

EPISTEMIC MODALITY AND DEONTIC MODALITY: TWO SIDES OF A COIN

Jumino Suhadi

Department of English Literature, Faculty of Literature
Islamic University of North Sumatra
Medan, Indonesia

Abstract

*Epistemic modality refers to the use of modality which is based on the speaker's evaluation and judgment in relation to the degree of confidence of the knowledge on the [proposition](#). It functions to comment on and evaluate an interpretation of reality in carrying out speech functions. Deontic modality indicates whether the proposition expressed by a command is obligatory, advisable or permissible according to some normative background such as law, morality, convention, etc. In many instances, the meanings of both types of modality are relative and complements to each other. The evidence of some extrinsic modalities such as **must**, **should**, **may**, and **can** indicates that they may fall under both types; thus, they are like two sides of a coin which carry its value from the meaning conveyed by each side.*

Keywords: Systemic Functional Linguistics, epistemic modality, deontic modality, extrinsic modality, intrinsic modality, subjective modality, objective modality

I. INTRODUCTION

In Systemic Functional Linguistics (henceforth SFL) Halliday (1994: 179) postulates that language is used in three different functions known as the three metafunctions of language. These metafunctions are *the ideational*, *the interpersonal* and *the textual*. *The ideational function* means that language is used to organize, understand and express the speaker's perceptions of the world and of his consciousness, and this function divides into two: the *experiential function* and the *logical function*. *The experiential function* is concerned with contents or ideas which regard clauses as the representations of experience in terms of *transitivity structures*, which are represented with *processes* and associated with *participants* and

circumstances. The *logical function* is concerned with the relationship between ideas in clause complexes. It defines the logico-semantic relation between one clause and another which covers *expansion* and *projection* and it also defines clause complexes from the interdependency relation whether they are *paratactic* or *hypotactic*.

The *interpersonal function* means that language is used to enable the speaker to participate in communicative acts with other people, to take on roles and to express and misunderstand feelings, attitude and judgments. This function involves *mood structures* and *modality*. *Mood Structures* express interactional meanings such as what the clause is doing, as a verbal exchange between the encoder and the decoder. Mood structures consist of *mood elements* and *residue elements*. Mood elements constitute the main elements of clauses which are always minimally present in various types of mood. For instance the clause *He is absent from the class*. The mood elements of this clause consist of the subject *He*, and the finite *is*. Thus, mood elements consist of three entities: *subject*, *finite* and *mood adjunct*. Residue elements refer to those elements which are not included in the mood elements. Residue elements cover three categories *predicator*, *complement* and *circumstance*.

Modality refers to opinion or judgment of the speaker on the content and speech function of the clause. This article is concerned with the interpersonal function of language in terms of modality. The discussion will focus on how epistemic modality and deontic modality are relative and complements to each other.

The *textual function* means that language is used to relate what is said or written to the real world and to other linguistic events. This involves the use of language to organize the text itself in terms of *thematic structures*, covering *theme* and *rheme*, which express the organization of the message; how the clause relates the surrounding discourse to the context of situation in which it is being produced. In addition, the unity of meaning in text known as *cohesion* constitutes the realization of the textual function.

Halliday (1994) maintains that the three metafunctions of language noted above operate simultaneously in the expression of meaning because certain aspects of the grammar realize the ideational function, other aspects realize the interpersonal function, and yet others realize the textual function.

1.1 Theory of Modality

In the interpersonal function, language is used to express a speaker's attitude and judgment for communicating with others. Mood and modality are realized in the lexicogrammar of the language to convey meanings. Mood is the system that is realized in the selection of the three main illocutionary acts in terms of indicative, interrogative and imperative. Modality is the speaker's opinion or judgment on the content and speech function of the clause. It refers to the area of meaning that lies between the positive and the negative poles, that is whether the process is realized or not realized.

Halliday (1994: 88) notes that modality is the intermediate degrees between the positive or the negative poles. Further, he says (1994: 356) modality refers to the area of meaning that lies between *yes* and *no* -- the intermediate ground between positive and negative polarity. In social context, human being as the language user interchanges his linguistic experience to others which are realized in the form of the text. Modality is part of action done by the language users when they change their linguistic experience to each other which is represented in a text. In this interchange, the language user may give his own suggestion or comment in the commodity of what he is saying. Modality contains consideration, perspective, attitude or judgment of the addresser to the information or goods and services which are realized by way of statement, question, offer, and command.

1.2 Realization of Modality

Modality in English can be realized in various linguistic units as follows.

1. Modal

The unmarked type of modality is expressed in such overt modal operators as *must*, *can*, *could*, *may*, *might*, *will*, *would*, *shall*, *should*, *ought* and the semi modals *need* and *dare*. The meaning they carry may vary depending on the context.

