Levinson, 1983:84) :

- 15) a) Who is going to London tomorrow ?
 b) Where is John going tomorrow ?
 c) When is John going to London ?

- 16) a) Someone is going to London tomorrow .
 b) John is going somewhere tomorrow .
 c) John is going to London at some future time.
- 17) John is going to London tomorrow .

Analysing what Levinson (1983:84) calls "question-presuppositions", (e.g., (16),above), which would serve as topics for the answers of the respective questions, would not be sufficient for providing an account of the pragmatic implications of questions,(see also Wunderlich,1981: 132). What is needed, as Kiefer (1981:163) points out, is a system of "the speaker's cognitive attitudes", as will be seen in a moment.

6.1.2. Questions as Configurations of Cognitive Attitudes

Kiefer's (1981) analysis of questions in terms of the speaker's cognitive attitudes is based on Bierwisch (1980:21-3) and Motsch (1980: 159-66). On this view, an utterance of a question by a speaker in a situation where "the speaker does not know the answer but assumes that the hearer knows it", (Kiefer,1981:162), would amount to expressing the following set or configuration of attitudes,(from Kiefer,1981:163-4):

- | | |
|-----------------------------|----------------------|
| 18) a) Epistemic Attitude : | -KNOW (S,p) |
| b) Doxastic Attitude : | ASSUME (S,KNOW(H,p)) |
| c) Motivational Attitude : | WANT (S,KNOW (S,p)) |

As it stands, Kiefer's framework of cognitive attitudes,(which are also described as"mental states")¹¹, is to some extent sketchy and far from being capable of providing an adequate account of how a question is performed as an illocutionary act. E.g., it does not explain :

- i) How this configuration of cognitive attitudes can be externalized into an illocutionary act of question.
 - ii) Whether these cognitive attitudes are of equal importance in the performance of the question, or that each of them has a different illocutionary part in the act.
 - iii) How it would be possible for the speaker (questioner) to secure the illocutionary uptake.
- etc.

The answers to the above questions will be found in the alternative analysis, to be provided in the remaining part of this chapter. This proposed analysis has the advantage of being based on a more systematic theory of Intentionality,(2.3.21). The speaker's different mental states, which would roughly correspond to Kiefer's cognitive attitudes, have been defined,(2.3.23-26), and related to each other not as a 'configuration' but as a 'complex logically prior illocutionary act of Informing, (2.3.35).

6.1.3. Questions as a special sub-class of requests

The view that questions are a special kind of requests,(e.g.,requests for information), has long been expressed in the literature,see,e.g., Bolinger (1957:4) and Katz & Postal (1964:113). (See also notes 2 and 3) It is also the view adopted in Aqvist's (1965) and Hintikka's (1974 & 1978) works, where questions are dealt with within an 'Imperative-Epistemic' framework. E.g., a question like "Who lives here?" is analysed, according to Hintikka (1978:279-82), as "bring it about that I know who lives here.". It is in Searle's Speech Acts (1969), however, that questions are explicitly formulated as a special sub-class of requestive illocutionary acts. This is particularly clear in the case

of 'sincerity' and 'essential' rules, as provided in (Searle,1969:66) :

Request	Question
Sincerity Rule: "S wants H to do A"	"S wants... information from H "
Essential Rule: "Counts as an attempt to get H to do A"	"Counts as an attempt to elicit information from H"

Searle's sincerity and essential rules,(which are developed in his later work (1979 & 1983) into sincerity and illocutionary point conditions, respectively), can easily be included within the present framework. It can be said that an illocutionary act of request/question is an externalization of S's sincerity condition of desire to get Ad to do A/ to give S some information. The illocutionary point can be explained in terms of S's intention-in-action,(2.3.35), to get Ad to do A / to elicit information from Ad. The problem arises with some details,(e.g., Preparatory Conditions, a clear distinction between requests and questions, etc.), which have not been accounted for within Searle's Theory of Intentionality (1983). In the following, I shall provide an account of the points relevant to the purpose of the present study. I shall be particularly concerned with the following points :

- i) The Preparatory conditions of questions in contrast to those of requests.
- ii) A pragmatically based distinction between questions and requests.
- iii) How questions can be formalized in the present framework.

6.1.31. Preparatory Conditions : Questions vs Requests

A Preparatory condition, PC, has been defined, (2.3.26), as "a set speaker's assumptions about his participants' beliefs concerning what he is speaking about at the time of utterance.". In addition to this definition, I assume the following pragmatic implications for questions: :

A: i) In a serious and sincere utterance of a question, the speaker would be in a state of non-knowledge with respect to the possible answer(s) to his question. What I mean by "possible answer(s)" can be illustrated by the verbal responses of S2, below :

S1: Who is coming ? S2: Bill./John./etc.

S1: Is John coming ? S2: Yes./No.

ii) It pragmatically follows from (i) that S desires to know p implies S does not know p .

B: A speaker would normally ask a question of a person whom he believes to know, (i.e., to be able to provide), the answer; and whom he believes to have no particular desire or reason for not providing the answer.

On the assumption, (to be explained later), that (A) above is part of the speaker's sincerity condition, (i.e., it is concerned with the propositional content and not with the participants' beliefs), I take (B) as the relevant set of assumptions which constitute the preparatory conditions for questions. This is shown as (18a), below, in contrast to the preparatory conditions for requests, i.e., (18b) which is a modified version of Searle¹². (p' stands for the information contained in the possible answer, as illustrated by S2's utterance above) :

18) a) PC's for Questions

1. S believes that it is possible that Ad knows p' .
2. S believes that Ad has no desire not to provide p' .

PC's for Requests

1. S believes that Ad is able to do A .
2. It is not obvious to S that Ad will do A in the normal course of events of his own accord.

6.1.32. Questions vs Requests (for information)

On the basis of (18) and by way of drawing a distinction between questions and requests, I shall briefly raise two points : i) Questions and requests for information are distinguishable from each other only through their different preparatory conditions, since their sincerity and illocutionary point conditions are more or less identical. ii) Although questions can be considered as belonging to the requestive type of illocutionary acts, it is not precisely accurate to say that they are 'requests for information', since requests for information are simple requests for (verbal) actions, as will be seen below.

The above two points can be illustrated by comparing the following examples, which are supposed to be uttered by a friend and a person in authority, respectively :

19) Where do you live ?

20) Tell me where you live .

These examples have the same sincerity condition, (S desires to know some information from Ad), and the same illocutionary point condition, (S tries by the utterance to get this information from Ad). But they

differ markedly with respect to the preparatory conditions, as explained in (18). It is immaterial for the speaker of (20) whether his addressee desires or not to provide him with the information he wants. The act of 'providing S with information' in (20) is not essentially different from the act of 'opening the door' in (e.g., "open the door."). The case with (19) is different. In order for this example to be appropriately uttered as a 'real' question, (e.g., not as an indirect request or command), the answerer's attitude, (i.e., (18a 2)), has to be considered by the questioner as part of his preparatory condition. This has been insightfully pointed out by Bolinger, who considers that a question

" is fundamentally an attitude ... the attitude is characterized by the speaker's subordinating himself to his hearer."

(Bolinger, 1957:4)

I assume that the questioner's attitude, as explained by Bolinger, can only be brought about by his considering the answerer's desire, as stated in (18a 1), above. It has also to be mentioned that such an attitude is quite irrelevant to the requester's preparatory conditions.

6.1.4. Formalization

The following formalization, (C) below, is to be seen as a natural development and formal elaboration of the approaches discussed so far, (6.1.1-32). E.g., the assumption in (A) is based on the view that a question is an open structure, (6.1.1). The content of (B), which provides, informally, a description of the essential felicity conditions for questions, can be seen as an elaboration of Kiefer's "cognitive attitudes", (6.1.2), within a more integrated theory of

Intentionality. (C) shows how these attitudes or mental states can be related to each other in the production of the question through a logically-prior illocutionary act of 'informing', as explained in (2.3.35).

A: Assuming that p' , as opposed to p , is a variable ranging over possible answers, (i.e., the pieces of information needed for questions to form propositions), and given (B), below, as the pragmatic implications of questions, (C) would indicate, formally, how the elements of (B) are related to each other. Notice that on this assumption $p = \text{question} + p'$, see (6.1.1).

B:1) Preparatory Condition: S believes that it is possible that Ad knows p' . He also believes that Ad has no particular desire not to provide p' .

2) Sincerity Condition : S wants Ad to provide p' .

3) Illocutionary Point Condition: S tries to get Ad to provide p' .

4) Intention-in-action : S has an intention-in-action based on (B1) to get Ad to recognize (B2 and 3) through a logically-prior illocutionary act of INFORMing.

C: The Pragmatic Implication of Question (PIQ)

i. BEL (S, POSS(TELL(Ad,S, p') & -DES(Ad, -TELL(Ad,S, p')))

ii. INFORM (S,Ad, P1 & P2)

P1= -KNOW (S, p') & DES (S,KNOW(S, p'))

P2= INT (S, TELL (Ad,S, p'))

As formalized above, the PIQ is intended to account for both yes-no and wh-questions, whether unmodalized or modalized. E.g., what p' would stand for, for the following questions, can be shown in brackets, in

front of each example. Note that (23) and (24) are modalized versions of (21) and (22) respectively :

- | | | |
|-----|--|---------------|
| 21) | hal ya?tiya Zeidun ? | (na9am .) |
| | Q come Zeid | |
| | " Does Zeid come ?" | ("Yes.") |
| 22) | mata ya?tiya Zeidun ? | (&adan.) |
| | when come Zeid | |
| | " When does Zeid come?" | ("Tomorrow.") |
| 23) | hal yumkina ?an ya?tiya Zeidun ? | (na9am.) |
| | Q modal COMP | |
| | "Is it possible for Zeid to come?" | ("Yes.) |
| 24) | mata yumkina ?an ya?tiya Zeidun ? | (&adan.) |
| | when modal COMP | |
| | " When is it possible for Zeid to come?" | ("Tomorrow.") |

It will be seen, however, that there are some cases of modalized questions, (specially yes-no questions about possibility), in which the interaction between questions and modality is not fully predictable from the above formulation. I.e., (23), as it stands, poses some pragmatic problems which will be discussed in section (6.3.1), below.

6.2. Questions and Modality : General Observations

In preparing the data for this chapter, the following general observations, concerning questions in relation to modality, have been noted:

- i) Modalized questions share with questions in general the fact that the speaker, at the time of utterance, would be in a state of non-knowledge with respect to some information needed as an answer to the respective question. (I shall continue to use p' as a variable ranging

over possible answers)

ii) In so far as the scope of question is concerned, there are two major kinds of questions which can be termed : a) external questions, i.e., questions about modality, e.g., (25) and (26) below, and b) internal questions, i.e., questions about non-modal information (e.g., event, time, place, etc.). Within the scope of modality, e.g., (27) and (28) below :

25) hal yakina ?an ya?tiya Zeidum ?
Q modal COMP come Zeid

" Is it possible for Zeid to come ?"

26) hal yagiba ?an ya?tiya Zeidum ?
Q modal COMP come Zeid

" Is it necessary for Zeid to come ?"

27) mata yukina ?an ya?tiya Zeidum ?
when modal COMP come Zeid

" When is it possible for Zeid to come ?"

28) mata yagiba ?an ya?tiya Zeidum ?
when modal COMP come Zeid

" When is it necessary for Zeid to come ?"

