

**A COGNITIVE APPROACH TO EPISTEMIC MARKERS
OF LOGICAL NECESSITY, PROBABILITY,
AND PREDICTABILITY IN ENGLISH AND BULGARIAN.
SIMILARITY AND VARIATION OF USAGE IN DAN BROWN'S
„ANGELS AND DEMONS“ AND ITS TRANSLATION
INTO BULGARIAN**

Vesselina Koynakova
Plovdiv University

The object of study in the present paper is epistemic modality, expressed through paradigms of modal verbs, modal adverbs, modal predicative adjectives, and mental state predicates. The linguistic units are analysed from Cognitive-Pragmatic Perspective both in English and Bulgarian. The corpus of examples is based on Dan Brown's „Angels and Demons“ and the Bulgarian translation by Krum Buchvarov, 2003. The aim is not to discuss the merits or the drawbacks of the translation, but rather to discuss the epistemic patterns, establishing similarities or variations in the usage of the epistemic markers.

Key words: epistemic, modality, conceptualizer, mental spaces

Epistemic Modality and the linguistic means of expressing it have been in the focus of study of quite a number of scholars representing various linguistic fields. Actually, I have been working in the area for some time, and I believe that each of these has contributed to the present-day awareness and language competence of epistemic meanings and expressions. For the needs of the present analysis I have used the Cognitive Epistemic Model, developed by Ronald Langacker in his work „Foundations of Cognitive Grammar“ and Gilles Fauconnier's Theory of Mental Spaces. Langacker's Model accounts for the analysis of the modal auxiliaries, whereas the other epistemic units fit into Fauconnier's Model of Mental Spaces. I have applied the models to Bulgarian language and established that the epistemic markers in Bulgarian can be subjected to similar analysis, which is not surprising as speakers of different languages share common cognitive abilities. On the other hand, the epistemic patterns in both languages are not completely identical, which gives possibilities for

a comparative study of the corpus of examples taken from Dan Brown's „Angels and Demons“ and the translation into Bulgarian.

1. Theoretical Background

English has a rich paradigm of modal auxiliaries and semi-modal auxiliaries that denote the meanings of logical necessity, probability, and predictability. Langacker's Elaborated Epistemic Model (Langacker 1991: 244) reflects his idea of grounding predication and epistemic distance. According to him modal verbs serve as grounding elements and „place the designated process in the region of irreality and... can be described as contrasting with one another because they situate the process at varying distances from the speaker's position at immediate known reality.“ (Langacker 1991: 246) Hence his model shows how our cognitive abilities to interact with the physical world around us can be used for mental constructs that can serve as basis for judging epistemic distances and achieving better linguistic competence of the modal meanings. In our everyday life we are constantly faced with the necessity to judge physical distances, an ability that we can easily transfer into language when we have to evaluate the likelihood of an event's occurrence. The more certain we are about it, the closer the epistemic distance is and vice versa. The speaker or the conceptualizer stands at a particular point in the current reality from which he or she assesses the situation, categorising it not only as real or potential but also judging the respective degrees of likelihood. I have adopted Langacker's approach and have devised simplified models, based on his, to illustrate the epistemic distance of the modal meanings and the distribution of the modal auxiliaries.

1.1. Logical Necessity

The meaning of logical necessity is linguistically expressed by the modal verbs *must*, *have to*, *should* and *ought to*. *Must* is the most prominent member, indicating the highest degree of likelihood, placing the event „very close to known reality -the speaker has deduced that accepting it as real seems warranted, though he has not yet taken that step.“ (Langacker 1991: 246) *Should* and *ought to* occupy the periphery, but we should mind that even so „the distal form *should* expresses greater likelihood (lesser epistemic distance) than the zero form *may*“ (Langacker 1991: 247), which indicates the highest degree of probability.