- (1) a. Students *must* abide by the regulations of the university. (obligation)
- b. At midnight he *must* have been sleeping soundly. (Probability)
- c. It is raining now; the teacher *might* not come today. (Probability)
- d. Nobody *can* lift such a heavy box. (Ability)
- e. You *can* go with your mother to visit your grandma. (Permission)

2. Modal Adjunct

Modality may also be expressed by adjuncts such as *certainly, definitely, probably, possibly, perhaps, maybe, surely, always, usually, obviously*, etc.

- (2) a. *Probably*, he comes to her house today.
- b. *Certainly*, the examination will be held next week.
- c. *Possibly*, the earthquake happens again today.

3. Lexical Verbs

Some lexical verbs may also express modality such as *allow, beg, believe, command, forbid, guarantee, guess, promise, suggest, warn, wonder, wish, think, suppose*, etc.

- (3) a. The Principal *warned* that the students submit their assignment soon.
- b. I *think* he can solve the problem himself.
- c. We *suppose* that all the students' works are fair.

4. Lexico-modal Auxiliaries

Modality may also be expressed by lexico-modal auxiliaries such as *be able to, be about to, be apt to, be bound to, be certain to, be due to, be going to, be liable to, be sure to, be to, be likely to, be meant to, be supposed to, have to, have got to, had better, would rather, would sooner*, etc.

- (4) a. Many small children nowadays *are able to* browse the internet.
- b. Websites *are bound to* abide by the law of the respective country.
- c. Web world *is likely to* arrive at an uncontrollable condition.

5. Clause with Adjective

Modality in English can be realized in a clause with an adjective and followed by either an infinitive or a that-clause. The common adjectives which are used to express modality are *sure, certain, likely, possible, probable, willing*, etc.

- (5) a. *Budy is certain to* pursue higher studies in UK.
- b. *It is certain that* Budy will pursue higher studies in UK.
- c. *Palestine is probable to* get its independence next year.
- d. *It is probable that* Palestine gets its independence next year.

6. Clause with Past Participle

Modality can also be realized in a clause with a past participle and followed by either an infinitive or a that-clause. The common past participle verbs used to express modality are *allowed, determined, confirmed, obliged, required, supposed*, etc.

- (6) a. Indonesia is *required* to be provided with more sophisticated warfare.
- b. It is *required* that Indonesia be provided with more sophisticated warfare.
- c. Foreign citizens are *obliged* to abide by the regulations of the country of residence.
- d. It is *obliged* that foreign citizens abide by the regulations of the country of residence.

7. Clause with Noun

Another possibility of the realization of modality is in the form of a clause beginning with either an impersonal *it* or an existential *there* followed by a noun and a that-clause. The nouns commonly used to express modality are *must, chance, certainty, likelihood, possibility, probability, determination*, etc.

- (7) a. It is a *must* that every Master's student conduct a field research.
- b. It is an *obligation* that Muslims observe prayers five times a day.
- c. There is a *possibility* that this earth be burned by the sun one day.
- d. There is a *certainty* that this earth will perish one day.

8. Conditional Clause

Conditional clauses may carry the meaning of modality to express probability. If a condition is fulfilled it is possible, probable or certain that another condition will take place.

- (8) a. *If it does not rain*, the class will be going on. (Possibility)
- b. *Unless you put enough spices*, this food will not be delicious. (Probability)
- c. *If green is mixed with yellow*, it will become blue. (Certainty)

9. Combination of Modal and Adjunct

Modality can be expressed on the combination of a modal operator and an adjunct.

- (9) a. According to a Hadits, the doomsday *will definitely* happen on Friday.
b. An unknown creature *might possibly* exist in the old building.
c. The Rector *must always* be ready to meet the demonstrators.
d. The alligators *can sometimes* stay on land.

1.3 Subclasses of Modality

Typological studies on modality are still relatively rare and so far there is no consensus on the proper terminology and the classifications of modal meanings. In this paper the classification of modality is adopted from the theory of Systemic Functional Linguistics proposed in Halliday (1994), Downing and Locke (1995), and Eggins (2004). However, some outstanding linguists who wrote on this linguistic matter will also be referred to such as Lion (1977), Palmer (1986, 2001).

From the orientation of meaning, modality may be subdivided into subjective modality and objective modality. Subjective modality is the use of modality in a clause in which the personal judgment is expressed by the first person.

- (10) a. *I must* continue my study abroad.
b. We *may* follow them wherever they go.

On the other hand, objective modality is the use of modality in a clause in which the personal opinion is expressed by the third person or by using the impersonal *it*.

- (11) a. *He has to* continue his study abroad.
b. *It is a must* for him to continue his study abroad.

Further, modality can be explicit or implicit. Explicit modality is a clause in which the modality is represented by the speaker by using modal operators.

- (12) a. You *must* buy a dictionary.
b. The Dean *may* be in the office.
c. Such resolution *will* be in vain.