In the last two examples, the existence of possibility or necessity is assumed by the questioner to be the case at sometime; what is needed from the answerer is to provide the specific timing of such possibility or necessity. I have to say that this observation is in disagreement with Palmer's (1979:27) claim that "it is only modality that can be questioned."

iii) External questions and internal questions, in the above sense, are clearly marked by two different interrogative structures : a) yes-

no interrogative structures, (indicated in LA by a special question word, hal), and b) wh- interrogative structures, respectively. LA question words are mentioned in (3), which is repeated below :

- 3) a) hal = yes-no question indicator
 b) mata = when
 c) ?ayna = where
 d) man = who
 f) maa^xa = what

iv) It has also been observed that speakers use modalized questions to ask about either 'possibility' in general or 'necessity' in general. I.e., the sub-categorizing of (the asked for) POSSIBILITY or NECESSITY into Epistemic, Experiential, Deontic, etc. is not possible in the way it is in the non-interrogative cases. Related to this point is that a question about a state of affairs which would be affirmatively stated as epistemic necessity is normally expressed as a question about possibility and not about necessity. This may account for the fact that (in English and in LA) an example like (29), below, is the normal way of asking about what would be affirmatively expressed by (30) through (32) :

29) hal yunkina ?an yaku;na fi-l-bayti ?
 Q modal COMP he-be at-home
 " Can he be at home ?"

30) yunkina ?an yaku;na fi-l-bayti . (Experiential Possibility)
 modal COMP he-be at-home
 " He can be at home ."

31) rubbama yaku;na fi-l-bayti . (Epistemic Possibility)
 modal he-be at-home
 " He may be at home ."

32) labudda ?an yaku;na fi-l-bayti . (Epistemic Necessity)
 modal COMP he-be at-home
 " He must be at home ."

To say, (following Leech, 1971:71-2, in a similar argument about English), that yumkin is used in LA as the interrogative form of rubbama, "epist. may", and labudda, "epist. must", would amount to the misleading assumption that (29) is ambiguous between the three meanings represented by the affirmative examples above. I shall argue (in the following section) against this view on the grounds that the questioner, being in a state of non-knowledge, is in a position to ask only about a possibility . It would be up to the answerer, due to his being in an assumed position or state of knowledge, to provide p', (i.e., the information needed), as an 'epistemic possibility', 'experiential possibility' or 'epistemic necessity'.

I have also to mention that because of the observations just stated, the following discussion will be divided into two major sections : section (6.3) discusses 'Possibility Questions', i.e., questions about possibility and wh- questions involving possibility. Section (6.4) discusses 'Necessity Questions' in a similar way.

6.3. Possibility Questions in LA

As briefly mentioned in the preceding section, there are two kinds of possibility questions in LA : external (yes-no) questions and internal (wh-) questions. The possible modals and interrogative structures used to express these questions can be illustrated by (33) and

(34), respectively. (Recall that ?istata9, "was able to", is the perfect form of yastati:9, "is able to") :

- 33) a) hal yumkina ?an ya?tiya ?
 Q modal COMP he-come
 " Can he come ?"
- b) hal kaana yumkina ?an ya?tiya ?
 Q PAST modal COMP he-come
 " Was it possible for him to come?"
- c) hal ?istata9a ?an ya?tiya ?
 Q PAST-modal COMP he-come
 " Was he able to (and did he) come ?"
- 34) a) mata yumkina ?an ya?tiya ?
 when modal COMP he-come
 " When can he come ?"
- b) mata kaana yumkina ?an ya?tiya ?
 when PAST modal COMP he-come
 " When was it possible for him to come ?"
- c) mata ?istata9a ?an ya?tiya ?
 when PAST-modal COMP he-come
 " When was he able to (and did he) come?"

It is notable that the interrogative structures of the above two sets of examples are almost identical, except that the question word in (34), which represents wh-question words in general, is interpreted as associated with some variable, (e.g., sometime, somewhere, etc.).

Semantically, however, the two structures are quite different. E.g., hal, "yes-no question indicator", takes as its scope the whole of the modalized sentence, whereas a wh-question word takes as its scope only the variable with which it is associated. This can be further illust-

rated by replacing mata, "when", in (34a) by other different question words, as in the following, where the possible variables are indicated in brackets :

- 35) a) ?ayna yunkina ?an ya?tiya ? (Somewhere)
 where
 " Where can he come ?"
- b) man yunkina ?an ya?tiya ? (Someone)
 who
 " Who can come ?"
- c) kayfa yunkina ?an ya?tiya ? (Somehow/some way)
 how
 " How can he come ?"

The semantic difference between these two kinds of question may well indicate that they are based on two different sets of speaker's assumptions, (i.e., how much of the propositional content he knows or assumes to be the case), which determine the kind of p', (i.e., the information), the speaker wants to know, from his addressee. This will be the topic of the following discussion.

6.3.1. Yes-No Questions of Possibility

Yes-no questions of sentences modalized with yunkin pose a pragmatic problem not normally encountered with yes-no questions in general. E.g., 37), below, provides a set of possible answers to a question like (36); it is interesting to note that an unqualified yes or no , as an answer, would conversationally be considered un-cooperative :

- 36) hal yunkina ?an yaku:na fi-l-bayti ?
 Q modal COMP he-be at-home
 " Can he be at home ?"

37)@a) na9am .

"Yes."

b) rubbama yaku;na .

" May be ."

c) yuakina' ?an yaku;na .

" He can be ."

d) labudda ?an yaku;na ,(?alaa tara an-nura ?)
 modal COMP he-be ,(Q-Neg you-see the-light)

" He must be,(don't you see the light on ?)."

The problem arises from the pragmatic fact that a speaker would normally produce a question like (36) to ask not about whether one of two truth values is the case, but about a wide range of unspecified possibilities, whose specification is left to the addressee to determine . This follows from the assumption that in asking a question the speaker is in a state of non-knowledge and assumes that the addressee is in a state of knowledge with respect to what the speaker wants to know . To be sure, there is no logical reason why people do not normally ask questions like :

" Is it epistemically possible/necessary that ?"

but that there are no modals conventionalized in LA (and possibly in English) to express these questions would suggest the validity of the argument above. Notice that the following questions (formed with epistemic modals) are unacceptable in the meaning indicated in brackets :

@38) hal rubbama yaku;na fi-l-bayti ? (Epistemic Possibility)
 Q modal he-be at-home

" May he be at home ?"

- ③9) hal labudda ?an yaku;na fi-l-bayti ? (Epistemic Necessity)
 Q modal COMP he-be at-home
 " Must he be at home ?"

6.3.2. Is yunkina the interrogative form of rubbama and labudda ?

Dealing with a similar question related to the English modals, Leech (1971:71-2) and Palmer (1979:27-8) express the view that can is the interrogative form of epistemic may and must, or that affirmative sentences expressed with the latter two modals are interrogated with can. Given that the three English modals correspond to the LA yunkin, rubbama and labudda, respectively, I accept this view only as part of a semantic framework in which questions can be considered supplementary to their indicative counterparts, (see also Wunderlich, 1981:131, for a similar view). On this account, one would start with indicative examples like (40 a-c) as basic linguistic structures, to which others (e.g., interrogatives, negatives, etc.) are supplementary or related by some transformational operations :

- 40) a) rubbama yaku;na fi-l-bayti .
 modal he-be at-home
 " He may be at home ."
- b) labudda ?an yaku;na fi-l-bayti .
 modal COMP he-be at-home
 " He must be at home ."
- c) yunkina ?an yaku;na fi-l-bayti .
 modal COMP he-be at-home
 " He can be at home ."

The result of finding out that the interrogative counterparts of these examples are expressed by one modal, namely yunkin in (36) repeated below as (41), would naturally lead to the assumption that yunkin is

used in LA as the interrogative form of rubbama and labudda ;

41) hal yumkina ?an yaku;na fi-l-bayti ?
 Q modal COMP he-be at-home
 " Can he be at home ?"

This account would run into the difficulty of having to postulate three meanings for (41) : 'epistemic possibility', 'experiential possibility' and 'epistemic necessity'. This is counterintuitive , because (41) would normally be understood to be expressing only one meaning ; it is a question about an unspecified possibility, or possibility in a very loose sense, which cannot be identified with any of these categories, as will be seen in a moment.

In the pragmatic approach adopted in this study, questions are dealt with not as supplementary to other linguistic structures, but as illocutionary acts which can be accounted for in terms of the speaker's Intentionality. This does not necessarily involve looking for a derivational basis, according to which questions have to be related to assertions. In fact, there is no need for a derivationally based relation between questions and assertions, since within a pragmatic framework, as Wunderlich (1981:132) points out, "a question is the most prominent kind of initiative speech act ,i.e., it invites a verbal response.". In so far as the problem under consideration is concerned, the starting point is to analyse the Intentional meaning of a question like (41), as an initiative illocutionary act ; and the next step is to establish a pragmatic relationship between this question and its possible answer(s). In other words, it is to see how a question about possibility in general can invite verbal responses

expressing different specified meanings of possibility as well as 'epistemic necessity'.

To begin with, the following, (42 B), is an informal description of the Intentional meaning of (41), which is represented as (42 A), (where p = "he is at home.") :

42)A: " Is it possible that p ?"

B:1. S is in a state of non-knowledge and assumes that Ad is in a state of knowledge with respect to the possibility of p . S also assumes that Ad has no particular reason for not answering (42 A).

2. S wants to know through Ad whether and to what extent p is possible. (the underlined is to be clarified in a moment)

3. S intends, by producing (42 A), to get Ad to inform S of whether and to what extent p is possible.

Postulating that the speaker of (42 A) wants to know not only whether p is possible, but also to what extent it is possible can be clarified by considering the following situation and the talk exchange it involves as an analogy.

Suppose there is a water tank and S does not know whether it contains any water. S wants to know whether there is water and wants to know how much water, if any, the tank contains. Given this situation and assuming that the addressee is able and willing to answer, only one of the following, namely (43 a), would be an appropriate question:

43) a) Is there any water in the tank ?

b) How much water is there in the tank ?

The second question is less appropriate because it implies that the speaker knows that there is water and that he only wants to know the quantity of what is there, which would be a different situation. The addressee, on the other hand, would most likely provide one of the following as an answer, depending on his knowledge and conversational cooperation :

- 44) a) Yes, there is some .
 b) Yes, it is half-full .
 etc.

An answer with an unqualified "Yes." would be true but less appropriate.

As contextualized above, the question about the amount of water and the verbal response(s) it elicits may well illustrate, in a simplified way, the conventional way of asking about possibility in general with a modal like yumkin and the varied possible answers expected as specification or evaluation of the possibility as believed by the answerer , who is assumed to be in a state of knowledge with respect to what is asked about. The normal situation of a yes-no question about possibility can be postulated as follows :

A: A speaker who is in a state of non-knowledge with respect to POSS(p) can not ask (or does not normally ask) about a specific possibility , (e.g., a question about possibility corresponding to (43 b) above), since this would wrongly imply that he knows that p is possible and only wants to know 'to what extent it is possible that p'.

B: He would also assume that an affirmative answer to a question like (41), repeated below as (55), would normally be provided as a "Yes"

qualified with the addressee's evidential or 'experiential' belief with respect to the extent or degree of the possibility, (e.g., whether it is 'epistemic', experiential', etc.). Notice that it is pragmatically possible that what is not known to the speaker as a possibility may be known to the addressee as an existing fact. This can be illustrated by (56) which provides the possible answers to (55) :

55) hal yumkina ?an yaku;na fi-l-bayti ?