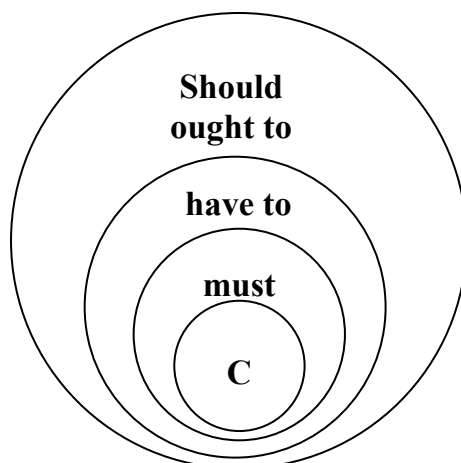


Fig. 1. Simplified Model – Base Forms

1.2. Probability / Possibility

The semantic meaning of probability/ possibility is linguistically expressed through the modal verbs *may*, *can*, *could* and *might*. They occupy an area further than that of logical necessity; *may* being the most prominent member, „implies only that the speaker regards the situation as compatible with what he knows“ (Langacker 1991: 246) *May* indicates the highest degree of probability and „situates the designated process in the realm of potential reality“. (Langacker 1991: 278) *Might* indicates the least degree of likelihood and the strongest degree of doubt as regards the potentiality of the situation.

Example: They *may have seen* it and not noticed. (D. Brown)
Using *may* the speaker implies that it is very likely so. If *may* is substituted for *might*, then the implication is that he or she strongly doubts what he or she is saying. *Can* ranks second to *may* as it indicates „theoretical possibility“ (Leech 1989: 81)

Example: This signal *can only be coming* from the inside or we would not be receiving it. (D. Brown) The speaker implies that it is theoretically possible to be the case.

Could indicates lesser degree of likelihood than *can* and stronger than *might*.

Example: Like any technology- fire, gunpowder, the combustion engine-in the wrong hands, antimatter *could be deadly*. (D. Brown) The speaker is somewhat dubious about the situation.

When used to refer to a past situation *could have done* locates the event at a greater epistemic distance than *might* as it indicates unfulfilled activity.

Example: Mortati, many believed, *could have been* Pope in his younger days had he not been so broad-minded. (Dan Brown) Actually, it didn't happen though it was possible for him to become Pope.

As far as negation is concerned *can* and *could* are predominant markers and also serve as substitutes for *must* as it doesn't occur in negations in its epistemic meaning.

Example: He had enemies here at CERN, you know that, but it *couldn't have had* anything to do with antimatter.

Example: „Illuminati,“ he stammered his heart pounding. It *can't be...*

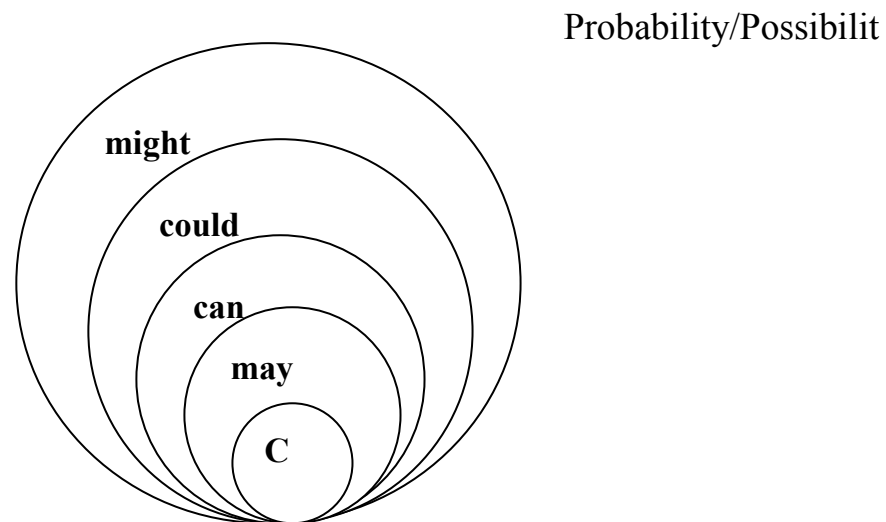


Fig. 2. Simplified Model – Base Forms

1.3. Predictability

The semantic meaning of predictability is linguistically expressed by the modal verbs *will* and *would*. In their present time reference *will* overlaps with *must*, whereas *would* indicates lesser degree of certainty.