On the other hand, implicit modality is a clause in which the modality is not overtly coded in the form of a simple modal but in other realizations such as *modal adjuncts*:

- (13) a. *Probably*, the student has bought a linguistic dictionary.
b. The Dean *certainly* comes today.

adjectives:

- (14) a. It is *probable* that the student has bought a linguistic dictionary.
b. It is *certain* that the Dean comes today.

lexical verbs:

- (15) a. I *think* that the student has bought a linguistic dictionary.
b. We *believe* that the Dean comes today.

and *nouns:*

- (16) a. There is a *probability* that he has bought the linguistic dictionary.
b. There is *certainty* that the Dean comes today.

Downing and Locke (1992: 383) note that modality is understood as a semantic category which covers such notions as possibility, probability, necessity, volition, obligation and permission. Recently, the concept of modality has been extended to cover other notions such as doubt, wish, regret and desire, and temporal notions such as usuality. Further they add that in very general terms, modality may be taken to express a *relation* with reality, whereas a non-modal utterance treats the process as reality. They differentiate modality into two main types: *Epistemic Modality* and *Deontic Modality* and the description of these points will be given as the main discussion of this article.

Halliday (1994), and Eggins (2004) note that there are two types of modality, they are *modalization* and *modulation*. There are so many ways of getting *yes* to *no* poles. Because of that, modality needs to account for the distinction between propositions and proposals. Proposition is the meaning of the positive and negative poles in asserting and denying. Proposition is accounted for by *modalization*, that is the subtype of modality. On the other hand, proposal is concerned with the meaning of the positive and negative poles in prescribing and proscribing. Proposal is accounted for by *modulation*, the second subtype of modality.

1. Modalization

Halliday (1994: 89) notes that modalization is concerned with the meaning ranging between the positive and negative poles, between asserting and denying: positive *it is so*, negative *it isn't so*. Modalization is the speaker's judgment to

proposition or information commodity which is used in communication or interaction. Modalization divides into *probability* and *usuality*.

a. Probability

Thompson (1996: 57) notes that probability is how likely it is to be true. It means that how the sentence is equivalent to either *yes* or *no*, for instance, *maybe yes* or *maybe no*, with different degree of likelihood attached. Some of the basic points of probability scale are: *possible* - *probable* - *certain*. That scale confirms that *possible* is lower than *probable*, and *probable* is again lower than *certain*. It means that *certain* is more convincing than *probable* and *possible*.

Probability can be expressed in three ways: finite modal operator, modal adjunct, and the combination of both finite modal operator and modal adjunct.

1. Probability which is expressed by finite modal operator.

- (17) a. This guy *may* be a new comer. (Probability)
b. He *might* join in our class. (Doubt)
c. He *must* be from the same department. (Certainty)

2. Probability which is expressed by using modal adjunct:

- (18) a. He is *possibly* a migration student. (Uncertainty)
b. He *probably* joins us in this department. (Probability)
c. He is *certainly* from the same department. (Certainty)

3. Probability which is expressed by using both finite modal operator and modal adjunct:

- (19) a. The doomsday *will possibly* come in 2012. (Possibility)
b. The doomsday *will probably* come next year. (Probability)
c. The doomsday *will certainly* come on Friday. (Certainty)

b. Usuality

Usuality is one of the subtype of modalization which lies between two poles *yes* and *no*, which is associated with the frequency of a process. Thus, usuality can be probed by a question *How frequently does the process take place?* So, in usuality the sentence can be realized by *sometimes yes* or *sometimes no*.

Halliday (1994: 89) postulates that the degrees of usuality may be represented ranging from *sometimes*, *usually*, and *always*. *Sometimes* has the lowest degree and *usually* has a higher degree than *sometimes* and *always* has the highest degree. Usuality can also be expressed in three ways. They are by finite modal operator, modal adjunct, and the combination of both finite modal operator and modal adjunct.

1. Usuality which is expressed by finite modal operator.

(20) a. Every morning Jane *will* have breakfast at seven o'clock.

a. When he was a small boy, he *would/used to* fish in the river on Sunday.

b. Water *will* boil at 100 degree centigrade.

2. Usuality which is expressed by modal adjunct.

(21) a. Jane *sometimes* has breakfast at seven o'clock in the morning.

b. When he was a small boy, he *usually* fished in the river on Sunday.

c. The young boy *always* comes to his girl friend's house on Saturday night.

3. Usuality which is expressed by both finite modal operator and modal adjunct.

(22) a. Jane *may sometimes* have breakfast at seven o'clock in the morning.

b. When he was a small boy, he *would usually* fish in the river on Sunday.

c. If we go to the village, my son *will always* climb the rambutan tree.