Q modal COMP he-be at-home

" Is it possible that he is at home ?"

56)a) rubbama .

" May be ."

(Epistemic Possibility)

b) na9am, yumkina ?an yaku;na.

yes , modal COMP he-be

" Yes, he can be ."

(Experiential Possibility)

c) na9am, labudda, (?alaa tara an-nura ?)

yes, modal , (Q-Neg you-see the light)

" Yes, he must be, (don't you see the light ?)"

(Epistemic Necessity)

d) na9am, ?a9lamu ?anna-hu fi-l-bayti.

yes , I-know COMP-he at-home

" Yes, I know that he is at home." (Factual Assertion)

The point raised in the argument presented so far is that yes-no questions modalized with yumkin, "can", are best postulated as questions about possibility, (in general), which may elicit answers expressing different sub-categories of possibility, necessity or even factual assertions, depending on the addressee's state of knowledge and his conversational cooperation. It would follow that yumkin is not used

in LA as an interrogative form of rubbama or labudda, and that questions about specific sub-categories of possibility or epistemic necessity are not normally asked.

6.3.3. Questions with kaana-yumkin, (i.e., PAST-yumkin)

When used in interrogative structures, kaana-yumkin, (i.e., PAST-yumkin), is not essentially different in meaning from yumkin, except that the question about possibility is interpreted with respect to past-time. Thus, example (55) above would be produced as (57 S1), with kaana inserted before the modal. The possible answers expected are also similar to those provided in (56), with the possible addition of past-time modification, as is shown in S2's response(s) :

57) S1: hal kaana yumkina ?an yaku;na fi-l-bayti ?

Q PAST modal COMP he-be at-home

" Was it possible for him to be at home ?"

S2: a) rubbama .

" May be."

b) na9am, kaana yumkina .

yes , PAST modal

" Yes, it was possible."

c) na9am, labudda ?anna-hu kaana, (?ana ra?aytu an-nura.)
yes , modal COMP-he PAST ,(I saw the-light)

" Yes, he must have been,(I saw the light.)"

d) na9am, ?a9lamu ?anna-hu kaana fi-l-bayti .
yes , I-know COMP-he PAST at-home

" Yes, I know that he was at home ."

6.3.4. Internal (wh-) Possibility Questions

When used with yumkin-questions, wh-words like mata, "when", ?ayna, "where", etc. ask about the time, place, etc. of what is possible rather than about the possibility itself. Thus in the following the speaker is asking about what can fill in the variables shown in brackets, (see section 6.3) :

- 58) ?ayna yumkina ?an ya^Xhaba ? (somewhere)
 where modal COMP he-go
 " Where is it possible for him to go?"
- 59) mata yumkina ?an ya^Xhaba ? (some-time)
 when
 " When is it possible for him to go?"
- 60) man yumkina ?an ya^Xhaba ? (someone)
 who
 " Who can go ?"

These examples can represent what I call 'internal questions', in which what is questioned is within the scope of modality. It must be mentioned, however, that wh-questions expressed with particles like kayfa, "how", and maatha, "what" are almost always used for purposes other than information-asking. This can be illustrated by the following, where the meaning intended by the potential speaker is shown in brackets below each example :

- 61) kayfa yumkina ?an ya^Xhaba ?
 how modal COMP he-go
 " How is it possible for him to go ?"
 (He will not go because , in so far as I know, it is not possible for him to go.)

62) kayfa kaana yumkina ?an ya^xhaba ?
 how PAST modal COMP he-go

" How was it possible for him to go?"

(He did not go because it was not possible for him to go.)

63) kayfa kaana yastabi:9a ?an ya^xhaba ?
 how PAST modal COMP he-go

" How was it possible for him to go?"

(He did not go because it was not possible for him to go.)

yastabi:9 is included with these examples for the reason that it is equivalent to yumkin in this structure. I have also to say that this is an indirect use of modalized questions, and discussing indirect illocutionary acts in any detail is beyond the scope of the present study.

6.3.5. Questions with ?istata9, (i.e., the perfect of yastabi:9)

The association of yastabi:9 with 'agentivity', 'actualization' and 'expectation', as discussed in (4.4.2-4), is strongly felt in interpreting a yes-no question modalized with its perfect form, ?istata9. An example like (64) is normally interpreted as a question about (i) and (ii), against a background of (iii), below :

i) The actualization of a state of affairs in the past.

ii) The agent's ability and its involvement in bringing about this state of affairs.

iii) Someone, (usually but not necessarily the speaker), was not expecting the actualization of the state of affairs in the way it is asked about.

64) hal ?istata9a Zeidun ?an yaqu:da as-sayyarah ?
 Q PAST-modal Zeid COMP drive the-car

" Has Zeid been able to drive the car ?"

I am not sure that the English translation can convey the full content of (64), which can be represented by something like the following :

- 65) "Did Zeid really drive the car ? And did he do that by himself ? I did not expect that that could happen."

That this is the total signification of a yes-no question with ?istata9 can be supported by the fact that a question like (64) would be pragmatically very odd if uttered with a first person subject, (unless, perhaps, in a situation where the speaker is supposed to be in a state of amnesia at the time of reference) :

- @66) hal ?astati9t-u ?an ?aqu:du as-syyarah ?
 Q PAST-modal-I COMP drive the-car
 " Have I been able to drive the car (by myself)?"

6.3.51. wh-questions with ?istata9

As can be expected, from the discussion in (6.3.4), internal questions with ?istata9 are not questions about modality, (i.e., ability, agentivity, etc.), but about some variables with which the wh-words are associated :

- 67) mata ?istata9a Zeidun ?an yaqu:da as-sayyarah ?
 when PAST-modal Zeid COMP drive the-car
 " When was Zeid able to drive the car ?"
- 68) ?ayna ?istata9a Zeidun ?an yaqu:da as-sayyarah ?
 where
 " Where was Zeid able to drive the car ?"

The speaker of the above examples assumes that the agent (Zeid) was able and did drive the car; he is only asking about the time/ place in which this happening took place.

6.4. Necessity Questions in LA

In the preceding analytic sections,(6.3.1-51), two kinds of possibility question have been discussed : questions about possibility (expressed by hal,= "yes-no question indicator") and questions which assume the existence of possibility but ask about the time,place,etc. of what is possible. The same procedure will be followed in the following discussion of Necessity Questions,which reveal the same pattern of divisibility. I.e., there are questions about necessity (external questions expressed with hal) and questions which assume the existence of necessity but ask about the time, place,etc, of what is necessary (internal questions expressed with other wh-words).

6.4.1. Questions about Necessity : hal yagib ?

Questions about necessity in LA can be represented by yes-no interrogative structures modalized with yagib. In the following the speaker asks about whether a state of affairs is or was necessary :

- 69) hal yagiba ?an yaxruga Zeidun ?
 Q modal COMP go-out Zeid
 " Is it necessary for Zeid to go out ?"
- 70) hal kaana yagiba ?an yaxruga Zeidun ?
 Q PAST modal COMP go-out Zeid
 " Was it necessary for Zeid to go out ?"

As is the case with possibility,(6.3.1.),the speaker above would be in a state of non-knowledge with respect to whether there is/was a necessity for a state of affairs to take/to have taken place. No question of actualization is involved,i.e., the examples would appropriately be uttered as

questions even in situations where it is known to the speaker that the state of affairs concerned will not/did not take place. This point can be made clear by the following exchange between S1 and S2, where (70) starts the dialogue :

- 71) a) S1: hal kaana yagiba ?an yaxruga Zeidun ?
 " Was it necessary for Zeid to go out ?"
- b) S2: na9am, kaana yagiba, li-yah^hsula 9ala ba9a al-maala .
 yes, PAST modal , to get PREP some money
 "Yes, he must have(done), to get some money ."
- c) S1: wa limaa^ha lam yaxruga ?izan ?
 and why PAST-Neg go-out then
 " And why didn' he go out then ?"
- d) S2: la-?anna-hu kaana &abiyan .
 because-he PAST stupid
 " Because he was stupid ."

Another important aspect revealed by this dialogue is that specifying the kind of necessity asked about, (whether 'deontic' or 'experiential'), is highly pragmatic. There is no way of knowing, out of context, whether the addressee or some external circumstances would be assumed by the questioner to be the source of necessity or obligation. E.g., in a press conference with an army commandor who has successfully carried out a coup d'etat , the following question is likely to be interpreted deontically :

- 72) hal kaana yagiba ?an yata^haraka al-gay^hu ?
 Q PAST modal COMP move the-army
 "Was it necessary for the army to take action ?"

The same question would be interpreted 'experientially' if asked of a historian.

The pragmatic difficulty involved in specifying the kind of necessity asked about makes it more plausible to assume that hal-yagib interrogative structures are used to express questions about necessity in general. The distinction between the two kinds of necessity would be important only in the case of non-interrogative structures, where 'Deontic Necessity' is based on the speaker's desire and 'Experiential Necessity' on his belief that a state of affairs is necessary. In the case of interrogatives, asking about these two sub-categories can be conflated into one kind of question, which is based on the questioner's desire to know whether a state of affairs is necessary. The additional information, (e.g., it is 'deontic' or 'experiential'), would be left to the addressee to provide, explicitly or contextually, in his answer.

6.4.2. Asking about possibility vs Asking about necessity

The difference and similarity between asking about possibility and asking about necessity can be illustrated by comparing (73) to (42), which is repeated below for convenience :

73) A) "Is it necessary that p ?"

- B) 1. S is in a state of non-knowledge and assumes that Ad is in a state of knowledge with respect to the necessity of p .
 S also assumes that Ad has no reason for not answering (A).
2. S wants to know through Ad whether p is necessary .
3. S intends, by producing A, to let Ad inform S of whether p is necessary .

42) A) " Is it possible that p ?"

- B)1. S is in a state of non-knowledge and assumes that Ad is in a state of knowledge with respect to the possibility of p. S also assumes that Ad has no reason for not answering (A).
2. S wants to know through Ad whether and to what extent p is possible.
3. S intends, by producing (A), to get Ad to inform S of whether and to what extent p is possible.

It can be said that there is no essential difference between the two formulations, except that a question about possibility,(42), has a wider range of application than a question about necessity. I.e., whereas the former can be answered with statements expressing 'epistemic possibility', 'experiential possibility', 'epistemic necessity' or a 'factual assertion', (as explained in 6.3.2), the latter would be answered with statements expressing 'experiential necessity' or 'deontic necessity', (i.e., Obligation, as will be explained in the following chapter),

6.4.3. Internal (wh-) necessity questions

Similar to their possibility counterparts, internal 'necessity questions' are not questions about modality, they assume the existence of necessity and ask about detailed information indicated by the respective question-words :

74) mata yagiba ?an yaxruga ?
 when modal COMP he-go out
 " When must he go out ?"

- 75) ?ayna yagiba ?an ya^χhaba ?
 where modal COMP he-go
 " Where must he go ?"
- 76) limaa^ha yagiba ?an yaxruga ?
 why modal COMP he-go out
 "Why must he go out ?"

