Evolution of the Category of Modality as a Component of Speech Tactics

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ABSTRACT

This article is an investigation of modality. It considers the term modality to be rather elusive. The present paper aims to contribute to some postulates pertaining to modality, its main properties, and ways of expression. It is due to the fact that in linguistics, it is possible to find different approaches to the category of modality. It is highlighted that modality is a category of linguistic meaning having to do with the expression of possibility and necessity. As well it is generally accepted that modality should be defined as a semantic domain that covers a range of values (jussive, desirative, eventual, hypothetical, probable, possible, necessary) expressing the opinion, the attitude or the judgment of the utterer in relation to the propositional content of the utterance. In the article, the distinction is made between the terms of modality and mood. It is emphasized that modal expressions can compositionally interact with other expressions. As well in the article, five main types of modality, five senses in which the various categories of modality may be understood are distinguished: extensional modality, temporal modality, tense and duration, natural modality, logical and ethical modalities. There is a basic dichotomy in the categorization of modalities, which distinguishes between epistemic and non-epistemic, that is, deontic, modality. Its output can be considered in textbooks on theoretical grammar and lexicology, in manuals on modality and the ways of its expression, on the development of English dialogical speech skills.

Keywords: modality, expression, mood, epistemology, interaction, negation, probability.

Introduction

The term modality is rather elusive. It is due to the fact that in linguistics, we can find different approaches to the category of modality. All of them can be roughly divided into four main categories, which will be analyzed below. However, the full and comprehensive nature of modality still arises much interest in the scope of modern linguistic research. The present paper aims to contribute to some postulates pertaining to modality, its main properties, and ways of expression. Its output can be considered in textbooks on theoretical grammar and lexicology, in manuals on modality and the ways of its expression, on the development of English dialogical speech skills.

Theoretical Background. Literature Review

Modality, as the subject matter of linguistic studies, has recently received increasing attention. The major emphasis in modality studies is laid on the ways of expressing modality (cf. L.Avram, Ch.-J. Bailey, B. Jacobsson, C. Inchaurralde Besga, G. Leech, A. Th.Wymann, A. Celle, G. Ghio, S. Karlsson, M. Perkins, L. Resky, G. Ward, B.J. Birner, J.P. Kaplan, E.Th. Vold, V.L. Rubin, C. Paradis, Ch. Rocq-Migette, F. Palmer),the realization of modality in discourse (cf. J. Bybee, S. Fleischman, S. Maynard), modality as semantic category (cf. J. Calbert, J. Coates, J. Lyons, A. Kratzer, A. Papafragou), syntactic properties of modality (cf. S. Chung and A. Timberlake, A. Bondarko, R. Declerck, M. Enc, H.B. Drubig, F. Haan, G. Ghio, I. Roberts), categories and types of modality (cf. J.F. Kearns, A. Sion, N. Rescher), the relations between modality and mood (cf. M. Halliday, L.Trask, F. Palmer), modality from logical and philosophical points of view (cf. R. Girle, O. Jespersen, E. Lemmon, B. Chellas), diachronic aspect of epistemic modality (cf. N. Skybyts'ka), the relations between evidentiality and epistemic modality (cf. F. Palmer, Th.L. Willett, W. Frawley), epistemic modalities and relative truth (cf. J. MacFarlane), modality as a strategy in interaction (cf. E. Kärkkäinen).

Some scholars avoid the problem of modality by focusing on a set of expressions, such as modal verbs in English [13, p. 1]. Modality is then taken to include whatever these expressions mean. J. Coates, for instance, analyses the meaning and use of English modals in corpus data without attempting to give any definition of the term modal.

Others give a narrow definition of modality. In their typological study, J. Van der Auwera and V. Plungian [13, p. 1] propose to use the term modality for those semantic domains that involve possibility and necessity as paradigmatic variants. They describe this definition as relatively restricted. This strategy has the virtue of starting with universally recognized domains within modality; unfortunately, it excludes some semantic domains, such as volition and evidentiality, which many scholars would also want to include. Sometimes modality receives a broad interpretation. For instance, F. Palmer's extensive survey says that modality is concerned with the status of the proposition that describes the event. The weakness of this approach is that the description is very vague so that what it includes and excludes is unclear.

Modality is also often treated as a semantic category. A. Downing and P. Locke, for example, claim that modality is to be understood as a semantic category that covers such notions as possibility, probability, necessity, volition, obligation, and permission [13, p. 2]. The treatment of modality as a semantic, rather than syntactic or morphological, category traditionally prevails, and the reasons for this are as follows.