Example: „This *must be* a lie!“ one of the cardinals yelled. (Dan Brown) Were we to substitute *must* for *will*, we would definitely end up with the same degree of certainty implied whereas *would* conveys a certain degree of doubt.

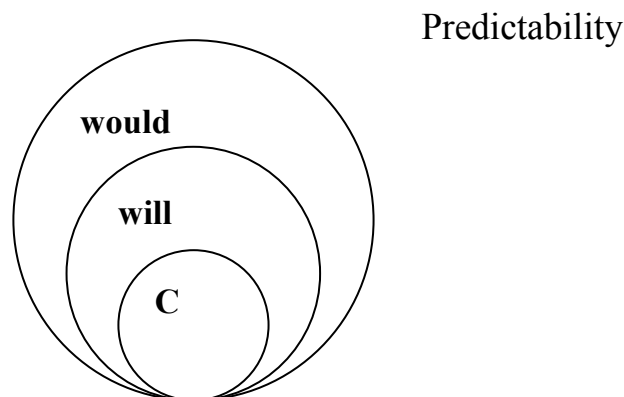


Fig. 3. Simplified Model – Base Forms

With past –time reference *would have done* locates the event further than *could have done as* it denotes hypothetical past situation.

Example: „Leonardo Vetra,“ Kohler said, „*would have been* fifty-eight next week.“

1.4. The Bulgarian Epistemic Markers *трябва да...*, *ще да...*, and *може да ...*

The lexical conclusive modifiers *трябва да*, and *ще да...*, (*trjabva da.. and shte da..*)

“are peripheral to the grameme Conclusive Mood in the functional-semantic category of Subjective Modality.“ (Kutsarov 1989 : 104) They are the closest in meaning and function to the English modals expressing logical necessity and predictability. We should have in mind, though, that *ще да (shte da)* is rarely used at present and has become almost obsolete. *Може да.. (mozhe da)* indicates lesser degree of likelihood and parallels the English modal verbs indicating probability.

Example: – Ама той *трябва да е дошъл* след нас? (S. Minkov) (Ама тоj trjabva da e doshul sled nas?) The speaker is quite sure that it is the case. The same effect can be achieved if we substitute *трябва да.. (trjabva da..)* for *ще да..(shte da)*, whereas *може да.. (mozhe da)* implies the speaker’s uncertainty about the situation.

Example: (He *must have arrived* after we did. / He *may have arrived* after we did.)

Although the set of the Bulgarian epistemic markers is rather limited as compared to the English ones, they manifest identical characteristics and usage, which makes me believe that they can be analysed through Langacker’s Cognitive Model thus determining the epistemic distance of each one.

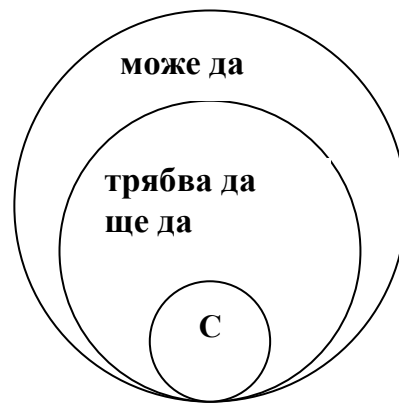


Fig. 4. Simplified Model – Base Forms

1.5. The Bulgarian Conclusive Mood

The Bulgarian Conclusive Mood does not have an identical corresponding marker in English. Actually it is rich in evidential and non-evidential forms and indicates „subjective modality“. „The grameme Conclusive expresses an activity, perceived and experienced by the speaker through deduction and supposition on the grounds of certain facts.“ (Kutsarov 1989: 105)

Example: Ако е съобщил след срещата, значи, той *се е* бил вече разделил с Любо.

(Kutsarov: B. Rainov) (Ако е suobshtil sled sreshtata, znachi, toj se e bil veche razdelil s Ljubo.) (If he *had announced* that after the meeting he *must have parted* with Ljubo.)

It becomes obvious from the example that an English speaker will use on such occasions a construction with a modal auxiliary expressing logical necessity or with a modal adverb denoting certainty- (...he had *certainly* parted with Ljubo.)