2. Modulation

Modulation is concerned with the meaning of a proposal in the positive and negative poles in prescribing and proscribing (Halliday, 1994: 89). There are two kinds of intermediate possibility depending on the speech function, whether command or offer. In a command, the intermediate points represent degrees of *obligation*, while in an offer, they represent degrees of *inclination*.

a. Obligation

Obligation is one of the subtypes of modulation which is used in a command which lies between *yes* and *no*. In a command, it concerns the degree of obligation on the other person to carry out the command, which can be scaled by *allowed to*, *anxious to*, and *determined to*. In this case, the degrees of obligation is ranged from the lower scale into the higher scale. It means that *allowed to* has a lower value than

anxious to, while *anxious to* is lower than *determined to*. Thus, *determined to* has the highest value than *allowed to* and *anxious to*. Thompson (1996: 57) notes that in a command, the scale for demanded goods and services includes: *permissible*, *advisable*, and *obligatory*. Obligation can be expressed by a finite modal operator or by an expansion of the predicator typically by a passive verb or an adjective.

1. Obligation expressed by a finite modal operator:

- (23) a. The students *may* submit their assignment next week.
b. On the final examination day students *should* wear uniforms.
c. Students *must* leave all books outside the examination room.

2. Obligation expressed by a passive verb:

- (24) a. The students *are allowed* to submit their assignment next week.
b. On the examination day students *are advised* to wear uniforms.
c. Students *are obliged* to leave all books outside the examination room.

3. Obligation expressed by an adjective:

- (25) a. The students *are permissible* to submit their assignment next week.
b. On the examination day students *are advisable* to wear uniforms.
c. Students *are obligatory* to leave all books outside the examination room.

b. Inclination

Inclination is a subtype of modulation which concerns the degree of willingness of a speaker to do something. Inclination also lies between positive and negative polar. Halliday (1994: 89) proposes that in an offer, the modality used represents the degrees of inclination ranging from *willing to*, *anxious to*, and *determined to*. The scale means that *willing to* is the lowest degree of inclination, *anxious to* carries the sense of stronger inclination, and *determined to* carries the strongest sense of inclination.

Thompson (1996: 57) adds that in an offer, the modality concerns the degree of willingness or inclination of the speaker to fulfill an offer. In inclination, the speaker may signal *ability*, *willingness*, and *determination*. *Ability* implies someone's ability to do something with minimum inclination, *willingness* implies stronger inclination, and *determination* is the strongest inclination.

Inclination also can be expressed in two ways as follows:

Inclination which is expressed by finite modal operator.

- (26)a. Most men *can* swim in this lake.
- b. They *will* swim across the lake.
- c. They *must* swim across the lake within ten minutes.

Inclination which is expressed by an expansion of the predicator typically by an adjective or a participle.

- (27)a. Most men *are able to* swim in this lake.
- b. They *are willing to* swim across the lake.
- c. They *are determined to* swim across the lake within ten minutes.

In addition, modulation, either positive or negative, refers to the exchanges of goods and services between the speaker and the hearer in doing something:

1. Offering to do something: *Shall I go home?*
2. Requesting the listener to do something: *Would you open the door?*
3. Suggesting that they both do something: *Let's go home.*

The above kinds rarely have third person subjects, except as prayers or oaths.

1.4 Value of Modality

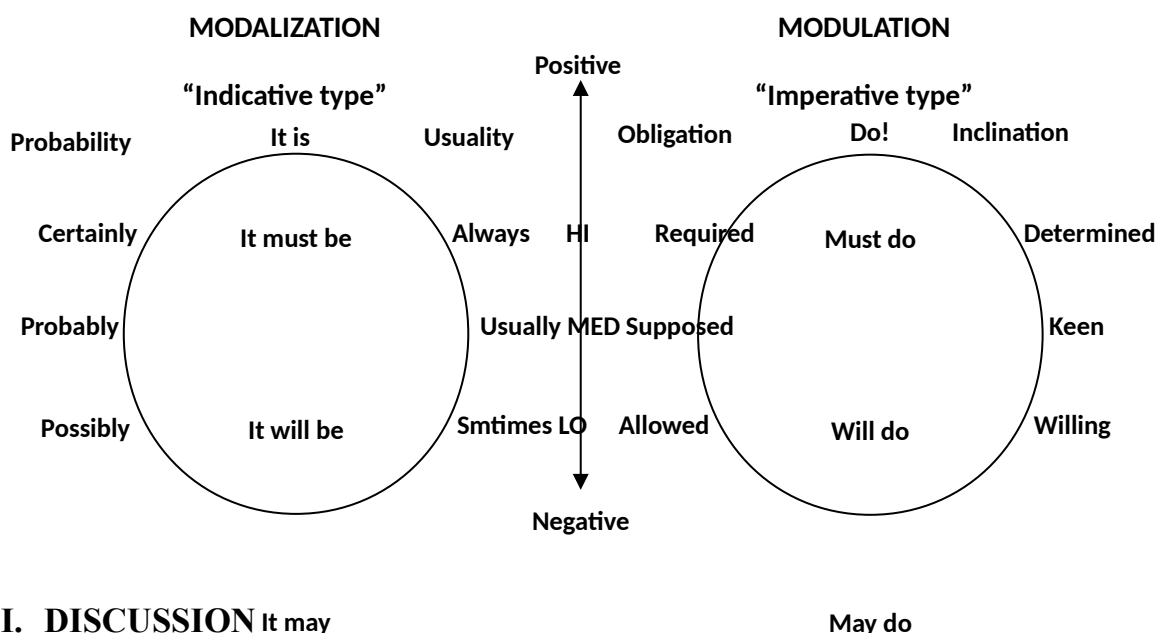
Halliday (1994: 358) and Eggins (2004: 173) propose that modality is classified according to the value or degree that is set on the modal judgment into three levels: *high*, *median*, and *low*, as illustrated in the following table.