There is a basic dichotomy in the categorization of modalities, as mentioned in O. Jespersen's work, which distinguishes between epistemic and non-epistemic, that is, deontic, modality. Epistemic modality derives its name from Greek episteme "knowledge" and is, therefore, to be interpreted basically, according to F. Palmer, as showing the status of the speaker's understanding or knowledge; this clearly includes both his own judgments and the kind of warrant he has for what he says. He argues that epistemic modality should include evidentials such as hearsay or report or the evidence of the senses. J. Lyons, on the other hand, defines epistemic modality as any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he/she utters. S. Chung and A. Timberlake see the quintessentials of epistemic modality in that it characterizes the actuality of an event in terms of alternative possible situations or worlds.

The definition of modality as a category sharing the morphosyntactic features of the English modal verbs, for example, will only be appropriate to the very same modal verbs of English. A semantically based definition, on the other hand, offers ground for cross-linguistic validity. It can be assumed that even speakers of structurally completely different languages share the same basis underlying cognitive processes that enable and control linguistic categorization. The same basic experiences and needs, that is, meanings, can be shared across people rather than the structures that are used to convey them. This makes the meaning more universal than a particular syntactic or morphological structure and more useful for our purpose to define a cross-linguistically valid category [12, p. 54].

Furthermore, modality is best defined on a semantic and not on a pragmatic level. Semantics offers criteria to identify specific formal categories that share semantic features, while pragmatics addresses the question about

regularities in the usage of such categories. Mechanisms in the pragmatic interpretation of meaning usually operate across a conglomerate of formal and semantic categories if they are limited to specific categories, making it much harder to define a category pragmatically [2, p. 35]. Speaking about modality as a semantic category, we cannot but mention epistemic modality.

Most of all, earlier studies of epistemic modality have focused their attention on the structural rather than on the semantic category. There has hardly been a systematic concern with the full range of structural and functional dimensions of epistemic expressions in general, let alone with the question of how these might correlate with the nature of epistemic modality as a semantic category. Now linguists approach this question from a different angle; they concern epistemic modality, an estimation of the likelihood that a certain state of affairs is/has been/will be true or false in the context of the possible world under consideration. In our work, we will adhere to the treatment of modality as a semantic category.

Modality is central to research done in many disciplines but rarely receives unified treatment in logic, in philosophy, or in linguistics. In modal logic, for example, one generally analyses a single semantic value for a modal verb.

Perhaps no other grammatical category in linguistics has been defined and interpreted as divergently as modality [7, p. 10].

Deontic modality derives its name from Greek déon, "the necessary", but is often defined in a wider sense because it is contrasted to epistemic modality as being a non-epistemic modality or rather set of several modalities. J.L. Bybee and W. Pagliuca define such non-epistemic modalities as referring to the modalities that predicate conditions of either an internal or external nature on a willful agent: these are the notions of ability, obligation, desire and intention [15, p. 20].

In order to avoid the equation of deontic and non-epistemic, the term root modalities are sometimes introduced. According to F. Palmer, this terminology was first used by T.R. Hofmann to free the term deontic for its narrower and common definition, which in the words of J. Lyons assigns deontic modality the essence of being concerned with the necessity or possibility of acts performed by morally responsible agents [15, p. 21]. In other words, deontic modality is concerned with obligations or permissions placed upon agents, which in appropriate cases will accept these, that is, act in a morally responsible manner.

Results and Discussion

In linguistics, it is generally accepted that modality should be defined as a semantic domain that covers a range of values (jussive, desirative, eventual, hypothetical, probable, possible, necessary) expressing the opinion, the attitude or the judgement of the utterer in relation to the propositional content of the utterance. The domain of modality has traditionally been divided into two sub-domains: the deontic, which covers obligation and permission, and the epistemic, which applies to possibility. However, the opposition between deontic and epistemic domains reveals itself; however, unsatisfactory in rendering the complexity of modal phenomena.

The quest for linguistic invariants has led linguists to make a tripartite model of the modal semantic field. Here, modality centring on the agent (including deontic modality) and expressing the various properties concerning the latter (capacity, obligation, intention, permission) is contrasted with epistemic modality, which expresses the commitment of the utterer in relation to the truth of the utterance and with enunciative modality, which indicates the implication of the utterer in the enunciative act (J. Bybee and S. Fleishmann).

Modal verbs express possibility (an impossibility, necessity, contingency, etc.), permissibility (obligation, proscription, etc.), probability (improbability etc.). A distinction can be made between both grammatical modality and grammatical mood. Linguistic modality can also refer to the type of communication, whether vocal, signed, or written.