1.6. Modal Sentence Adverbs, Mental State Predicates, and Modal Predicative Adjectives as Space Builders of Mental Spaces.

Another approach primarily concerned with constructing meaning in discourse and mental representations of physical space is that of Gilles Fauconnier. He has worked upon the theory of Mental Spaces, which are „constructed and modified as thought and discourse unfolds and are connected to each other by various kinds of mappings.“ (Geeraerts, Guyckens 2007: 352) According to Fauconnier, mental spaces are built by conceptual domains we already know about. The building units are the elements, nouns and pronouns, which provide access to their counterparts

in the next space. Each space is set up by space-builders that can vary from prepositional phrases to embedded clauses. For the needs of the present study I will focus on a special type of space builders that set up the mental space of probability and logical necessity, linguistically expressed by modal sentence adverbs, mental state predicates, and modal predicative adjectives. In this respect the latter epistemic markers function as the modal auxiliaries do when they denote epistemic modal meanings.

Example: *Perhaps* I failed to mention that Leonardo Vetra was anything but an ordinary scientist. (D. Brown) (modal advverb)

Example: *It is probable that* the missing cardinals were taken in one of these areas. (D. Brown) (modal predicative adjective)

Example: I *suppose* Galileo could have created some sort of mathematical code that went unnoticed by the clergy. (D. Brown) (mental state predicate)

Each marker locates the event into the area of irreality and denotes a particular degree of likelihood as regards its occurrence. The conceptualizer perceives the situation as potential within the limits of the context and his or her prior experience and knowledge of the world.

Now I shall analyse the example with the modal adverb.

Perhaps I failed to mention that Leonardo Vetra was anything but an ordinary scientist. (D. Brown)

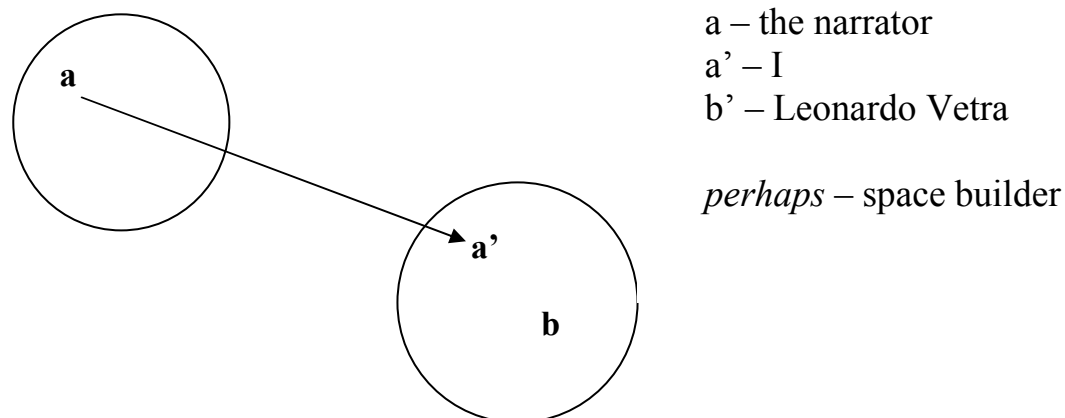


Fig .5. Mental Space Model – Based on Fauconnier's

The narrator is introduced earlier in the discourse as the element *a* in a mental space whose frame is not under discussion. It gives access to the next mental space through its counterpart -the element *a'* (*I*) and a new element *b* (Leonardo Vetra) is introduced. The space builder – *perhaps* (modal adverb, which denotes a slight uncertainty about the proposition)

sets up the mental space of probability. The framework is one of evaluating and judging the probability of the narrator's failure in mentioning the outstanding skills of Leonardo Vetra.

Similar mental spaces can be set up by modal predicative adjectives and mental state predicates. The epistemic mental space accounts for constructing meaning in discourse, but does not differentiate among the various degrees of likelihood implied by the epistemic markers outlined above. Once the epistemic mental space is set up, the conceptualizer assigns a particular degree of certainty to the event's occurrence relying on his or her judgment and experience of the situation. This process is facilitated by the findings of Descriptive Linguistics, which has provided us with detailed characterization of usage and scales of certainty for each marker.