In uttering an internal question, the speaker would normally assume that there exists a necessity for something to be done, the purpose of producing the question is to get information about the time, place, reason, etc. of/ for such necessity. Examples with past-time reference are not essentially different in their pragmatic implication from those just mentioned :

- 77) mata kaana yagiba ?an yaxruga ?
 when PAST modal COMP he-go out
 "When was it necessary for him to go out ?"
- 78) ?ayna kaana yagiba ?an ya^χhaba ?
 where PAST modal COMP he-go
 " Where was it necessary for him to go ?"
- 79) limaa^χa kaana yagiba ?an yaxruga ?
 why PAST modal COMP he-go out
 " Why was it necessary for him to go out ?"

In both cases, (i.e., past and non-past) the question is neutral as to the actualization of the state of affairs concerned. E.g., any of the above examples can be followed by another question like (80) or a statement like (81):

- 80)..... wa limaa^χa lam yaxruga ?
 and why PAST-Neg he-go out
 ".... and why didn't he go ?"
- 81).... kama fa9ala .
 as he-did
 "... as he (actually) did ."

Chapter Six

NOTES

- 1) hal is used in LA as a yes-no question indicator. Since there is no English counterpart to LA hal, Q will be used to stand for the question indicator, e.g., as in (2) compared to (1), where the English 'who' is the counterpart of LA man .

It would seem that most VSO languages are similar in having yes-no question particles which are inserted in initial positions. See, e.g., Wunderlich, (1978:153), for bibliographical details.

- 2) The speaker-addressee relationship, as expressed in this statement, has long been recognized in the literature, i.e., since Bolinger's publication, Interrogative Structures of American English (1957). What is called here the speaker's mental state (Searle's term) is recognized by Bolinger as "the speaker's attitude" (p.4). Bolinger tells us that a question

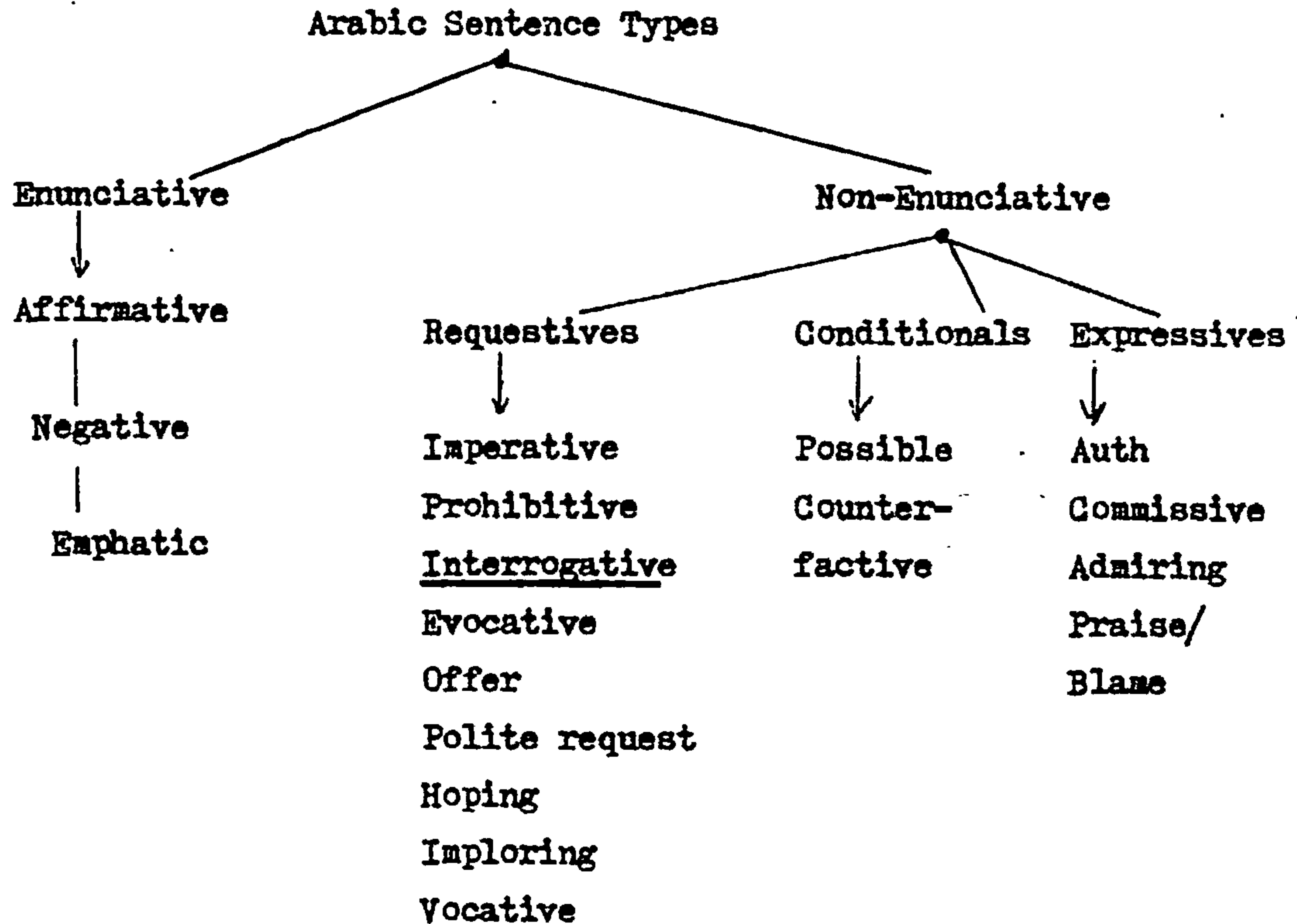
" is fundamentally an attitude ... it is an attitude that craves a verbal response. The attitude is characterized by the speaker's subordinating himself to his hearer." (p. 4).

See also Lang (1978:301-2) for supporting Bolinger's view.

- 3) Lang (1978:303) takes the narrower, and possibly more accurate, view that "we will only ask a question of someone who we believe is both willing and capable to answer to our satisfaction". (Emphasis added) Considering the addressee's willingness may be part of the speaker's belief but it is difficult to analyse and far more difficult to formalize as a necessary condition of questions in general and of modalized questions in particular.
- 4) In his first major publication, Speech Acts (1969), Searle explicitly states that "asking questions is really a special case of requesting, viz. requesting information." (Searle, 1969:54). It is also interesting to note that one of the earliest semantic formulations of questions, i.e., in Katz & Postal (1964), illocutionarily starts as follows: "The speak-

er requests that the hearer provides a true sentence...".(Katz & Postal, 1964:113). See also Malone (1978) for a detailed survey on the topic .

- 5) The following diagram, (from Hassaan,1979: table facing page 373), shows how Classical Arabic grammarians have classified Arabic sentence types, i.e., their semantical classification of the Arabic Sentence :



What is of particular interest to this study is the Classical Arabic classification of interrogatives as a requestive sub-type. This is in keeping with the currently held view, as expressed in, e.g., Searle's work.(see also note 4 above). I would like also to mention that Arabic has special conventional structures for expressing each of these sub-illocutionary types. E.g., (the following from Hassaan,1979:373) :

Offer : ?ala taf9ala.
? you-do

" I am willing and offering that you do "

Polite-request: hala fa9alt.
? you-perf-do

" would you do (it is for your benefit)"

- 6) No claim is to be understood to be made that the Classical Arabic grammarians have mentioned terms like 'truth conditions', or 'conditions of satisfaction' as criteria for their dichotomy. In fact, there is no evidence known to me that the Classical dichotomy was originally made on any philosophical basis. My only claim is that the Classical dichotomy is justifiable in modern terms.
- 7) The syntactic approaches to questions can be represented by Z. Harris (1978) who says : "We will try to obtain the forms and contextual restrictions of interrogatives from the syntax of non-interrogative sentences and discourses, without any special syntactic rules made up only for the interrogatives." (p. 1). This approach is in general agreement with Chomsky's (1957:61-72) and Katz & Postal's (1964:27-9) treatment of questions. I have to mention, however, that Harris, in (1978), is not concerned merely with the syntactic structures of interrogatives, this may be indicated by the fact that he attempts to analyse the meaning of interrogatives in terms of their assertive function, through a sort of machinery related to Ross's (1970) Performative Hypothesis : "It will be found", he says, "that all interrogatives can be derived ... from sentences which assert that someone is asking about a disjunction of statements which are the relevant possible answers to that interrogative." (Ibid.)

An attempt will be made in the following section,(6.1), to show that Harris' as well as similar views on questions and their meaning are oversimplification of the way questions have to be analysed.

- 8) The following general remarks are to be noted with respect to the different examples provided in (8) :
- i) The English translations of LA interrogatives are to be understood, at this stage, as approximate rather than equivalent.
 - ii) The imperfect of yastabi:9 and its kaana+imperfect, i.e., kaana-yastabi:9, can fairly be represented by yumkin-examples, namely (8 c and d) respectively.
 - iii) kaana-labudda, in (8 g), expresses what has been called (in chapter three) 'experiential necessity'. This example can therefore represent kaana-yagib and kaana-yanba&i.

- 9) Example (10 c) is syntactically acceptable as a question about a deontic necessity, but in this case it will be less preferable than its yagib-version ,i.e., :

hal yagiba ?an yabtasima ?
 Q modal COMP he-smile
 " Must he smile ?"

- 10) I will not discuss in any detail the transformational or generative semantic approaches to questions, since they are not particularly relevant to the pragmatic approach adopted in this study. For detailed survey of the transformational and generative-semantic studies on questions, see Malone (1978) .
- 11) Kiefer,(1981:168), recognizes two sets of mental states related to questions and their possible answers. They are, respectively :
- A) Mental states of "non-knowledge" : -KNOW(S,p), ASK(S,p), THINK(S,p), LOOK(S,p) and WANT(S,KNOW(S,p)).
- B) Mental states of knowledge : KNOW(S,p), DISCOVER(S,p), SEE(S,p), TELL(S,p) and EMOT(S,p).
- For a more detailed classification of the speaker's cognitive attitudes or mental states, as are used within the above framework, see Motsch , (1980:159-61), who recognizes, in addition to Kiefer's categories , "Intentional Attitudes" and "Normative Attitudes".
- 12) The following are Searle's (1969:66-67) formulations of the Preparatory Conditions for Question and Request. (Emphasis added and numbers lettered for convenient reference) :

<u>Request</u>	<u>Question</u>
R1. <u>H is able to do A</u> . S believes that H is able to do A.	Q1. S does not know the answer, i.e.,
R2. It is not obvious to <u>both S and H</u> that H will do A in the normal course of events of his own accord.	Q2. It is not obvious to <u>both</u> <u>S and H</u> that H will provide the information at that time without being asked.

It is assumed in this study that the preparatory condition functions to explain what S must assume about his Ad's beliefs concerning what S is speaking about. Accordingly, the underlined part of (R1) and the whole of (Q1), which are not functional in this sense, are not necessary, as components of preparatory conditions. Also, the underlined parts of (R2) would seem unnecessary complication for a speaker-based analysis, according to which Ad's mental states cannot be essential unless they are part of S's beliefs, (e.g., S believes that it is not obvious to H...), see also (2.3.26) for a similar discussion on the preparatory conditions for assertive illocutionary acts.

The formulation of (Q2), (assuming that the underlined parts are deleted or omitted for the reason mentioned above), would most likely confuse questions with requests for information, (e.g., tell me where you live.) . . I shall argue, (6.1.32), that questions are not precisely requests for information.