The mood is one of a set of distinctive forms that are used to signal modality. Modality is a facet of illocutionary force, signalled by grammatical devices (that is, moods), that expresses the illocutionary point or general intent of a speaker or a speaker's degree of commitment to the expressed proposition's believability, obligatoriness, desirability, or reality. The term mood is used by some authors in the same sense modality is. Others distinguish the two by using mood to refer to the contrastive grammatical expressions of different modalities and reserving modality to refer to the meanings so expressed. If, in addition, modality is used to refer to meanings expressed by lexical means as well as grammatical, it is effectively a synonym of illocutionary force.

The category of mood is defined as a morphological verbal category that expresses the modal value of the sentence. The mood is the grammatical zed expression of modality, just as, say, tense is the grammatical zed expression of time. The mood is thus the primary system that is associated linguistically with this speaker role in the interaction. This function is performed by the structural relationship between the subject and the predicator.

As participants in the interactive exchanges, we have to assume that the various roles that serve these functions may be appropriate. Thus, we may be required to express requests for services or information, provide information or service for someone else, give instructions, warn, make demands, pay compliments, etc. In such activities, we adopt, assign to others, or assign the appropriate participant role in the exchange.

Mood and modality relate to the linguistic expression of the speaker's attitude toward an utterance. However, it is extraordinarily difficult to organize into a single, unified system not only the range of mood/modality meanings but also their realizations in natural language. The challenge has, of course, been taken up before, with F. Palmer being among the most comprehensive cross-linguistic treatments.

Historically in language descriptions, the grammatical terms modality and mood have lacked truly definitive categories of meaning. For that reason, linguistic dictionaries have often treated them as synonyms, cross-referencing their entries and, in some cases, describing how different theories or authors have used the terms [11, p. 253 - 254]. In our opinion, the terms mood and modality should be clearly distinguished from each other.

Modal expressions can compositionally interact with other expressions. Interactions with negation, quantifiers and tense are of particular interest. By itself, negation has been considered by some scholars to be part of modality. By talking about non-existent events or states, we are talking about events or states that are not real.

The modality will have different semantic subcategories of which distinguished epistemic modality, evidentiality and agent-oriented modality, the latter including Traditional deontic and dynamic modality. The only category that perhaps needs a justification is evidentiality, a category that lacked general recognition as a modal category until recently, perhaps due to the fact that it does not have salient Formal expression in English. However, it unambiguously falls under the scope of Modality defined by factuality [5, p. 432], e.g. He allegedly died in an accident. The factuality of the proposition (killed in an accident) is undetermined, just as it is in the case of epistemic modality. The difference is that while in epistemic modality, the proposition is undetermined with respect to its factuality relative to the world of knowledge and beliefs of the speaker. With evidentiality, it is undetermined relative to sources of information other than the speaker [1, p. 483-502]. With respect to its formal expression, the salient grammatical means of modal marking in English would be:

Modal auxiliaries (e. g. can, must, may);

Semi-modals (e.g. have to, be to, seem to, want to);

Adverbs (e.g. perhaps, possibly);

Verbal mood, which is highly reduced in Modern English.

Negation, similarly, can be expressed through adverbs (never), determiners (no), pronouns (nobody), and clinics (not), that is, at least three form classes. Modalities have a scope; that is, they logically influence a part of any sentence in which they occur. Moreover, in English grammar, the scope of modalities is often ambiguous. The

combination of modals with negation is a fountain of idiosyncratic facts. English may scope under negation when reading deontic ally, but scopes above negation when reading epistemic ally [9, p. 132], e.g. He may not have any cake (deontic, not allowed); He may not be home (epistemic, possible that not). English must scope above negation, e.g. He must not have any cake (obligatory that not); He must not be home (evident that not").

Lastly, it should be noted that while can does not easily allow an epistemic reading, negated cannot does have an epistemic reading, e.g. Sandy can be home; Sandy cannot be home (epistemic).

Most of these facts have resisted systematic explanation and remain inexplicable.

Sentences containing both models and quantificational noun phrases are often

ambiguous, e.g. Most of our students must get outside funding.

    A.   for the department budget to work out.

    B.   the others have already been given university fellowships.

But not all sentences show this ambiguity. For example, epistemic modals seem to resist having quantifiers scope over them: e.g. Most of our students must be home by now.

    A. must most of our students

    B. most of our student's must

Again, this kind of tact remains inexplicable; it may be an idiosyncratic syntactic tact without any grounding in semantics.

Categories of modality are called the concepts of possibility or necessity, impossibility or necessity, contingency or incontingency, probability or improbability and their degrees - as well as presence or absence [62; 200]. It seems reasonable to deal with categories of modality in its different types.

Logical modality examines the possible truth or necessity of a proposition according to logic. J.F. Kearns provides the following statements to illustrate logical necessity [8, p. 1]:

Necessarily, the diameter of a circle passes through the centre of the circle.

It is necessarily the case that the diameter of a circle passes through the centre of the circle.