The Bulgarian modal sentence adverbs and mental state predicates function in the same way as their English counterparts and can be regarded as space builders of epistemic mental spaces. They are considered peripheral to the grameme Conclusive Mood and are categorised as regards the degrees of certainty implied by them.

Example: *Може би* не трябваше да го вижда повече. *Може би* в София щеше да го забрави. (D. Dimov)

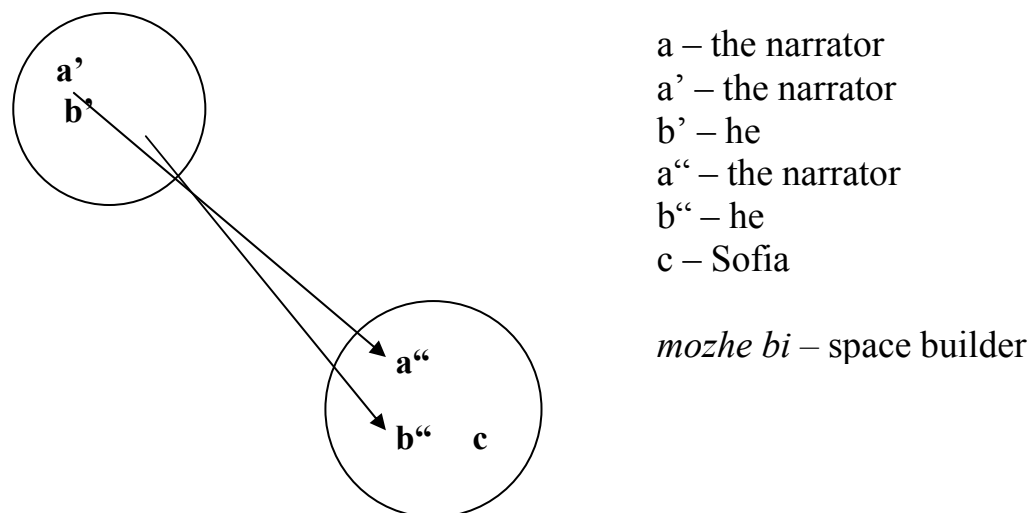


Fig. 6. Mental Space Model – Based on Fauconnier's

The frame of discourse is one of judgment of the potentiality of the event's occurrence. The space builder *mozhe bi* sets up the mental spaces of probability. Access is provided by the narrator *a*, who is implicitly understood and the man the talk is about – *b*. Those elements provide

access to the first mental space in the diagram as a' and b' . In their turn the latter provide access to the second mental space as a'' and b'' . The narrator assesses the possibility of different scenarios and tentatively uses an adverb that denotes a degree of doubt and uncertainty.

(Mozhe bi ne trjabvashe da go vizhda poveche. Mozhe bi v Sofija shteshe da go zabravi.)

(May be she shouldn't see him any more. May be in Sofia she would forget about him.)

Example: *Предполагам*, че това е същата кола, с която е пътувал Тороманов! (D. Dimov)

(Predpolagam, che tova e sushtata kola, s kojato e putuval Toromanov!)

(I guess the car is the same one by which Toromanov had travelled!)

The mental state predicate (*предполагам*) sets up the epistemic mental space of probability and denotes supposition about the situation.

The modal predicative adjectives in impersonal constructions do not have an identical counterpart in Bulgarian. If we consider the following example from English and the possible options in Bulgarian, we can easily note the difference in pattern usage of the epistemic units.

Example: It is probable that she is at home now. (mine)

(Вероятно тя сега си е вкъщи/ Вероятно е тя сега да си е вкъщи.)

(Verojatno tja sega si e vkushti/ Verojatno e tja sega da si e vkushti.)

A modal sentence adverb is used in the first sentence. In the second sentence we have an impersonal construction with a linguistic unit that is predicatively used but definitely cannot be categorised as an adjective. Actually I tend to support Stanju Georgiev's claim that it is a separate word class that he calls „predicative“. (Georgiev 1983: 41) And indeed, although the forms of the two markers are identical, the syntactic patterns are different which gives grounds for such a conclusion.