Chapter Seven

Deontic Modality in LA7.0. Intruductory

This chapter discusses LA Deontic Modality, which revolves around the illocutionary acts of imposing obligation and granting permission, with yagib, "deontic-must", and yumkin, "deontic-may", respectively. It has first to be mentioned that the reason for studying Deontic Modality in a separate chapter is that there are essential pragmatic differences between deontic illocutions, (i.e., imposing obligation and granting permission), and the non-deontic illocutions discussed in chapters 3 to 5. Most important among these differences are :

i) The speaker has to be in some authority in order for him to appropriately grant permission or impose obligation. This is not necessary for non-deontic illocutions.

ii) Deontic illocutions are based on (or are externalizations of) the speaker's sincerity condition of desire for something to be done, (as opposed to non-deontic illocutions which are based the speaker's belief that something is necessarily/possibly the case).

iii) Generally, deontic illocutionas have, as their illocutionary point, the purpose of getting things done, which is opposed to the informative purpose of non-deontic illocutions.

7.1. Introducing OBLIGATION and PERMISSION

7.1.1. It has been pointed out, e.g., (Palmer, 1979) & (Tregidgo, .982), that OBLIGATION and PERMISSION, (Palmer's deontic necessity and

possibility), are related to each other in the way Necessity and Possibility are logically related through two negatives. According to this view, A-relations, below, would correspond to B-relations :

<u>A: Logical Necessity/Possibility</u>	<u>B: OBLIGATION / PERMISSION</u>
i) Necessary p = -Possible -p	Obligated p = -Permitted -p
ii) Possible p = -Necessary -p	Permitted p = -Obligated -p
iii) -Necessary p = Possible -p	-Obligated p = Permitted -p
iv) -Possible p = Necessary -p	-Permitted p = Obligated -p

The following two stereotype cases of OBLIGATION and PERMISSION would fit quite well into the logical relation correspondence just mentioned:

1) yagiba ?an ta-xruga .
modal COMP you-go out

" You must go out ."

2) yumkina ?an ta-xruga .
modal COMP you-go out

" You may go out ." (deontic-may)

In other words, in each possible world in which it is true that the addressee of (1) is obligated by its speaker to go out, it will be equally true that he is not permitted, by the same speaker, not to go out. And the same applies to (2), i.e., whenever and wherever it is true that the addressee of (2) is permitted to go out, it will be equally true that he is not obligated, by the same speaker, not to go out.

The Necessity/Possibility logical relation, however, should not be stretched so far as to be the only criteria for representing the relationship between OBLIGATION and PERMISSION, which is, to a great

extent, determined by pragmatic implications (e.g., speaker's and addressee's involvement) in addition to the Necessity/Possibility logical relation.

Before going into these 'pragmatic implications' in any detail, it would be appropriate to briefly delimit the sense in which terms like 'obligation', 'command' and 'permission' are going to be used in the following argument.

OBLIGATION: Fully capitalized OBLIGATION will be used in this chapter to stand for the illocutionary act of 'imposing obligation', (i.e., Palmer's (1979) Deontic Necessity), specially as expressed by a yagib-like utterance like (4) compared to (3), which is a COMMAND expressed by the imperative :

3) ?uxrug . (imperative form of yaxruga, "he-goes out")
 " Go out."

4) yagiba ?an ta-xruga .
 modal COMP you-go out
 " You must go out."

COMMAND: When fully capitalized, COMMAND will be used to stand for the kind of illocution expressed by the imperative, e.g., (3). COMMAND will be mentioned only to the extent to which a clearer understanding of OBLIGATION is likely to be achieved.

PERMISSION: For the time being, let PERMISSION (fully capitalized) stand for the sort of illocution expressed by utterances like (5), i.e., yumkin-like utterances :

5) yumkin-(ka) ?an taxruga .
 modal-(you) COMP you-go out
 " You may go out." (deontic-may)

Notice that PERMISSION-yumkin differs from Possibility-yumkin in being optionally suffixed for the 'agent', i.e., the person to carry out the act permitted.

7.1.11. COMMAND vs OBLIGATION

Since it is likely that OBLIGATION may be confused with COMMAND, (e.g., both are assumed to be directive illocutionary acts), it would be appropriate to start by pointing out the pragmatic similarity and differences between these two illocutions.

Assuming that (3) and (4), repeated below, are uttered seriously and sincerely, i.e., the speaker in each case means to convey exactly and literally what the LA sentence means, the two examples would have the pragmatic characteristics shown in (6) :

3) ?uxrug . (COMMAND)
" Go out."

4) yagiba ?an taxruga . (OBLIGATION)
" You must go out."

- 6) i) General Felicity Condition: The speaker is in a position (e.g., authority) to utter (3)/(4).
- ii) Preparatory Conditions : The speaker assumes that it is possible for the act of the addressee's going out to be performed, (and this pragmatically implies that the speaker assumes that the addressee is able to perform this act).
- iii) Sincerity Condition : The speaker wants the addressee to go out.
- iv) Illocutionary Point Condition: The speaker intends to get the addressee to go out by the latter's understanding of (3)/(4) . In other words, by uttering (3)/(4) the speaker illocutionarily creates the necessity for the addressee to go out .

The pragmatic overlapping between OBLIGATION and COMMAND, as is shown above, may be responsible for the mistaken claim that the English must, which corresponds to LA yagib, is paraphrasable into "I order you to x", (Coates, 1983:38). In trying to differentiate between OBLIGATION and COMMAND, I shall raise the point that Coates' paraphrase : "I order you to x", which is equivalent to COMMAND, cannot be the meaning of yagib, "must", though it may be a conversationally-based meaning of some use of yagib with the second person subject. In this case, an indirect illocutionary act of COMMAND will be performed by means of an OBLIGATION.

As a possible procedure towards establishing a distinction between COMMAND and OBLIGATION I will resort to some pragmatic situations where the two illocutions are not equally acceptable, and where the pragmatic implications are more or less reflected in the linguistic environment. The following are two sets of such situations, A and B. In the first set of examples, (A), the subject of the main verb is co-referential with the addressee, but it is not agentive in (b and c). In the second set, (B), the subject is agentive, but it is not coreferential with the addressee :

A:	----- COMMAND -----	----- OBLIGATION -----
5)a)	?uxrug . "Go out."	6)a) yagiba ?an taxruga . " You must go out ."
@ b)	mu:t . ¹ "Die ."	b) yagiba ?an tamu:ta . " You must die ."
@ c)	?uʃ9ur . " Feel ."	c) yagiba ?an taʃ9ura . " You must feel ."

B:	<u>COMMAND</u>	<u>OBLIGATION</u>
	7)@a) ya-xruga . "(he) goes out."	8) a) yagiba ?an ya-xruga . " He must go out ."
	@b) yabtasima . "(he) smiles."	b) yagiba ?an yabtasima . " He must smile."
	@c) ya19aba . "(he) plays."	c) yagiba ?an ya19aba . " He must play."

Given the acceptability judgement above,(see note 1), COMMAND and OBLIGATION can be distinguished from each other through what can be called :

- i) the addressee-agentive condition (AAC), and
- ii) the addressee-agent identity condition,(AAIC).

7.1.12. The Addressee-agentive Condition (AAC).

It would seem from the unacceptability of (5 b-c), in contrast to their yagiba-counterparts, that in order for a COMMAND to be felicitously performed, the addressee should be the agent of the ACT indicated by the main verb,(I shall use ACT, fully capitalized, to stand for the future ACT requested, as opposed to the illocutionary act or Act). In other words, the AAC seems to be a necessary condition on COMMAND and not on OBLIGATION, as expressed by yagib-like utterances,e.g.,(6a-c). If this observation, which is based on LA, applies to English must, Coates' (1983:232) conclusions that "the modals of obligation and permission are all associated with agentivity" have to be re-considered.

7.1.13. The Addressee-agent Identity Condition

The unacceptability of (7 a-c), as utterances of COMMAND is due to the syntactical fact that the subject of the main verb, which is agent-

ive, is not identical with the addressee of the utterance, hence it can be concluded that the AAIC is a necessary condition for COMMAND, and, judging from the acceptability of (8 a-c), it is not so for OBLIGATION. In other words, COMMAND is distinguishable from OBLIGATION by requiring the grammatical subject of the linguistic structure through which it is expressed to be identical with the addressee of the illocutionary act and the agent of the ACT concerned. This is not a necessary condition for OBLIGATION which can be expressed with non-agentive verbs, (e.g., 5b), and can be imposed on persons other than the addressee, (e.g., 7a-c).

There are some cases of OBLIGATION, however, in which the COMMAND-characteristics are met, (e.g., (4), repeated below) :

- 4) yagiba ?an ta-xruga .
 " You must go out."

These cases would likely be interpreted as indirect illocutionary acts of COMMAND, depending on the speech situation and the addressee's conversational cooperation. In such cases the meaning of COMMAND should be understood as derived from the context rather than as part of the modal meaning.

7.1.2. The Intentional Meaning of OBLIGATION/Deontic Necessity

A realistic account of OBLIGATION, as expressed by yagib-like utterances, has to provide a uniform interpretation for examples like the following, which are assumed to be uttered by speaker(s) in authority :

- 9) a) yagiba ?an ta-xruga .
 " You must go out."

b) yagiba ?an ya-xruga .

" He must go out."

c) yagiba ?an na-xruga .

" We must go out ."

d) yagiba ?an ?a-xrugu.

" I must go out."

10) A teacher in a class-room :

man ?axa[∂]a al-kitaaba, yagiba ?an yu9i;da-hu.
who took the-book , modal COMP return-it

" Whoever took/has taken the book , must return it."

11) yagiba ?an ya9u;da al-kitaab-u .
modal COMP PASS-return the-book-SUB

" The book must be returned."

It is notable that only (9a) can pragmatically overlap with COMMAND for the reason that its grammatical subject, addressee and the agent, (you), are identical, which is not the case with the other examples . Of particular interest to the present argument are (9d),(10) and (11). In the first, the speaker himself is the agent of the necessary ACT , (see also (2.3.33)). There is nothing unrealistic about someone's expressing a desire for the necessity of his performing some future ACT. Example (10) shows that the agent of OBLIGATION does not necessarily have to be the addressee or even a third party known to both speaker and addressee. E.g., it is not difficult or unrealistic to imagine a situation in which the agent of (10) is known only to himself. The passive example,(11), is even more interesting. It shows that, in so far as the speaker's desire is concerned, the existence of a particularly known agent to perform the ACT concerned is in some cases

immaterial, i.e., the speaker of (11) seems to want the book back irrespective of whoever might be the agent of bringing it back.

Two points would naturally follow from the above argument. First, since specifying the agent of the ACT concerned is not an essential component in the act of OBLIGATION, it would not be strictly accurate to say that OBLIGATION is a directive illocutionary act, (a view held by Coates (1983:232), Lyons (1977:745), Mitchell (1981) beside others). For the purpose of this study, and in order to provide a uniform account of different cases like (9) through (11), I take the view that OBLIGATION, as is expressed by yagib-like utterances, should be regarded as an act of 'asserting' used to express the speaker's desire for the necessity of actualizing some future ACT. On this view, cases with unspecified agents would be accommodated, since it is not part of the speaker's intention to direct some identified person to do something. I have also to say that the present view should not ignore the possibility that some utterances of OBLIGATION can be interpreted as indirect illocutionary acts of COMMAND, REQUEST, etc., depending on the appropriate context. E.g., Given the appropriate context, (9b), repeated below, can be interpreted as an 'indirect request' for the addressee to tell someone to go out :

9b) yagiba ?an yaxruga .