It must be the case that the diameter of a circle passes through the centre of the circle.

The diameter of a circle must pass through the centre of the circle.

The statement treats logical necessity as a type of quantifier. We should expect the modal operators to exhibit the same types of scopal ambiguity that we found with the other quantifiers of predicate logic. We should remember that the quantifiers of predicate logic evaluated the truth of a proposition for some set of individuals. Logical necessity evaluates the truth of a proposition for all possible circumstances.

J.F. Kearns provides these statements to illustrate logical possibility [8, p. 1]:

Napoleon might have won at Waterloo.

For Napoleon to have won at Waterloo was possible.

It is known that the proposition Napoleon won at Waterloo is false, but we can entertain the possibility that the battle could have had a different outcome. The logical expression asserts that the proposition is compatible with the laws of logic and is not necessarily false, regardless of whether it is true.

While logical modality evaluates propositional truth according to the rules of logic, epistemic modality evaluates propositional truth according to our knowledge of the real world. Epistemic modality analyzes the necessity or possibility of a proposition's truth in light of what we know about reality. J.F. Kearns provides the following example of epistemic necessity [8, p.1]: The dinosaurs must have died out suddenly. This sentence could be translated into pseudologic as given what we already know. It must be the case that the dinosaurs died out suddenly. Since epistemic necessity is based on our current knowledge about the world, there is always the possibility that we will have to revise our conception of reality in light of new discoveries. We may yet discover that the dinosaurs did not die out suddenly.

The possibility of revision is not open to logical necessity. A logically true proposition will be true for all time. The following examples of epistemic possibility are provided by J.F. Kearns [8, p. 2]:

There might/could be intelligent life in deep space.

There may be intelligent life in deep space.

There is possibly intelligent life in deep space.

These sentences claim the existence of intelligent life in deep space is compatible with our present knowledge. We do not know for a fact whether intelligent life exists elsewhere in the universe. Still, we do not know of any logical or scientific reason why such life could not exist on another planet. Epistemic possibility must follow the rules of logic, including logical possibility.

English used to mark the distinction between logical and epistemic possibility. May only marked epistemic modality while might could be used for either logical or epistemic modality. The following examples are given by J.F. Kearns to reveal this distinction [8, p. 1]:

Logical possibility

She might have fallen down the cliff - thank goodness the safety harness held.

She may have fallen down the cliff - thank goodness the safety harness held.

Epistemic possibility

She might have fallen down the cliff - we're still waiting for the rescue team's report.

She may have fallen down the cliff - we're still waiting for the rescue team's report.

The clause about the safety harness in sentences She might have fallen down the cliff - thank goodness the safety harness held and She may have fallen down the cliff - hank goodness the safety harness held suggest that the woman did not fall. The clause about the rescue team's report in sentences She might have fallen down the cliff - we're still waiting for the rescue team's report, and She may have fallen down the cliff - we're still waiting for the rescue team's report suggest that the woman's fall is still being established by the rescue team. J.F. Kearns also quotes the following headline [8, p. 2]: GP Criticized over Death: Baby may have lived - Coroner.

Deontic modality is concerned with obligation, duty, or normative action. Deontic modality is related to orders, rights, willing, duty, exhortation, permission, requirements, and even ability. From a deictic perspective, deontic modality expresses the imposition of an expressed world on a reference world. S. Chung and A. Timberlake claim that deontic modality is the way that languages express the restriction of possible future states of affairs to a single choice - the forced convergence of the expressed world and the reference world.

Deontic necessity expresses what someone is required to do.

Deontic possibility expresses what behaviour is permissible. These distinctions define the two basic categories of deontic modality: obligation and permission. The following sentences illustrate these two aspects of deontic modality [8, p. 3]:

Deontic necessity

You must be home by midnight.

Buildings erected after September of this year are required to comply with the Revised Building Code.

Deontic possibility

Visitors may use the downstairs sitting room after 6 p.m.

Harry is allowed to drive the tractor.

The first example of deontic necessity above indicates that the speaker has somehow judged a relation between the expressed world and the reference world. For this reason, deontics have an arguable truth value. It is possible to deny the deontic judgement by asserting a logical or epistemic claim, But the party will have just started.

There are five main types of modality, five senses in which the various categories of modality may be understood. Within each type, all the categories occur, but with other meanings than in the other types. The categories have similar interrelationships and properties within each type.

Quantity, or extensional modality, is the primary type of modality. It was thoroughly dealt with by Aristotle; temporal modality and natural modality, logical modality, and ethical modality [12, p. 49]. The temporal and natural modalities have characteristics in common with quantity. They represent different ways the subject and predicate might be related. They can be combined in certain ways with quantity to form complex propositions. They are mutually related, in feet form a continuum, although they cannot be compounded together as they can be with quantity. They are subject to rules resembling those found for quantity because they derive from the same geometric fundamentals.