Having established the epistemic expressions in English and Bulgarian and the similarities and differences in the respective patterns, I shall now move on to the corpus itself.

2. Corpus Survey

The corpus of examples is taken from Dan Brown's „Angels and Demons“ and its translation into Bulgarian by Krum Buchvarov, 2003. My aim was not to discuss the merits or the drawbacks of the translation but rather to compare the epistemic expression units in both works and investigate the similarities or the differences in their usage from Descriptive-Pragmatic Perspective.

2.1. Modal Verbs

The meaning of logical necessity is expressed by the modal auxiliary *must*. There is not a single instance of *have to*, whereas *should* and *ought to* are used to indicate necessity rather than logical necessity. Most probably it is due to their peripheral location in the semantic field, which makes them more prominent in their deontic usage, particularly in past-time reference. The Bulgarian text demonstrates the usage of all the epistemic markers, including instances of conclusive mood. Actually, the conclusive modifier is predominant, as it is the closest to *must* in characteristics and usage.

Example 1: „Why did you wait so long, Vittoria? You and your father *should have told* me about this discovery immediately.“

– Защо толкова дълго чакахте, Витория? С баща си *трябваше веднага да ми съобщите* за това откритие. (deontic use)

(– Zashto tolkova dulgo chakahte, Vitorija? S bashta si trjabvashe vednaga da mi suobshtite za tova otkritie.)

Example 2: Langdon's first impression was that *he must be dreaming*. The vehicle looked as airworthy as a Buick.

Отначало Лангдън *си помисли*, че сънува. Машината изглеждаше стабилна като буик.

(*mental state predicate*)

(Otnachalo Langdon si pomisli, che sunuva. Mashinata izglezhdashe stabilna kao buik.)

Example 3: The director *must be* in one helluva of a hurry to see you. He doesn't usually send the big boy.

Директорът *сигурно* адски бърза да ви види. Обикновено не праща това приятелче.

(*modal adverb*)

(Direktorut sigurno adski burza da vi vidi. Obiknoveno ne prashta tova prijatelche.)

Example 4: „Must be one hell of a lab,“ Langdon thought.

(„*Трябва да е* страхотна лаборатория“ – помисли си Лангдън.)
(*conclusive modifier*)

(„Trjabva da e strahotna laboratorija“ – pomisli si Langdon.)

Example 5: „The camera isn't here,“ the voice said. „I can see where it was mounted, though. Somebody *must have removed* it.“

– Камерата я няма – събщи гласът. – Обаче виждам къде е била монтирана. Някой я *е свалил*. (*conclusive mood*)

(Kamerata ja njama – suobshti glasut. – Obache vizhdam kude e bila montirana. Njakoј ja e svalil.)

Example 6: Langdon's eyes met the director's. „Police. You sent me a fax of a homicide. You *must have called* the police.“

Погледите им се срещнаха. – Полицията. Вие ми пратихте факс с убит човек. *Трябва да сте съобщили* на полицията. (*conclusive modifier*)

(Pogledite im se sreshtnaha. – Policijata. Vie mi pratihte faks s ubit chovek. Trjabva da ste suobshtili na policijata.)

Example 7: „The technology. Antimatter technology *must be worth* a mint.

Maybe someone stole the specimen to do analysis R and D.“

-Технологията. Тя *трябва да струва* луди пари. Някой може да е откраднал образеца, за да го анализира. (*conclusive modifier*)

(– Tehnologijata. Tja trjabva da struva ludi pari. Njakoј mozhe da e otkradnal obrazeca, za da go analizira.)

May and *might* are the prevailing markers in the meaning of probability / possibility. *Can* and *could* are rarely used in positive sentences, but widely used in negative ones. In negations the markers in Bulgarian are mainly modal adverbs. *May* is predominantly translated with the semi-modal (*mozhe da*), whereas *might* with modal adverbs. We can expect that as *may* is the most prominent member in the set and implies the strongest degree of probability it is translated primarily with the closest marker in Bulgarian in characterisation and usage- the semi modal (*mozhe da*)

Example 8: „No. The Illuminati *may have believed* in the abolition of Christianity, but they wielded their power through political and financial means, not through terrorists acts.“

– Да. Те *може да са вярвали* в унищожаването на християнството, но са осъществявали влиянието си с политически и финансови средства, а не с терористични актове. (*semi-modal*)

(– Да. Те *mozhe da sa vjarvali v unishtozhavaneto na hristijanstvoto*, no sa osushtestvjavali vlijanieto si s politicheski i finansovi sredstva, a ne s teroristichni aktove.)