Value	Probability	Usuality	Obligation	Inclination
High	Certain	Always	Required	Determined
Median	Probable	Usually	Supposed	Keen
Low	Possible	sometimes	Allowed	Willing

Based on the figure above, the degree of value of modality can be ranged into three:

- a. High: The action closest to *yes* poles (positive polar) and most possible to happen.
- b. Median: The action occurs between high and low level or in the median of the polarity.
- c. Low: The action is closest to *no* poles (negative polar) and most possible *not* to happen.

Halliday (1994: 357) presents a diagram of the value system and types of modality as adopted below:



II. DISCUSSION It may

2.1 Epistemic Modality

Epistemic was derived from the Greek word *epistēmē* 'knowledge'. Thus, epistemic modality is related to a speaker's knowledge on the proposition. The degree of certainty on the knowledge of a proposition may fall under several grades: certain, probable and possible. So, epistemic modality may be defined as the use of modality which is based on the speaker's evaluation and judgment in relation to the degree of confidence of the knowledge on a [proposition](#). Epistemic modality functions to comment on and evaluate an interpretation of reality in carrying out speech functions. So, it refers to the way speakers communicate their doubts, certainties, and guesses (their modes of knowing). More technically, epistemic modality is defined as the

linguistic expression of an evaluation of the chances that a certain hypothetical state of affairs under consideration or some aspect of it will occur, is occurring, or has occurred in a possible world which serves as the universe of interpretation for the evaluation process.

The meanings of epistemic modality are classified on the basis of the degree of certainty; thus they may be differentiated into: certainty, probability, and possibility.

1. Epistemic Certainty

Epistemic certainty conveys the highest degree of confidence based on the speaker's knowledge on the proposition. Epistemic certainty may be expressed by various linguistic properties as given in the following.

1. Modals

Epistemic certainty is commonly expressed with the modal operators *must* and *will*.

- (28)a. The bread *must* be well-cooked. It has been grilled for fifteen minutes.
- b. His father *will* be disappointed as he has not completed his study after five years.

2. Modal Adjunct

A number of modal adjuncts may carry the meaning of epistemic certainty such as *certainly*, *definitely*, *surely*, etc.

- (29)a. The food is *certainly* well-cooked. It has been boiling for twenty minutes.
- b. His father is *definitely* disappointed as he has not completed his study after five years.
- c. The boy will *surely* be successful for his being diligent and perseverance.

3. Lexical Verbs

Such lexical verbs as *believe* and *guarantee* may express epistemic certainty.

- (30)a. I *believe* the Dean is in the office.
- b. The company *guarantees* that the product will last more than ten years.

4. Lexico-modal Auxiliaries

Epistemic certainty may also be expressed by the lexico-modal auxiliaries *be certain to*, *be bound to* and *be sure to*.

- (31)a. The doomsday *is certain to* take place on Friday.
- b. The Director *is sure to* be the man of the year.
- c. The oil in the engine *is bound to* be changed regularly.

5. Clause with Past Participle

Epistemic certainty can also be realized in a clause with the past participle *confirmed* and followed by either an infinitive or a that-clause.

- (32)a. Indonesia *is confirmed to* buy sophisticated warfare from Russia.
- b. It *is confirmed that* Susan will sit for the final exam tomorrow.

6. Clause with Noun

Another possibility of the realization of epistemic certainty is in the form of a clause beginning with an existential *there* followed by the noun *certainty* and a that-clause.

- (33) *There is certainty that* this earth will perish one day.

7. Conditional Clause

Conditional clauses may express the meaning of epistemic certainty. If a condition is fulfilled it is certain that another condition will take place.

- (34)a. *If green is mixed with yellow*, it becomes blue.
- b. Water will freeze *if it is under zero degree centigrade*.

8. Combination of Modal and Adjunct

Epistemic certainty can be expressed on the combination of a modal operator and an adjunct.