Each type of modality has its own character. Quantity refers to the proportion of a whole class that is subject to a certain relation to a predicate. Temporal modality refers to the proportion of its whole existence in time that any individual subject happens to have a certain relation to a predicate. It proceeds from the occurrence of a change in individual things during their existence. Natural modality expresses the degree of causal conditionality concerning such relation [Perkins M.: 53]. Extensional modality recognizes the variations which can be found to exist between instances of similar phenomena because they are static or dynamic. Natural modality stems from the belief that laws guide events. Our world is diverse in all these senses. There is thus an ontological basis for such distinctions.

Furthermore, logic must investigate the differences and similarities in behaviour

of such phenomena and the results of their interplay. Here, then, is a possible area

of new activity for logic, clarifying the meanings of forms involving modality, and analyzing their oppositions, the deductions possible from them, and also the syllogistic arguments involving them.

What distinguishes these types from those previously considered is their object of attention. Extensional, temporal and natural modalities tell us something concerning the subject and predicate related themselves. Logical and ethical modalities, in contrast, either report about the state of our knowledge or make recommendations for action in connection to those objects.

Let's consider the ways in which we use expressions of possibility or necessity. As stated previously, the terms like sometimes, can, may, might, must are not consistently used in everyday discourse. Ultimately these are semantic issues, not important to us, though they need pointing out. Logic simply establishes conventions for terminology and focuses on the material issues.

Now, it happens, for instance, that when we say S may be P we mean some S is P. This use of a modal-looking qualification to express quantity is not accidental. When considering a specimen of S, we may want to note that the fact that other S have been found P suggests that this one also could fall in that group for all we know [3, p. 77].

Quantity is essentially a qualification of universals, which we are supposed to have

some kind of reality, although we cannot yet understand their nature adequately.

When we say that some S are P, we do not merely intend to express a

quantitative fact, but to affirm the compatibility between S-ness and T-ness [3, p. 89].

This is traditionally known as the distinction between viewing a concept in its extension (the units it applies to) and its intention (its meaning). A universal may be viewed as a substance (or stuff) that is scattered in the world. When two universals, S and P, coincide in some entities, we learn more than simply the fact of contiguity; we learn that the natures of the two universals do not intrinsically prevent such occurrences, and this is for us significant information [3, p. 53].

A similar argument is possible for the other quantities. They tell us of compatibility, incompatibility, necessity or contingency, or high or low probability of coincidence between universals. The numerical aspect of quantity is incidental, though logic develops by concentrating on it because of its manageability.

Social statistics, for example, are mostly based on this approach. The information we obtain concerning a social group is applied to each individual in the group, with the corresponding degree of probability. The mere fact that most individuals in a sample behave in a certain way should not imply that there is at any possibility that individuals

who did not behave in that way at all could have. And yet, we do feel justified in so reasoning because we believe that reality functions through the forces inherent in universals.

Although many sceptical philosophers have denied validity to such modes of thinking, is pragmatic optimism. This is the position of science: that even if an appearance is not fully understood, it is received with an open mind, provided or so long as no inconsistency arises from the belief.

Humans inevitably conceive the world in terms of universals; therefore, it appears that they exist. That they are difficult to grasp fully does not mean they are untrue. Only if they were logically contradictory to evidence would doubt be reasonable. But no credible cause for doubt has arisen. Indeed, most importantly, to deny universals through some speech is using universals to deny them: that position is the inconsistent one of the two, and therefore absolutely false.

So when we say that some S are P and some are not P, we still believe that there was a possibility even for S which are not P to have been P (or vice versa), although they did not happen to concretize in this way. We think this because the universals S and P (or non P) have displayed compatibility in some cases of their existence. Thus, we mentally distribute not only generals but even particulars to each of all the individuals involved, via the universals, while remaining aware that the factual concretization of the universals in that contingent way is final. In this sense, quantity can legitimately be viewed as a type of modality.

It must be stressed, however, that extensional modality differs radically from

temporal and natural modalities, in that it can be combined with either of them, whereas they cannot be superimposed with each other. That is because they are really part of the same modal continuum of individual capabilities, whereas quantity remains essentially a factor concerning groups of phenomena.

Temporal and natural modality may be called intrinsic modalities because they

concern the properties of concrete individuals; extensional modality is comparatively extrinsic in that it focuses on abstract universals.