" He must go out."

But this does not amount to saying that (9b) is in itself a directive illocutionary act of 'requesting'.

The second ^{point} is related to the informal use of the term 'OBLIGATION'.

It must have been noted, from the above argument, that my use of the

term 'OBLIGATION' is somewhat inadequate, since a speaker of a yagib-like utterance does not, strictly speaking, impose obligation, in the directive sense, but asserts or expresses his desire for the necessity of actualizing some future ACT. In fact, Palmer's (1979) 'Deontic Necessity' is a better term, but for reason of terminological familiarity, (e.g., Leech (1971), Mitchell (1981), Coates (1983), etc.), I shall continue to use OBLIGATION or 'the act of OBLIGATION' with the understanding that it indicates not the act of imposing obligation, but the act of asserting the speaker's desire for the necessity of actualizing some future ACT; more specifically, when that assertive act is expressed with a yagib-like utterance.

7.2. OBLIGATION in LA : Formalization

7.2.1. Notational Conventions

The following conventions and abbreviations will be used frequently in the remaining part of this chapter :

- OBLIGATION : = the kind of illocutionary act expressed with yagib-like utterances, e.g., (12 a-d) below.
- ACT = the future act indicated by the main verb, e.g., the ACT of opening the door in (12 a-d).
- S = Speaker, and agent of the illocutionary act of OBLIGATION.
- H = the set of hearers intended by S to take part in the illocutionary act.
- Ad = a sub-set of H intended by S to take the additional role of addressee(s).
- A = the agent of ACT, who may or may not be Ad, and may or may not be identified in the linguistic structure and/or context. See also section (7.2.5).

Note that H, Ad and A are roles which may or may not be played by the same person, e.g., F(ikry) is intended by S to play H, Ad and A in (12 a), and is intended to play only Ad, (i.e., a sub-set of H), in (12 b) below. In a similar way, the speaker takes the roles of S and A in (12 b). (See also section 2.3.33)

12):

- a) Zeid, to Fikry : yagiba ?an taftaħa al-baaba.
modal COMP you-open the-door
" You must open the door."
- b) Zeid, to Fikry, in front of Kamil: yagiba ?an ?aftaħu al-baaba.
I-open
" I must open the door."
- c) Zeid, to Fikry, about Kamil : yagiba ?an yaftaħa al-baaba .
he-open
" He must open the door."
- d) Zeid, to Fikry : yagiba ?an yu-ftaħa al-baabu .
be-opened
" The door must be opened."

7.2.2. Formalization

Examples (12 a-d), which represent the possible OBLIGATION-utterances, can be captured by formula (13). This formula is based on the Intentional framework discussed in (2.3.22)-(2.3.35), in addition to an OBLIGATION specific condition, (13 i), and the notational conventions mentioned above, (particularly ACT and A) :

13) yagib : OBLIGATION (Note that ACT(A) = (agentive) p)

i. S is in authority. (General Felicity Condition)

ii. BEL (S, POSS (ACT(A))) (Preparatory Condition)

iii) INFORM (S, Ad, P1 & P2)

P1= DESIRE (S, NEC (p)) (Sincerity Condition)

P2= INTEND (S, ACT(A)) (Illocutionar Point C.)

Only minor modifications will be needed to account for complicated examples like (12 b or c), which can be informally analysed, according to (13), as follows :

12 b') i. Zeid is in a position to utter (12 b).

ii. Zeid believes that it is possible for him (i.e., he is able) to open the door.

iii. Zeid illocutionarily informs Fikry and Kamil, collectively, of P1 and P2 .

P1= Zeid has a desire for the necessity of actualizing 'the ACT of opening the door'.

P2= Zeid intends that he (himslef) will open the door.

12 c') i. Zeid is in a position to utter (12 c).

ii. Zeid believes that Kamil is able, and it is possible for him, to open the door.

iii. Zeid illocutionarily informs Fikry of P1 and P2.

P1= Zeid has a desire for the necessity of actualizing 'the ACT of opening the door'.

P2= Zeid intends that Kamil will open the door.

The explanatory power of formula (13) is not confined to simple illocutionary acts of OBLIGATION. It can be used, with minor modifications, to account for the way OBLIGATION is used to perform various indirect illocutionary acts, e.g., COMMAND, REQUEST, etc. This point, together

with the possible roles intended to be played by the addressee, will be clarified in the following sections,(7.2.3)-(7.2.5).

7.2.3. Speaker's desire and the satisfaction conditions

It has been mentioned ,(2.3.24), that an illocutionary act is based on two levels of Intentionality : Sincerity Condition and intention-in-action,(2.3.35). It would follow, according to Searle (1983), that there are two different kinds of satisfaction conditions, the first is related to the sincerity condition and the second to the intention-in-action. This is particularly useful to differentiate between the involvement of the addressee and the agent of OBLIGATION. Whereas the satisfaction conditions of the intention-in-action are concerned with the illocutionary uptake of OBLIGATION,(i.e., directed at Ad), the satisfaction conditions of the sincerity condition,(i.e., S's desire), are concerned with the actualization of the ACT concerned,(i.e., they directed at A). It would follow that the former will be satisfied by Ad's understanding of the utterance,(i.e., Ad's uptake),and the latter will be satisfied iff the ACT is actualized . This can be illustrated by the following example, as contextualized :

14) yagiba ?an yaxruga . (uttered by a father,to a mother,about
" He must go out." their son who is not around)

In this example, Ad and A are different persons (mother and son respectively). S's intention-in-action will be satisfied by Ad's understanding (uptake) of what is meant by (14). S's sincerity condition , however, will not be satisfied unless A (the son) goes out. In the

following, the two roles (Ad and A) are intended to be taken by the same person, (i.e., the son), but they have to be understood as two roles involving two kinds of satisfaction conditions :

- 15) yagiba ?an taxruga . (uttered by a father, to his son)
 " You must go out."

S's intention-in-action, in (15), can be satisfied ,(i.e., by his son's understanding of (15)), irrespective of whether or not S's sincerity condition is satisfied,(e.g., the son may refuse, in his role as A, to go out). Recall that the above argument is in keeping with Searle's (1983:165) assumption that the sincerity condition exists independently from the illocutionary act, and that it can be satisfied whether or not it is externalized in an illocution,(see 2.3.23). E.g., in the following two examples, the speaker's desire that the agent (his son) should study and pass the exam can be satisfied (e.g., by the agent's studying and passing the exam) whether or not such a desire is externalized as (16) or (17), i.e., without expressing his desire illocutionarily to any addressee :

- 16) yagiba ?an yu[∅]aakira wa yanga[∅]ha. (uttered by a father, to a
 modal COMP study and succeed mother, about their son
 who is not around)
 "He must study and pass the
 exam."

- 17) yagiba ?an tu[∅]aakira wa tanga[∅]ha. (uttered by a father, to
 modal COMP you-study and succeed his son)
 " You must study and pass the exam."

The fact that (16) can be uttered to convey the meaning expressible by (17),(which is directed at the agent who is identical with Ad), does

not invalidate this argument; it only shows that one person, (e.g., the son), can play two roles : the agent, (who is involved in the speaker's sincerity condition), and the addressee, whose illocutionary role is to receive the the illocutionary uptake, as will be discussed in the following.

7.2.4 The intention-in-action and its satisfaction conditions

In his study on "Intention and Conventions", Strawson (1971) identifies the notion of "audience understanding" of the utterance with Austin's notion of "uptake", and "hence with the notion of illocutionary force", (Strawson, 1971:606). I am not sure that Strawson's view holds for illocutionary acts in general, but it is fairly explanatory of the addressee's illocutionary role in OBLIGATION, where the complexity of the three notions (i.e., 'uptake', 'audience understanding' and illocutionary force') can be explained in terms of a logically-prior illocutionary act, (2.3.35), by means of which the addressee is intended by the speaker to know (i.e., to be informed) that a future course of action is necessary. Thus, apart from the 'general' and 'Preparatory' conditions of OBLIGATION, an example like (18) would be analysed as (19), (where Z, F and K stand for the names of Zeid, Fikry and Kamil, respectively). Notice also that (19) and (21), below, provide instantiations of formula (13), section (7.2.2) :

- 18) yagiba ?an yaxruga. (uttered by Z, to F, about K who is not
 " He must go out." around)

19) INFORM (Z,F, P1 & P2)

P1= DESIRE (Z,NECESSARY('K goes out'))

P2= INTEND (Z, KNOW(F, NECESSARY('K goes out')))

(20) is a more complicated example, but it can be analysed along similar lines,(recall that the third argument of INFORM can include more than P1 and P2, see section (2.3.35)) :

20) yagiba ?an taxruga . (uttered as an indirect request by Z,
" You must go out." to K, in front of F)

21) INFORM (Z,K&F, P1&P2&P3)

P1= DESIRE (Z, NECESSARY('K goes out'))

P2= INTEND (Z, KNOW(F&K, NECESSARY ('K goes out')))

P3= REQUEST (Z,K,('K goes out'))

In the above examples, the satisfaction conditions of the intention-in-action will be met if the respective P2, i.e., the illocutionary points, are successful. In other words, it depends on Ad's understanding of S's complex intention, as explained in (2.3.35). There are three points to be clarified at this juncture. First : the satisfaction conditions of the intention-in-action are essentially S-Ad based, i.e., they are concerned with the illocutionary uptake. In order for an illocutionary act to be successful (22) should necessarily obtain, in addition to further felicity conditions :

22) a) S should intend that Ad will understand the Illocutionary act.

b) S should also intend that his intention (a) will be recognized by the same Ad .

Failure to secure the illocutionary uptake indicated by (22), (e.g., by addressing a sleepy person or speaking in a language not known to Ad), would result in an unsuccessful illocutionary act of OBLIGATION. This is to be contrasted with the satisfaction conditions of the sincerity condition, which can in part be met without any act of communication.

Second: It would follow, from the above argument, that the conditions of satisfaction of the intention-in-action have to be met by the performance of the illocutionary act independently from satisfying the sincerity condition. E.g., by a successful utterance of (18), above, F will understand Z's OBLIGATION whether or not K goes out.

Third: The intention-in-action of an illocutionary act can be satisfied even in cases where the speaker is not sincere, i.e., where the sincerity condition is deceptive. E.g., example (20), above, can be uttered in a situation in which the speaker does not really want 'K's going out', (e.g., he may be merely showing off, to F, that he has authority over K). In spite of the speaker's 'assumed insincerity', his addressees, in (20), will nevertheless understand (wrongly) that an OBLIGATION and an indirect REQUEST have been performed. The fact that they are deceived would be part of the speaker's intention-in-action.

To conclude, sections (7.2.3) and (7.2.4), I point out that by combining Searle's (1983) Intentional Framework, Strawson's (1971) notion of 'complex intention' and Clark & Carlson's (1982) 'Informative Hypothesis' to provide an account of OBLIGATION, the present framework would be able to account for examples of more illocutionary complexity.

It sometimes happens that the speaker produces, in the same utterance, more than one illocution directed at more than one addressee. Consider the following case, where it is assumed to be known to all participants that in the case of F's travelling, (which is to be decided unilaterally by S), X has to pay for the cost of the trip, Y has to see F off, and Z is to lose his job :

23) S, to Ad, in front of F, X, Y and Z : yagiba ?an yusaafira F &adan.
 modal COMP travel F tomorrow
 " F must travel tomorrow."