- (35)a. The doomsday *will definitely* happen on Friday.
- b. Water *must certainly* freeze under zero degree centigrade.

2. Epistemic Probability

Epistemic probability conveys the median degree of confidence based on the speaker's knowledge on the proposition. Linguistic properties which may express epistemic probability are described below.

1. Modal

The modal operators *should* and *ought to* may convey epistemic probability.

- (36)a. At midnight he *should* have been sleeping soundly.
b. The teacher is punctual and it is eight o'clock now so the class *ought to* have started.

2. Modal Adjunct

The modal adjuncts which express epistemic probability are *probably*, *perhaps*, and *maybe*.

- (37)a. *Probably*, he comes to her house today.
b. *Maybe*, the examination will be held next week.

3. Lexical Verbs

The lexical verbs *guess*, *think*, and *suppose* may express epistemic probability.

- (38)a. He *thinks* he would pass in the subject.
b. We *suppose* that all the students' works are fair.

4. Clause with Adjective

Epistemic probability can be realized in a clause with such adjectives as *likely*, *probable*, etc.

- (39)a. It is raining heavily and so many students *are likely to* arrive late.
b. Palestine *is probable to* get its independence next year.
c. *It is probable* that Palestine gets its independence next year.

5. Clause with Noun

Epistemic probability may also be expressed by a clause beginning with the existential *there* followed by a noun and a that-clause. The nouns commonly used to express epistemic probability are *likelihood*, and *probability*.

- (40)a. There is *likelihood* for most students to arrive late as it is raining heavily.

- b. There is a *probability* for Palestine to get its independence next year.
- c. *There is a probability* that Palestine gets its independence next year.

6. Conditional Clause

Conditional clauses may express the meaning of epistemic probability. If a condition is fulfilled it is probable that another condition will take place.

- (41)a. *If it does not rain*, the class will be going on.
- b. *Unless you put enough spices*, this food will not be that delicious.

7. Combination of Modal and Adjunct

Epistemic probability can be expressed on the combination of a modal operator and an adjunct.

- (42)a. It *will probably* rain tonight.
- b. *Perhaps*, he *would* give you some money if his salary got increased.

3. Epistemic Possibility

Epistemic possibility conveys the lowest degree of confidence based on the speaker's knowledge on the proposition. It can be expressed by various linguistic properties as presented below.

1. Modal

Epistemic possibility is expressed in such overt modal operators as *can*, *could*, *may*, and *might*.

- (43)a. It *may* rain this afternoon.
- b. There *can* be a ghost in the old building.

2. Modal Adjunct

Modal adjuncts which may express epistemic possibility are *possibly*, *perhaps*, and *maybe*.

- (44)a. *Maybe*, he comes to her house today.
- b. *Perhaps*, the examination will be held next week.
- c. *Possibly*, the earthquake happens again today.

3. Lexical Verbs

Some lexical verbs may also express epistemic possibility such as *guess*, *wonder*, *think*, *suppose*, etc.

- (45)a. The Principal *wondered* whether Jack could pass the final exam.
b. We *supposed* that most students would drop out as they had failed in the mid test. But in fact, their marks in the final test improved quite considerably.

4. Clause with Adjective

Epistemic possibility can also be realized in a clause with the adjective *possible* and followed by either an infinitive or a that-clause.

- (46)a. Palestine *is possible* to get its independence next year.
b. *It is possible* that Palestine gets its independence next year.

5. Clause with Past Participle

Epistemic possibility can also be realized in a clause with the past participle *allowed* and followed by an infinitive.

- (47) The boy *is allowed* to get in without ticket as he is still under age.

6. Clause with Noun

Another possibility of the realization of epistemic possibility is in the form of a clause beginning with the existential *there* followed by the noun *possibility* and a that-clause.

- (48) *There is a possibility* that a thunder strikes this tall tree.

7. Conditional Clause

Conditional clauses may express the meaning of epistemic possibility. If a condition is fulfilled it is possible that another condition will take place.

- (49)a. *If it does not rain today*, a rain may fall tomorrow.
b. *If the door was not locked*, a thief might enter the house.

8. Combination of Modal and Adjunct

Epistemic possibility can be expressed on the combination of a modal operator and an adjunct.

- (50) An unknown creature *might possibly* exist in the old building.

2.2 Deontic Modality

The term deontic was derived from the Greek word *deont-*, *deon* meaning ‘which is obligatory’; but, this word is adopted as a term which refers to a type of modality which covers obligation and permission. Deontic modality indicates whether the proposition expressed by a command is obligatory, advisable or permissible according to some normative background such as law, morality, convention, etc. Deontic modality is concerned with the meaning of a proposal in the positive and negative poles in prescribing and proscribing.