It is true that often the copula is is intended in a timeless sense. We sometimes use the word with a more restrictive connotation involving temporal limits. The temporal equivalent of what is a singular instance in extension is a momentary occurrence; this is the unit under consideration here. When we say S is P, we may mean either that S is always P or that S is now P, or even that S is sometimes P. This ambiguity must be taken into consideration by logic explicitly. A possible modification of standard propositions is, therefore, through the factor of temporal frequency. We can say of an individual S that it is now or not-at-this-time P, or sometimes or always, or sometimes-not or never P, or usually or rarely P. We recognize that a thing can vary in attributes during the time, and often use such forms to express such experiences. Such propositions can, in turn, be quantified so that complex combinations emerge. According to the traditional approach, we are supposed to deal with these forms simply by attaching the frequency qualification to the predicate, to obtain a new predicate. This process is called permutation; it may be encountered in the context of changing propositions into the is form, and obversion is also a sample of it. Tradition has assumed that once permuted, such propositions can be processed normally through Aristotelian syllogism [10]. But this first impression was wrong; the device is misleading where modality is concerned for three reasons. Firstly, it fails to account for a large number of practical inference, whose validity can only be established through analysis of the propositions in their original forms. With such propositions in their permuted forms, syllogisms would contain a middle term which is not identical in the two premises, e.g. S is sometimes M, M are always-P, or a minor or major term not identical in premises and conclusion, for example, the conclusion S is sometimes P from the said premises. Secondly, and even more importantly, permutation can result in erroneous inference. For, in fact, we cannot always transmit a frequency unchanged from premises to conclusion, for example, as in S is M, M are always P. Therefore S is always P, and sometimes not at all, for example as in S is M, M are sometimes P. Therefore S is sometimes P. Thirdly, in some cases, we can deduce from a given frequency, not capable of being itself simply transmitted, another, lower frequency; if we merely relied on permutation, the conclusion would not be formally valid, for example, in S is M, M is

always P. Therefore S is P. So we have no choice but to demand special treatment; the issues are more complex than we are led to believe by the permutation theory.

Temporal modality arguments cannot mechanically be reduced to traditional forms [Sion A.: 5]. Such situations must be investigated systematically, and special principles must be formulated to guide our reasoning in relation to them. The results obtained are often unexpected and instructive and justify the research effort. Temporal modality is especially useful when reporting the behaviour patterns of organisms; this is especially true for animals, who have powers of volition, and even more so for humans, who we consider as having free will. For, with regard to certain actions or states of such subjects, we cannot say that they must or cannot do or have them, in the sense of natural determinism, but only that they always or occasionally or never do so. Thus, for instance, we can study the psychology of people and predict their reactions to some extent, without having to postulate a more rigid degree of necessity than mere constancy, and before being able to explain volition or free will.

We have indicated that the unit considered by temporal modality is a moment of existence. But now is not the only individual moment we can refer to. The individual moment involved may be located anywhere in time, past, present, or future, and that location may be expressed precisely, by date and time o'clock, or roughly. This issue is known to grammar as tense, and we may adopt the same name for it in logic. Also, the individual moments we speak of vary in size. The segment of time involved may be a fleeting moment or an extended period of time; it may be expressed vaguely, or precisely, as a year, week, hour, or microsecond. This is an issue of duration.

These different units in the continuum of time, defined by the tense and duration of existence, of the subject and predicate relation under scrutiny, are the instances of the class under consideration in the context of temporal modality, in analogy to the cases of a universal in the context of quantity. In principle, we can develop an infinite list of possible tense/duration characterizations for propositions, according to where in the time continuum the event is projected and for how long. Thus things S and P could mean: things now S and P, or which were or had earlier been S and P, or which will be or are later going to be S and P; and the time locations and periods tacitly intended could be specified explicitly [4, p. 45]. Here again, following the permutation idea, it would possible to merge the tense into a term so related, to form a new term capable of timeless treatment; for example, *S was P would become S is a was P. This presupposes that, provided no equivocation was involved, a proposition so altered could then enter into a syllogism without causing problems [4, p. 46]. However, this artifice does not work; it conceals the validity of certain arguments that it assumes false, and it causes us to assume certain arguments correct, which closer inspection reveals false.

Tense is not in itself a distinct type of modality qualification; but an integral part of the doctrine of frequency. It simply defines the possible variety of locations in time, besides the elementary now; we might make logical mistakes without awareness of them.

Natural modality refers to propositions such as S can be P, S cannot be P, S can not be P, and S must be P, with the sense of real, out-there potential or necessity. In his philosophical discussions, these relations were effectively recognized by Aristotle but were not systematically dealt with in the framework of his logic works [12, p. 67].

Often, when people write S can not be P, they mean cannot be rather than can not be; in the former case, the not negates can be (it means not can be despite its position in the phrase), whereas, in the latter, the not only negates the be.