Apart from formal details, by the serious and felicitous utterance of (23), the speaker informs his hearers collectively of what is directed at each of them individually, and from (23) follows (23') :

- 23') a) Ad, F, X, Y and Z are informed that F must travel.
 b) F is requested to travel .
 c) Y is requested to see F off.
 d) Z is warned that he is going to lose his job.
 e) X is requested to pay the cost of F's trip.

7.2.5. Agent Identification

It has briefly been mentioned, (7.1.11), by way of distinguishing between OBLIGATION and COMMAND, that in the former, as expressed by yagib-sentences, the addressee and the agent of the obligated ACT are not necessarily identical. It has also been noted in the preceding sections that such an agent can be the speaker himself, the addressee, one of the hearers other than the addressee, a third party known to both speaker and addressee, or an unidentified third party. Two points

will be discussed in this subsection; a) the way of identifying the agent of the obligated act, i.e., A of ACT, and b) the effect of such identification on the interpretation of the OBLIGATION issued.

It has generally been acknowledged in the literature, though more often implicitly, that the referential identification of A, which is a referent, is part of the pragmatics of the discourse, (see, e.g., Russell (1971:166-75), Strawson (1971:176-80) and Donnellan (1971 : 195-200 & 1978)). It is hardly possible to attempt describing the way referents are picked out without resorting to or bringing in a sufficiently rich description of the circumstances surrounding the utterance, (cf. Donnellan, 1978:48-50). I will confine the present discussion to speaker-reference as opposed to sentence-reference or the attributive use of anaphoric expressions. Without going into any detail of distinguishing between these two kinds of reference, by speaker's reference I simply mean the kind of reference which depends on both the speaker's intentions and his assumption that such intentions are recognizable by his audience.

What is most relevant to our purpose is the simple thesis that a great deal of the communicative meaning of OBLIGATION depends for its being understood on the audience's referential identification of the A(gent). E.g., an OBLIGATION like the following :

24) yagiba ?an tit-nadafa al-/ugratu.
modal COMP be-cleaned the-room

" The room must be cleaned."

is likely interpreted as an indirect COMMAND if the agent is pragmatically identified as a servant, and can also be interpreted as a COMPLAINT

if the agent is identified as a careless wife. This is a reminder that 'imposing obligation' (in a strict sense), which has always been attributed to yagib-like OBLIGATIONS (see, e.g., Coates (1983) and Leech (1971), specially in connection with the English deontic must), can be expressed only indirectly by these illocutions, (7.1.2).

7.2.6. Negation and Interrogation of Deontic yagib

The picture drawn so far of deontic-yagib and OBLIGATION in LA may become clearer by studying some examples modified for Negation and/or Interrogation. The following discussion will be confined to simple cases involving only two participants, namely speaker and addressee, since the conclusions arrived at from these cases can easily be generalized to other more complicated cases.

7.2.6.1. Negation

It has first to be mentioned that although there are two syntactically different patterns of negating LA deontic-yagib, (e.g., pre- and post-modal, as can be demonstrated by (26) and (27) as possible negative structures of (25)), the semantic scope of negation is invariably internal, (see also chapter 5 :5.6.1):

- 25) yagiba ?an taxruga .
 modal COMP you-go out
 " You must go out."
- 26) laa yagiba ?an taxruga .
 Neg COMP
 " You mustn't go out."
- 27) yagiba ?al-laa taxruga .
 COMP-Neg
 " You mustn't go out."

In other words, the two forms of negation are semantically equivalent, though according to general usage post-modal negation is more formal and less frequent than the other, (see also 5.6.1). Post-modal negation will therefore be ignored except in cases where it can be of use for explaining some pragmatic significance.

The internal scope of negation in (26) compared to its positive counterpart (both are repeated below) makes it possible to say that negation in yagib-OBLIGATION sentences does not affect the modal implications discussed in the preceding sections; in both cases, (i.e., negative and positive), the pre-modalization proposition would be within the scope of yagib and its OBLIGATION-implications. I.e., the argument connected with 'Experiential Necessity'-yagib holds for OBLIGATION-yagib, (cf. 5.6.1). As can be seen from the following repeated examples, in the positive case, there is expressed an OBLIGATION for some ACT to be done, and in the negative case an OBLIGATION for some ACT not to be done. This relation can be illustrated by b-examples, (where O = OBLIGATION and p = the proposition 'you go out') :

25) a) yagiba ?an taxruga. "You must go out."

b) O p .

26) a) laa yagiba ?an taxruga. "You mustn't go out."

b) O not-p

7.2.62. Questions

Questions will not be discussed in any detail for the reason that, in LA at least, questions about OBLIGATION are not OBLIGATIONS, but

different sorts of illocutions, i.e., Necessity Questions, which are discussed in detail in (6.4.1). Only one or two points will be briefly mentioned to shed more light on the speaker-addressee relation in the area of OBLIGATION.

The simplest cases of question in this area are those corresponding to the English yes-no questions, which in LA are formed by inserting hal, "yes-no question indicator"; in initial position, (cf. 6.0.2) :

27) hal yagiba ?an ?a-xrugu ?
 Q modal COMP I-go out
 "Do I have to go out ."

28) hal yagiba ?an ya-xruga ?
 he-go out
 " Does he have to go out ?"

The speaker of (27) or (28) is simply seeking for information whether there exists a state of necessity for him/someone else to go out, on the assumption that his addressee is either the source of OBLIGATION or the right person to provide him with the information required. The illocutionary roles of both speaker and addressee are discussed in detail in sections (6.1.3) through (6.1.4), where the speaker is assumed to be in a state of non-knowledge and assumes that his addressee is in a state of knowledge with respect to what is asked about. The argument presented in the above mentioned sections applies here, except that the speaker is asking whether there exists an OBLIGATION.

With wh-questions, the speaker seems to take the existence of OBLIGATION for granted and only asking about the place, time, etc. of the

actualization of the ACT concerned :

29) ?ayna yagiba ?an ya^hhaba ?
 where modal COMP he-go

" Where does he have to go?"

30) mata yagiba ?an ya^hhaba ?
 when

" When does he have to go ?"

It can be said that questions about OBLIGATION are not essentially different from questions about Necessity in general,(cf. 6.4.1). This is due to the fact that determining whether the necessity for actualizing some future ACT is based on the answerer's desire (i.e., OBLIGATION) or his belief (i.e. Experiential Necessity) is highly pragmatic; it depends to a great extent on the context and the participants' conversational cooperation.

Further clarification of the use of OBLIGATION utterances may be gained by comparing it to PERMISSION in section (7.4); in the meantime the pragmatic implications of PERMISSION will be discussed in the following section.

7.3. PERMISSION in LA

The set of 'conventions and abbreviations' explained in (7.2.1) will be used in the following, with the simple addition that PERMISSION, fully capitalized, will stand for the illocutionary act of 'granting or giving permission', as can be represented by the following, i.e., by yumkin-like utterances :

- 31) yumkina ?an taxruga al-?aan.
 modal COMP you-go out now
 "You may go out now ." (Deontic may)
- 32) yumkina ?an ya?tiya al-?aan .
 modal COMP he-come-in now
 " He may come in now ."

7.3.0. Kinds of PERMISSION

There are several kinds of PERMISSION which differ from each other in pragmatic complexity, more specifically, they differ in the kind of knowledge accessible to the speaker about the agent who is to carry out the permitted ACT. The simplest case of PERMISSION can be represented by (31), where a speaker who has authority gives permission to his addressee. PERMISSION can also be given, through the addressee, to a third party. Example (32) represents the standard case, in which someone in authority gives permission to a third party through a secretary. A third kind of PERMISSION can be illustrated by the following example, which represents a wide variety of permissions given through public notices (e.g., Road Signs, Notice Boards, etc.) :

- 33) yumkina ?an taqifa as-sayyaratu 9ala yami:ni at-tari:qi.
 modal COMP stop the-cars on right-side the-road
 " Cars may park on the right hand side of the road ."

For the purpose of this argument, let the three kinds of PERMISSION just mentioned be called 'Addressee-PERMISSION', 'Third-person PERMISSION' and 'Public PERMISSION', respectively. It has then to be admitted that there are some pragmatic variations on these kinds of PERMISSION. E.g., example (31) can be uttered by a person who is not in authority but acting for someone else who is in authority. PERMISSIONs given within an administrative framework as 'rules' and 'regulations' can be considered as a sub-set of 'Public PERMISSION'.

Having briefly mentioned the most important kinds of PERMISSION and their pragmatic complexity, I must say that the present section will be particularly concerned with the kinds of PERMISSION uttered in speech situations similar to those indicated in (34) :

- 34.)a) A speaker, who is in authority, gives permission directly to his addressee.
- b) A speaker, who is in authority, gives permission to a third party through the addressee; and the third party is known to both speaker and addressee.

7.3.1. The Intentional meaning of PERMISSION

On the view adopted in this study, the two speech situations, mentioned in (34), are not 'Intentionally' different, provided it is understood that Ad(dressee) and A(gent) are two separate roles, as discussed in (2.3.33) and (7.2.5). On this account, (34a) would be a special case of (34b), in which Ad and A are identical. Accordingly, the two situations would be conflated into (34'):

- 34') S, who is in authority, gives permission to A through Ad; and A is known to both S and Ad.

7.3.11. Preparatory Conditions

Assuming that S's being in some sort of authority is a general felicity condition for PERMISSION and given that we are concerned with the kind of PERMISSION to be uttered in a situation like (34ⁿ), the following can be regarded as an informal description of the Preparatory Conditions for a successful utterance of PERMISSION :

- 35a) S should believe that it is possible for Ad and/or A to believe that the ACT concerned is prohibited at the time of speech.
- b) S should believe that it is possible that A desires performing the ACT concerned at or after the time of speech.
- c) S should believe that it is assumed by Ad and/or A that it is within the capacity of S to eliminate the prohibition assumed to be imposed on the ACT concerned.

To illustrate that these preparatory conditions are essential to a successful utterance of PERMISSION, consider the following example, where the ACT it permits cannot, in normal circumstances, be determined by any of the above conditions :

@36) yumkina ?an tatanafasa .
modal COMP you-breathe

@ " You may breathe ." (in the following, only permission-may will be used, unless otherwise indicated)

An example like (36) would be appropriate only in very odd situations, and only when the conditions mentioned in (35) are met. E.g., a situation where a doctor is administering a drug to a patient, and when such a drug (which is necessary to save the patient's life) would have fatal effects unless the patient stops breathing for, say, 15 seconds. After

explaining the situation to the patient, the doctor, having injected the drug, would utter the following (with 15 seconds between (a) and (b)) :

37) a) tawaqafa 9an at-tanafusi .
stop from breathing

" Stop breathing."

b) yumkina ?an tatanafasa al-?aan .
modal COMP you-breathe now

" You may breathe now ."

Although the preparatory conditions,(35), are meant to be interrelated, they can be tested separately. Consider the following example, which is supposed to be uttered by a father to his son at bed-time, in a situation where the son's sleeping in his room is the normal 'course of events' in the family life :

? 38) yumkina ?an tanaama fi yugrata-ka al-yawm .
modal COMP you-sleep in room-your the-day

" You may sleep in your room today ."