Example 9: The church *may not be burning* scientists at the stake anymore, but if you think they've released their reign over science, ask yourself why half the schools in your country are not allowed to teach evolution.

Църквата *може вече да не гори* учените на клада, но ако смятате, че е оттеглила властта си над науката, запитайте се защо в половината училища във вашата страна е забранено да се преподава еволюционната теория.(*semi-modal*)

(Curkvata mozhe veche da ne gori uchenite na klada, no ako smjatate, che e otteglila vlastta si nad naukata, zapitajte se zashto v polovinata uchilishta vuv vashata strana e zabraneno da se prepodava evoljucionnata teorija.)

Example 10: Cardinal Mortati was starting to fear it *might be* a long evening after all.

He had no idea.

Мортати се опасяваше, че в крайна сметка *може би* им предстои дълга нощ. Той си нямаше и представа колко дълга. (*modal adverb*)

(Mortati se opasjivashe, che v krajna сметка mozhe bi im predstoi dulga nosht. Toj si njashe i predstava kolko dulga.)

Example 11: Moreover, the concentration of lights at the coast was a stark reminder that even far out at sea an explosion *might have* devastating effects.

Нещо повече, светлините по крайбрежието му припомниха, че дори в открито море експлозията *може да* има опустошителни последици. (*semi-modal*)

(Neshto poveche, svetlinite po krajbrezhieto mu pripomniha, che дори v открито море eksplozijata mozhe da ima opustoshitelni posledici.)

Example 12: „Illuminati,“ he stammered, his heart pounding. It *can't be...*“

– И... люминати – заекна ученият. Сърцето му биеше бясно. - *Невъзможно...*

(*modal adverb*)

(– I... ljuminati – zaekna uchenijat. Sunceto mu bieshe bjasno. - Nevuzmozno...)

Example 13: „It *can't be* more than a yard in diameter.“

– Диаметърът му *едва ли е* повече от метър. (*modal adverb*)

(– Diameturut mu edva li e poveche ot metur.)

Example 14: This signal *can only be coming* from the inside or we would not be receiving it.

Сигналят *може да идва* единствено отвътре, иначе нямаше да го приемаме. (*semi-modal*)

(Signalut mozhe da idva edinstveno otvutre, inache njashe da го priemame.)

Example 15: This crime *could be* anything-maybe even another CERN employee who found out about Mr. Vetra's breakthrough and thought the project was too dangerous to continue.

Това престъпление *може да е* всякакво – може дори друг служител на ЦЕРН да е узнал за откритието на господин Ветра и да е решил, че проектът е прекалено опасен.

(*semi-modal*)

(Tova prestuplenie mozhe da e vsjakakvo – mozhe дори друг sluzhitel na CERN da e uznal za otkritieto na gospodin Vetra i da e reshil, che proektut e prekaleno opasen.)

Will and *would* are sometimes difficult to be definitely categorised as expressing predictability. Most often they denote future prognosis instead of present predictability.

Example 16: „A formal investigation,“ Kohler said, his voice firm, „*will take place*. However, it *will most certainly involve* a search of Vetra’s lab, a space he and his daughter hold most private.“

– *Ще се проведе* официално следствие – твърдо отвърна Кьолер. – Това обаче със *сигурност ще изисква* претърсване на лабораторията на Ветра, място, което беше светая светих за двамата с дъщеря му.

(– Shte se provede oficialno sledstvie – tvurdo otvurna Kyoler. – Tova obache sus sigurnost shte iziskva pretursvane na laboratorijata na Vetra, mjesto, koeto beshe svetaja svetih za dvamata s dushterja mu.)

Example 17: Service was an honor. Someday he would be granted his ultimate reward. (future prediction in the past)

Службата бе чест за него. Някой ден *щеше да бъде* възнаграден.