Like epistemic modality, the meanings of deontic modality are classified on the basis of the degree of obligation; thus they may be differentiated into: necessity, advisability and possibility (permission).

1. Deontic Necessity

Deontic necessity conveys the highest degree of obligation of a command and it can be expressed in various linguistic properties such as:

1. Modals:

Deontic necessity may be expressed with the modal operators *must* and *have to*.

- (51)a. You *must* submit your assignment next week by the latest.
- b. You *have to* be available in the class before the lecturer comes.

2. Clause with Adjective

Deontic necessity can also be realized in a clause with the adjectives *compulsory*, *obligatory*, *necessary* and *urgent* followed by either an infinitive or a that-clause.

- (52)a. It is *compulsory* for you to send your grandma to hospital soon.
- b. It is *urgent* that you send your grandma to hospital soon.

3. Clause with Past Participle

Deontic necessity can also be realized in a clause with the past participles *required* and *obliged* followed by either an infinitive or a that-clause.

- (53)a. You are *required* to send your grandma to hospital soon.
- b. It is *required* that you send your grandma to hospital.
- c. You are *obliged* to abide by the regulations in this country.

4. Clause with Noun

Another possibility of the realization of deontic necessity is in the form of a clause beginning with the impersonal *it* followed by the noun *obligation* or *necessity* and a that-clause.

- (54)a. It is an *obligation* that you pray five times a day.
- b. It is a *necessity* that you buy a house before you get married.

2. Deontic Advisability

Deontic advisability conveys the median degree of obligation of a command and the linguistic properties which may express such meanings are given below.

1. Modal

The modal operators which convey deontic advisability are *should* and *ought to*.

- (55)a. In monsoon you *should* always carry an umbrella with you.
- b. You *ought to* examine your vehicle before you go far.

2. Clause with Adjective

Deontic advisability can also be realized in a clause with the adjective *advisable* followed by either an infinitive or a that-clause.

- (56)a. It is *advisable for* you to prepare yourselves well before the exam.
- b. It is *advisable* that you prepare yourselves well before the exam.

3. Clause with Past Participle

Deontic advisability can also be realized in a clause with the past participles *supposed*, *advised*, and *suggested* followed by either an infinitive or a that-clause.

- (57)a. You are *supposed* to prepare yourselves before the exam.
- b. It is *suggested* that you prepare yourselves before the exam.

3. Deontic Possibility

Deontic possibility conveys the lowest degree of obligation of a command so that it implies the sense of permission. It may also be expressed in several linguistic properties as follows.

1. Modal

The modal operators which may convey deontic permission are *may* and *can*.

- (58)a. You *may* bring your text books in the exam room.
b. Any question that you have *can* be found in the web.

2. Clause with Adjective

Deontic possibility can also be realized in a clause with the adjective *possible*.

- (59)a. It is *possible* for you to attend a lecture without a note book.
b. It is *possible* that you attend a lecture without a note book.

3. Clause with Past Participle

Deontic possibility can also be realized in a clause with the past participles *allowed* and *permitted*.

- (60)a. You are *allowed* to open a dictionary during the exam.
b. You are *permitted* to leave the room after you sign the attendant list.

2.3 Two Sides of a Coin

As presented earlier explicit modality is the use of modality in a clause by using overt modal operators such as *must*, *can*, *could*, *may*, *might*, *will*, *would*, *shall*, *should*, and *ought to* and this is the unmarked type of modality. However, in terms of epistemic and deontic uses, most of them may carry relative and even ambiguous meanings. Evidence of such a claim may be presented in the following.

1. Must

The modal *must* obviously carries epistemic reading as in (28a.) adopted as (61) below.

- (61) The bread *must* be well-cooked. It has been grilled for fifteen minutes.

Generally, bread is well-cooked after being grilled in the stove between ten to fifteen minutes so that at the last moment of the dead line it must be well-cooked; thus, *must* in (61) conveys the meaning of epistemic certainty.

On the other hand, the modal operator *must* in (62) conveys deontic meaning in terms of obligation of high degree.

- (62) You *must* submit your assignment next week by the latest.

In the academic tradition in universities, assignment is compulsory for every student to be submitted regularly and it plays a very significant role in the final marking. Thus, *must* in (62) conveys the meaning of deontic necessity.

2. Should

Like *must*, the modal operator *should* also carries relative meaning. In (38a) as adopted in (63) below, *should* carries epistemic reading.

(63) At midnight he *should* have been sleeping soundly.

It has become a common habit of most people that they go to bed at about ten to eleven p.m. so that at midnight it is probable that they have been sleeping quite soundly. However, there is no certainty that the same also happens to the one narrated in the clause, for many people do not sleep until late at night for some reasons; for instance, most interesting TV programs are generally presented at midnight; some may do urgent works to be completed until late at night, etc. Thus, *should* in (63) conveys the meaning of epistemic probability.