As an act of PERMISSION, (38) is very odd, since in the above situation there is no assumption, on the part of the speaker, that the agent's sleeping in his room is believed to be prohibited at the time of speech. Consider also (39) when uttered in a situation where (35a & c) together with the general felicity condition are met, but (35 b) is not, (e.g., smoking is prohibited and S is in a position to eliminate this prohibition, but it is known to both S and Ad that Ad is not a smoker) :

? 39) yumkina ?an tudaxina al-?aan .
modal COMP you-smoke now

" You may smoke now."

7.3.12. Sincerity Condition and Illocutionary Point

In the utterance of a successful PERMISSION based on the Preparatory Conditions, discussed above, the speaker would have a desire to make possible what is assumed to be prohibited ; he would also have, as an illocutionary purpose, an intention to inform his addressee that the prohibition imposed on the ACT concerned is, by the illocutionary act, eliminated. This can be regarded as a detailed description of Palmer's brief statement that in the production of a deontic possibility utterance, (i.e., PERMISSION), "the speaker performatively creates the possibility for the coming into reality of a state of affairs.", (Palmer,1979:39). On my account, the speaker "creates the possibility" for the actualization ("coming into reality") of some state of affairs on the assumption that such actualization is believed by Ad or someone else to be prohibited, in some sense.

7.3.13. Formalization of PERMISSION

From (7.3.11) and (7.3.12), the Intentional meaning of PERMISSION can be formalized as follows, (where $ACT(A) = (\text{agentive } p)$) :

40) yumkin : PERMISSION

- i) S has authority to utter PERMISSION. (General Felicity C.)
- ii) a) BEL (S, POSS(P1)) (Preparatory C's)
 P1= BEL (Ad, PROHIBITED(p))
- b) BEL (S, DESIRE (A, ACT(A)))
- c) BEL (S, BEL(Ad, POSS(CAUSE(S, POSS(p))))))
- iii) INFORM (S, Ad, P2 & P3) (intention-in-action)
 P2= DESIRE(S, CAUSE(S, POSS(p))) (Sincerity Condition)
 P3= INT (S, BEL(Ad, -PROHIBITED(p))) (Illocutionary Point C.)

7.3.2. Negation and Interrogation

7.3.21. Negation

Negating PERMISSION utterances is structurally more straightforward than negating OBLIGATION ones, (cf. 7.2.61). It is invariably post-modal. Compare (41 a), with its two negative counterparts, to (42 a), which is not acceptable when negated pre-modally :

- OBLIGATION :
- 41) a) yagiba ?an taxruga .
 modal COMP you-go out
 " You must go out."
 b) laa yagiba ?an taxruga .
 Neg COMP
 " You mustn't go out."
 c) yagiba ?al-laa taxruga .
 COMP-Neg
 " You mustn't go out."
- PERMISSION :
- 42) a) yumkina ?an taxruga .
 " You may go out."
 * b) laa yumkina ?an taxruga .
 Neg COMP
 c) yumkina ?al-laa taxruga .
 COMP-Neg
 " You may not-go out."

Example (42b) is not acceptable as a negative structure expressing PERMISSION, but it is acceptable as an expression of 'not-possibility', (see 5.3.2).

As is reflected in (42), the semantic negation of PERMISSION-yumkin utterances is always internal, i.e., the negative proposition is within

the scope of yumkin and its modal implications. As such, the structure of (42 c) is not essentially different from its affirmative counterpart, (42 a), i.e., both are different cases of PERMISSION. In the affirmative case, a permission is granted for an ACT to be done, and in the negative case, a permission is granted for an ACT not to be done, (see also (7.2.61), for a similar argument in connection with OBLIGATION).

7.3.22. Interrogation

In interrogative structures, except in 2nd person cases, the meanings of PERMISSION and POSSIBILITY are almost always conflated together forming what can be called "merger", (see Leech & Coates (1980) and Coates (1983:16)). The reason for this conflation can be attributed to the pragmatic implications of 'questions' as illocutionary acts, (see, e.g., section 6.1.3). In an utterance like (44), compared to (43) which is a clear case of PERMISSION, it is difficult to say whether the speaker (the questioner) is asking about the possibility, or seeking permission, for someone to smoke :

43) hal yumkina ?an ?u-daxina huna ? (Seeking PERMISSION)
 Q modal COMP I-smoke here
 " May I smoke here ?"

44) hal yumkina ?an yu-daxina huna .
 he-smoke
 " Can he smoke here ?"

In fact, in so far as (44) can intuitively be understood by an LA speaker, it does not matter much which meaning is intended. If a distinction is needed, the speaker can be more explicit by using an utterance like (45) or (46), below:

45) hal ta-smaŋa la-hu ?an yu-daxina huna ?
 Q you-permit for-him COMP he-smoke here
 "Do/would you permit him to smoke here ?"

46) hal ma-smu;ŋan la-hu ?an yu-daxina huna ?
 Q be-permitted for-him COMP he-smoke here
 " Is it permitted for him to smoke here ?"

The PERMISSION/POSSIBILITY merger is also applicable to wh-questions with non-2nd person cases :

47) mata yumkina ?an yaxruga ?
 when modal COMP he-go out
 "When is it possible/permitted for him to go out ?"

48) limaa^oa yumkina ?an yaxruga ?
 why
 " Why is it possible/permitted for him to go out ?"

As in most cases of merger, specially as explained by Leech & Coates, (1980), the distinction, in the above examples, between PERMISSION and general POSSIBILITY seems to be immaterial. It should be mentioned however that the above observation applies only to neutral, non-biassed , contexts, e.g., (47) could be interpreted in a specific situation as a PERMISSION, but then it could also be interpreted, in a different specific situation, as an indirect request or as an indirect COMMAND.

7.4. PERMISSION vs OBLIGATION

A clearer understanding of PERMISSION may be achieved through comparing it with OBLIGATION, as discussed in (7.3.2). It has been mentioned, at the beginning of this chapter, that PERMISSION and OBLIGATION are semantically related to each other through two negatives. It can

also be said that they are pragmatically related to each other through the General Felicity and Sincerity Conditions. It is notable, however, that they differ markedly from each other in their respective Preparatory Conditions, which will first be compared in the following.

7.4.1. Preparatory Conditions : PERMISSION vs OBLIGATION

PERMISSION and OBLIGATION are sharply distinguished from each other in their Preparatory Conditions, (cf. (7.1.11) & (7.3.11)). In issuing an OBLIGATION, all that the speaker has to worry about is whether the ACT concerned is possible to be performed by the potential agent. It is not necessary for him to think whether the agent will like it or not. In contrast, in issuing a PERMISSION the speaker has to consider the agent's desire, i.e., the ACT permitted should not be against the agent's interest, (cf. 7.3.11). Hence the simple Preparatory Condition for OBLIGATION :

49) BELIEVE (S, POSS (ACT(A)))

which is strongly contrasted with the more pragmatically complicated set of Preparatory Conditions for PERMISSION, (cf. 7.3.13), which is repeated for convenience as (50) :

50) a) BELIEVE (S, POSS (P1))

P1= BELIEVE(Ad, PROHIBITED(p))

b) BELIEVE (S, DESIRE(A, ACT(A)))

c) BELIEVE (S, BELIEVE(Ad, POSS(CAUSE(S, POSS(p))))))

See the above mentioned sections for detailed discussions.

7.4.2. Speaker's Authority (General Felicity Condition)

It has been seen, (7.2.2) and (7.3.0), that a serious and sincere utterance of PERMISSION or OBLIGATION requires that the speaker should be in some sort of authority over the potential agent. The speaker's 'authority' in connection with Deontic Modality has long been recognized in the literature ², but it has been accounted for either informally, (e.g., Leech, 1971), or as part of the semantic meanings of the modals, (e.g., Acker, 1981). On the present account, it is dealt with as part of the pragmatic implications of the illocutionary act, i.e., as a general felicity condition for PERMISSION and OBLIGATION.

7.4.3. Speaker's Desire (Sincerity Condition)

PERMISSION and OBLIGATION also share the characteristic of being illocutionary externalizations of the speaker's sincerity condition of desire. In the former, the speaker would have a desire to make it possible for someone to perform some future ACT, and in the latter, a desire to make it necessary for someone to perform some future ACT. (See sections (7.2.3) and (7.3.12), for discussion and illustrations.)

7.4.4. Deontic vs non-Deontic Modality

The speaker's 'desire' and his 'authority', as referred to above, are the two pragmatic features which relate PERMISSION and OBLIGATION to each other, (as constituting Deontic Modality), and distinguish them from non-Deontic modal meanings, (i.e., 'Epistemic', 'Experiential' and 'Agentive' POSSIBILITY/NECESSITY, as discussed in chapters 3 & 4). E.g., 'Experiential Possibility and Necessity' are based on the speaker-

er's sincerity condition of belief and not desire. The essential difference between these two kinds of sincerity condition lies (in part) in their different 'direction of fit' conditions, as discussed in (2.3.25). An expression of belief, (i.e., a non-deontic modal expression), aims at describing some state of affairs as being possibly/necessarily the case in the world, i.e., no change in the world is required. An expression of desire, (i.e., a Deontic modal expression), would most likely aim at some change in the world. The different implications of belief and desire, as sincerity conditions, can be illustrated by the following (Epistemic Necessity and OBLIGATION, respectively) :

51) labudda ?anna-ka muhmilan gidan .
modal COMP-you careless very

" You must be very careless."

52) yagiba ?an ta-xruga min maktab-i .
modal COMP you-go-out from office-my

" You must go out of my office."

Further, the speaker of non-deontic modal expressions, (e.g., (51)), does not have to have 'authority' over anybody in order for him to express his beliefs.

If Deontic and non-Deontic Modality are differentiated by the above pragmatic points, they can be related to each other by the fact that they have NECESSITY and POSSIBILITY as their semantic basis, (cf. 2.4.2). This is reflected in the different modal labels or names used all through this study. It has been seen, however, that the categorization and sub-categorization of NECESSITY/POSSIBILITY into Epistemic, Deontic, etc. is best achieved through the speaker's Intentionality, (e.g., S's belief, intention, desire, etc.), and that is what has been attempted in this study.

Chapter Seven

NOTES

- 1) I have to mention that acceptability judgements are confined only to the meaning under consideration. Some of the examples which are marked unacceptable can be accepted in different situations. e.g., (5 b) is not acceptable as a direct illocutionary act of COMMAND, but it is fairly acceptable from a theatrical director giving instruction to an actor on stage. Similarly, (7 a-c) are not acceptable as illocutionary acts of COMMAND, but they are acceptable as assertions.
- 2) See, e.g., Leech (1971:75), Acker (1981:27-38) and Coates (1983:33), as discussed in some detail in section (2.2.2). It has to be mentioned, however, that these studies approach 'speaker's authority' in a way different from the way it is treated in the present study. Acker and Coates are in general agreement that the speaker's authority is part of the semantic component of the meaning of the deontic modals. Leech's account is less clear, since in his work, the expression "The speaker has authority" is not explained as 'a semantic feature', (e.g., as in Coates), 'a semantic parameter', (e.g., as in Acker), or as part of the pragmatics of deontic modality.

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⊗) Most of the works mentioned in this Bibliography have been used and referred to in the text of this study. The works which are not referred to in the text have been used indirectly, i.e., the influence of their ideas on the making of this work cannot be denied by the present student.