Such modality differs radically from temporal modality. We do not here merely recognize that something maybe sometimes one thing and sometimes another, or always or never so and so. We tend to go a step further and regard that there is a character intrinsic to the object which makes it able to behave in this way or that, or incapable of doing so or forced to do so. Thus, temporal and natural modalities represent distinct outlooks, which cannot be freely interchanged.

We can infer from S being sometimes P, the implication that it can be P, arguing that otherwise, it would never be P; likewise, that S is sometimes not P, implies that it can not be P, or else it would always be P. But when we say that S can be P or non P, we mean something deeper than merely an observed conjunction. We often claim, through indirect discovery, to know that S can be P (or non P), even though this potentiality is never actualized. Whereas with S is sometimes P (or non P), we are making a statement that requires the relation of S and P to be actualized at least once [12, p. 71].

Similarly, we may induce, in the way of a generalization from experience, from S always being P (or never being P), that it must (or cannot) be P. But when we say mat S must (or cannot) be P, we intend a more profound relationship than mere constant recurrence (or nonoccurrence, as the case may be). We claim knowledge of the inner nature of the object; we claim to be explaining why the observed constancy took place. We may, after that, discover indirectly that S can be and can not be P; we would then conclude that, although S is always (or never) P, this is not a case constancy due to necessity, but just the way a contingency was actualized.

An event is said to be potential if it occurs in some circumstances; it is said to

be naturally necessary if it occurs in all circumstances. Unnecessity is, then, nonoccurrence under some circumstances and impossibility occurrence under no circumstances.

This concept of circumstance refers us, then, not to time as did temporal modality, but to the assumption that, scattered in the environment of an event, are certain causative factors, be they known or unknown, specified or unspecified.

S can be P thus means that when certain causes occur, S is P. S can not be P means that under certain conditions S is non P. S must be P means in all situations, S remains P. S cannot be P means that whatever the surrounding circumstances, S remains non P [12, p. 78].

That definition justifies our calling this phenomenon a type of modality because, like the previous types of modality (temporal and extensional), it is reducible to an issue of enumeration: we use the same ideas of whole and part, inclusion and exclusion, all/this/some, frequency.

In the case of extensional modality, we are dealing with instances of a universal; in that of temporal modality, with moments of existence; in natural modality, with causal conditions. These implicit concepts are admittedly inscrutable in their essences, but their applications are numerical and capable of systematic treatment by logical science.

What distinguishes logical and ethical modalities from other types is their object of attention. Extensional, temporal and natural modalities tell us something concerning the subject and predicate related themselves. Logical and ethical modalities, in contrast, either report about the state of our knowledge or make recommendations for action in connection to those objects [3, p. 46].

They do not concern the object in itself (i.e. the S - P relationship as such) like the others. Still, They involve an additional relation to man, the knower of that object, or man, the eventual agent of such object. Thus, the latter relation is a new object, which includes the former, but is not identical with it. Such modalities, then, are not essentially subjective, though they can degenerate into subjectivity, but rather concern another object [3, p. 56].

Logical modality expresses the compatibility or otherwise of a proposed assumption with the general framework of our knowledge to date. It makes use of terms such as might (or perhaps) and surely (or certainly), for possibility and necessity [3, p. 78]. To the extent that such an evaluation is scientific, based on rigorous process, thorough, common public knowledge, and so on, it is objective information. To the extent that thought is deficient in its methodology, such modality is subjective.

Whereas the extensional, temporal and natural types of modality may be called materialistic, in that they refer directly to the world out there, which is mainly material or in any case substantial, logical modality may be called formalistic because it operates on a more abstract plane.

Ethical Modality. Ethical statements tacitly refer to some value to be safeguarded or pursued and consider the compatibility or otherwise of some proposed event with that given standard. We use terms such as may (for permissibles) and should (for imperatives) to indicate ethical possibility or necessity. Ethical modality is relative to standards of value. The complex issue

of how to establish absolute standards, or whether we are able to, will not be

discussed here. Suffices to say that, within a given framework, an ethical statement can, in principle, be judged true or false like any other.

Subjectivity comes into play here, not only in the matter of selecting basic values but also to the extent that, in this field, more than any other, factual knowledge is often very private.

There is a basic dichotomy in the categorization of modalities, as mentioned in O. Jespersen's work, which distinguishes between epistemic and non-epistemic, that is, deontic, modality [6, p. 301]. This basic distinction still lies at the centre of a large number of studies, as pointed out by B. Heine, quoted by M.E.Conte, who also makes reference to the various conventions of terminology established through the years. She claims that recent research on the domain of modality has focussed on the nature of one basic distinction, namely that between what has variously been referred to as deontic (author's emphasis), root, objective, pragmatic or agent-oriented modality on the one hand and subjective, hypothetical or epistemic modality on the other, to the extent that one might wonder whether there are no other equally exciting topics to be looked at within this domain.