On the other hand, the modal operator *should* in (55a) adopted in (64) below conveys deontic reading.

(64) In monsoon you *should* always carry an umbrella with you.

As the general climate in this city, in monsoon during the months of September up to December there can hardly be any day without rain so it is advisable that everyone should carry an umbrella to avoid getting wet of the rain. Thus, *should* in (64) conveys the sense of deontic advisability.

3. May

The modal operator *may* in (43a.) as adopted in (64) below, carries epistemic reading of the relative degree.

(65) It *may* rain this afternoon.

First, *may* in (65) may carry epistemic certainty if the clause is spoken by a meteorologist who has examined the climate in the area based on scientific data. He does not use the modal *must* as certainty is claimed to belong to God's right; but, scientifically speaking, it is certain that it will rain this afternoon.

Secondly, it may carry epistemic probability if the clause is spoken by a common person in monsoon as the rain falls almost every day then it is quite probable that rain will fall this afternoon, though it is not certain as rain sometimes does not fall in spite of the fact that cloud in the sky is getting darker.

Thirdly, *may* in (65) may also carry epistemic possibility if it is spoken by someone in India in the month of June, where it is the peak of summer and monsoon is usually in July and August; but, once in a while, there may be a rain fall at the time although the possibility is quite low.

On the other hand, *may* in (58a) as adopted in (66) below conveys deontic reading.

(66) You *may* bring your text books in the coming exam.

In (66) the modal operator *may* carries the meaning of permission, the lowest degree of deontic modality.

4. Can

The modal operator *can* in (43b) as quoted in (67) below carries epistemic reading.

(67) There *can* be a ghost in the old building.

Based on the belief of some people, an old building which has been deserted by the inhabitant for a relatively long time can sometimes be dwelled by an unidentified creature called ghost although such a belief cannot be proven scientifically. Its existence is usually based on some obscure evidence. Thus, *can* in (67) conveys the meaning of epistemic possibility.

On the other hand, the modal operator *can* in (58b) as adopted in (68) carries deontic reading.

(68) Any question that you have *can* be found in the web.

The deontic reading here is based on the lowest degree of obligation of the command *Find any question in the web!* Thus, *can* in (68) conveys the meaning of deontic possibility.

III. CONCLUSION

Epistemic modality and deontic modality are two types of modality which carry two different meanings. Epistemic modality refers to the use of modality which is based on the speaker's evaluation and judgment in relation to the degree of confidence of the knowledge on the [proposition](#). It functions to comment on and evaluate an interpretation of reality in carrying out speech functions; but, deontic modality indicates the degree of the proposition expressed by a command whether it is obligatory, advisable or permissible according to some normative background. However, in many cases the meanings of both types of modality are relative and complements to each other. The evidence of some extrinsic modalities such as *must*, *may*, *should*, and *can* indicates that they may fall under both types. Thus, it is a truism to say that they are like two sides of a coin which carry its value from the meanings conveyed by each side.

REFERENCES

- Bloor, Thomas and Bloor, Meriel. 1995. *The Functional Analysis of English: A Hallidayan Approach*. New York: Arnold.
- Downing, Angela and Locke, Philip. 1992. *A University Course in English Grammar*. New York: Prentice Hall International.
- Egan, Andy .2005. 'Epistemic Modals, Relativism, and Assertion', in Gajewski *et al.* 2005. <http://www.sitemaker.umich.edu/egana/files/mitwpl.proof.pdf>. (August, 2011).
- Egins, Susan. 1994. *An Introduction to Systematic Functional Linguistics*. London: Pinter.
- Gerot, Linda and Wignel, Peter. 1994. *Making Sense of Functional Grammar*. Sydney: Gerd Stabler.
- Haan, Ferdinand de. 1997. *The Interaction of Modality and Negation: A Typological Study*. New York: Garland.
- Halliday, M.A.K. 1994. *An Introduction to Functional Grammar*. London: Edward Arnold.
- Halliday, M.A.K. 2004. *An Introduction to Functional Grammar*. Third Edition. London: Edward Arnold.

Halliday, M. A. K. 2005. *On Grammar*. London: Continuum (Edited by Jonathan J. Webster).

Morley, G. David. 2000. *Syntax in Functional Grammar*. London: Continuum.

Martin, J. R. 1992. *English Text: System and Structure*. Amsterdam: John Benjamins.

Pafapragou, Anna. 2006. *Epistemic Modality and Truth Conditions*. In *Lingua 116* (2006) 1688-1702. www.elsevier.com/locate/lingua. (August, 2011).

Palmer, F.R. 1986. *Mood and Modality*. Cambridge: Cambridge University Press.

Siewierska, Anna. 1991. *Functional Grammar*. New York: Routledge.

Thompson, G. 1996. *An Introduction to Functional Grammar*. Tokyo: Arnold Ltd.