(Sluzhbata be chest za nego. Njakoј den shteshe da bude vuznagraden.)

2.2. Modal Adverbs

Modal adverbs are invariably translated with the same markers in Bulgarian. Both sets of modal adverbs in English and Bulgarian are quite comparable and can be matched perfectly.

Example 18: He was *probably* bored out of his mind, waiting all night to record his live ten-second video spot. He would *most likely* be grateful for a break in the monotony.

Сигурно беше вбесен, че цяла нощ ще чака, за да направи десетсекундния си видеорепортаж на живо. *Най-вероятно* щеше да е благодарен за нарушаването на еднообразието. (*modal adverb*)

(Sigurno beshe vbesen, che cjala nosht shte chaka, za da napravi desetsekundnija si videoreportazh na zhivo. Naj-verojatno shteshe da e blagodaren za narushavaneto na ednoobrazieto.)

Example 19: The killer wondered how Janus could possibly handle such a staggering task. The man *obviously* had connections on the inside. The brotherhood's dominion seemed limitless.

Чудеше се как ще го постигне Янус. *Явно* имаше вътрешни връзки. Властта на братството изглеждаше безгранична. (*modal adverb*)

(Chudeshe se kak shte go postigne Janus. Javno imashe vutreshni vruzki. Vlastta na bratstvoto izglezhdashe bezgranichna.)

2.3. Mental State Predicates.

Mental State Predicates are the prevailing markers in the Bulgarian text. There are few instances such as example 22, which illustrates uses of modal adverbs for mental state predicates.

Example 20: „I *guess* lawyers haven't evolved much over the centuries.“

– *Предполагам*, че адвокатите не са еволюирали много през вековете. (*mental state predicate*)

(– Predpolagam, che advokatite ne sa evoljuirali mnogo prez vekovete.)

Example 21: „I *don't suppose* physicists are natural born hackers?“

– *Предполагам*, че физиците не си падат хакери по рождение, нали? (*mental state predicate*)

(Predpolagam, che fizicite ne si padat hakeri po rozhdenie, nali?)

Example 22: „I *suppose* Galileo *could have created* some sort of mathematical code that went unnoticed by the clergy.“

– *Сигурно* Галилей е създал някакъв математически шифър, който е останал незабелязан от духовенството. (*modal adverb*)

2.4. Modal Predicative Adjectives

There is just one example with modal predicative adjective in the book.

Example 23: *It is probable that* the missing cardinals were taken in one of these areas.

И най-вероятно са били отвлечени оттам. (*modal adverb*)

(I naj-verojatno sa bili otvlecheni ottam.)

As Bulgarian doesn't have such a marker, the translator has used an alternative marker—a modal adverb.

Conclusion

Having explored the corpus, I have come to the conclusion that *must* enjoys the full paradigm of epistemic expressions in Bulgarian, whereas mental state predicates and modal adverbs are almost invariably translated by their Bulgarian counterparts. In general, the prevailing epistemic unit in Bulgarian seems to be the modal adverb whose paradigm is actually the richest one. Still, it has become obvious that we can rely not only on corresponding forms but also on alternative patterns to achieve the intended meaning. Moreover, being aware of all the markers and their usage, we can extend the investigation to translation studies and come up with a successful translation strategy.

WORKS CITED

- Geeraerts and Guyckens 2007:** Fauconnier, G. *Mental Spaces* –Chapter 14. *The Oxford Handbook of Cognitive Linguistics*. Ed. D.Geeraerts and H.Guyckens. Oxford: Oxford University Press, 2007 .
- Georgiev 1983:** Георгиев, С. *Морфология на съвременния български език*. Наука и изкуство, София, 1983.
- Langacker 1991:** Langacker, R.W. *Foundations of Cognitive Grammar-Descriptive Applications*. Stanford: Stanford University Press, 1991.
- Leech 1989:** Leech, G. *The Meaning and the English Verb*. Longman Group UK Limited, 1989.
- Kutsarov 1989:** Куцаров, И. *Очерк по функционално-семантична граматика на българския език*: ПУ „Паисий Хилендарски“, 1989.