Epistemic modality derives its name from Greek epistéme "knowledge" and is, therefore, to be interpreted basically, according to F. Palmer, as showing the status of the speaker's understanding or knowledge; this clearly includes both his own judgments and the kind of warrant he has for what he/she says [15, p. 18].

This translates into an example such as the following: From what I've read in the papers, the bus may be late today. J. Lyons, on the other hand, defines epistemic modality as any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he utters [15, p. 18]. This could be illustrated by an example such as He must be coming any moment now.

S. Chung and A. Timberlake see the quintessentials of epistemic modality in that it characterizes the actuality of an event in terms of possible alternative situations or worlds [15, p. 18]. Considering examples, which use either the modal auxiliary may or must, it becomes evident that we may make a basic distinction between epistemic possibility (The bus may be late, there is a possibility, but we can not be really sure) and epistemic necessity (He must be coming any moment now, as he said he would be here by eight o'clock and it's already ten past and he would have phoned if he couldn't make it).

In the words of J. Lyons, possibility and necessity are the central notions of traditional modal logic. Although they do not seem to be a dichotomy forming a universal system in the languages of the world, F. Palmer proposes to use this basic binary distinction mode as a descriptive tool to enable a further classification of epistemic and deontic modal expressions [15, p. 19].

The notions encoded as modal attitudes in epistemic modality and the sources which in general trigger such an attitude may thus be schematized in the following way:

notion attitude;

knowledge holds true;

doubt;

be convinced;

modal source inference, hearsay, evidence.

In theory and therefore in the strict sense of the word, the notion of belief does not enter into epistemic modality (it is sometimes labelled doxastic modality). Still, it is easy to see that such a distinction cannot be carried through in all instances. The main difference would be that in the sense of doxastic belief, the speaker himself is the

modal source. In contrast, with epistemic modality, we may believe that a specific event or action will take place. Still, in actual fact, we are, most of the time, only raising our commitment to what we are saying, based not on our own belief but rather on outside modal sources. The possible modal sources of epistemic modality list, among others, evidence. This obviously brings us very close to a system of modal elements that are commonly labelled evidentials and are commonly seen as an integral part of epistemic modality. F. Palmer, for instance, argues that epistemic modality should include evidentials such as hearsay or report or the evidence of the senses [15, p.19]. M. Perkins claims that the key concept underlying epistemic modality is, in fact, not so much the state of knowledge but rather the lack of it: to know that a proposition is true presupposes that it is actually true, whereas to be certain that a proposition is true does not. Of course, one may "know" something and be mistaken, but once revealed this knowledge is, by definition, no longer knowledge [15, p. 19].

Deontic modality is in a way defined on a level of social or institutional laws. On one side, there are the laws explicitly formulated and set down by a defined legal authority (either institutional or individual), creating a set of rules for behaviour in society or specific segments thereof. On the other side, there are the laws relating to social status, which tend to be less formal and usually attribute personal authority to an individual or a set of individuals over others. However, it may sometimes be difficult to draw a precise line between the two. The distinction between deontic necessity (obligation) and deontic possibility (permission) is illustrated by the following two examples [15, p. 22]:

All subjects of the crown must pay taxes by order of the king.

You may go now, Mr Hardy.

The notions encoded as modal attitudes in deontic modality and the sources which in general trigger such an attitude may be schematized as follows:

notion attitude;

obligation directive;

permission;

prohibition;

modal source norms, laws.

Conclusion

The term modality is rather elusive. It is due to the fact that in linguistics, we can find different approaches to the category of modality. Speaking about modality as a semantic category, we cannot but mention epistemic modality. Modality is a category of linguistic meaning having to do with the expression of possibility and necessity.

In linguistics, it is generally accepted that modality should be defined as a semantic domain that covers a range of values (jussive, desirative, eventual, hypothetical, probable, possible, necessary) expressing the opinion, the attitude or the judgment of the utterer in relation to the propositional content of the utterance. The distinction should be made between terms modality and mood. Modal expressions can compositionally interact with other expressions. Interactions with negation, quantifiers, and tense are particularly interesting.

Categories of modality are called the concepts of possibility or necessity, impossibility or necessity, contingency or incontingency, probability or improbability and their degrees, and presence or absence. There are five main types of modality, five senses in which the various categories of modality may be understood: extensional modality, temporal modality, tense and duration, natural modality, logical and ethical modalities.

The perspectives of further research in the domain of modality lies, in our view, in looking at cognitive mechanisms underlying the expression of the utterer's view of the situation. That would contribute to the study of communication strategies, which seems crucial in the view of the human-oriented character of modern linguistics.

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