論文の英文要旨	
論文題目	A study on the relationship between epistemic modality adverbs and moods in Spanish
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This study examined the relationship between epistemic modality adverbs and moods in Spanish. Epistemic modality adverbs in Spanish are modal inductors. When an adverb is prefixed to a verb, the following verb can be either indicative or subjunctive, and the determinants of mood are analyzed.

The function of modal inductors depends on individual adverbs. For example, "quizá and tal vez" easily co-occur with the subjunctive, whereas "a lo mejor" and "seguramente" are likelier to use the subjunctive. Based on this co-occurrence relationship with mood, some researchers have classified adverbs and clarified their characteristics of individual adverbs. Furthermore, because epistemic modality adverbs are expressions indicating the probability or possibility of a proposition, some researchers have attempted to classify them based on their degree.

In Spanish linguistics, sentences including epistemic modality adverbs are referred to as dubitative sentences. Recently, analyses focusing on elements other than adverbs, influencing mood alternation in this type of sentence, have advanced from a multimodal perspective. The results showed that in addition to linguistic factors, there are

differences in mood choices depending on the text genre, region, and educational level of the speaker.

As mentioned above, although much has been clarified in previous research on the relationship between epistemic modality adverbs and moods, individual adverbs' characteristics and other elements are still not fully understood. Therefore, this study sets the following points as research topics:

1.   Analyzing the epistemic modality adverbs individually and clarifying their relationship with the mood.
2.   Statistically clarifying other factors which affect mood alternation.

Since adverbs have a wide range of meanings and include the speaker's intention regarding the content of the utterance, the purpose of this research is to clarify each adverb' distribution. Binary logistic regression analysis was used because the judgment of modal selection is probabilistic, and decision tree analysis was used to clarify the rules for the judgment of modal selection using inductive reasoning from the data. Additionally, qualitative verification was performed by comparing the analysis results with actual usage examples.

The remainder of this paper is organized as follows: Chapter 2 provides an overview of previous research dealing with modality, and accordingly, modality is defined as a linguistic form that expresses the speaker's intention or attitude. Referring to Palmer (2001), I roughly divided it into modality of sentence and modality of enunciations; the former was further divided into propositional modality and event modality. The epistemic modality is a subcategory of the propositional modality.

Chapter 3 deals with the types of epistemic modality adverbs and their relationships with propositions based on previous research. From them, I defined 10 adverbs (quizá(s), tal vez, a lo mejor, acaso, lo mismo, igual, possiblemente, probablemente, seguramente, difícilmente) as epistemic modality adverbs.

Chapter 4 explains the variables used in the analysis and its methods, such as binary logistic and decision tree analyses. Chapter 5

presents the analysis results.

Chapter 6 considers the factors that influence mood alternation in dubitative sentences based on the analysis results and using examples. As a result of the analysis and example verification, epistemic modality adverbs were classified into i) adverbs that basically co-occur with the indicative, ii) adverbs that tend to co-occur with the indicative but also with the subjunctive, and iii) adverbs that relatively co-occur with the subjunctive.

i) Adverbs that have a strong affinity with the indicative:
a lo mejor, seguramente, difícilmente.
ii) Adverbs that have an affinity for the indicative but also co-occur with the subjunctive:
probablemente, acaso.
iii) Adverbs that have a strong affinity with the subjunctive:
posiblemente, quizá, quizás, tal vez.

However, even if some adverbs show affinity for the subjunctive, nearly half of the cases co-occur with the indicative. This classification is only a comparison and contrast within the category of epistemic modality adverbs.

In addition to adverbs, it was statistically shown that the region, polarity, reference time, and position of adverbs influenced mood choice. Regarding regions, there were differences in the tendency in Latin America, with the Andes Mountains serving as a rough dividing line.

I) Regions where the indicative method is likelier to be used:
Andean, continental Caribbean, Chilean, Mexico and Central America.
II) Areas where both the indicative and the subjunctive are used:
Spain, Equatorial Guinea.
III) Regions where the subjunctive method is likely to be used:
Antilles, La Plata River.

In this classification, there was a strong tendency to use the

subjunctive, particularly in countries along the La Plata River. Therefore, it is clear that there are differences in the tendency to choose the mood depending on the region.

Among the linguistic variables, adverb position and reference time were also related to mood. The results of logistic regression and decision analyses showed that the subjunctive was likelier to be selected when the adverb was located at the beginning of the sentence. Accordingly, I pointed out that the content of the modification differs depending on the position of the adverb, and when placed at the beginning of a sentence, it can affect the modality of the entire sentence. Furthermore, it became clear that the subjunctive was likelier to be used when referring to the present, whereas the indicative was likelier to be used when referring to the past. Furthermore, differences in polarity were indicative of preference in affirmative and interrogative sentences; however, the subjunctive was likelier to be used in negative sentences.

Chapter 7 provides conclusions based on the results and discussion. Regarding the relationship between epistemic modality adverbs and moods, most research has focused on their co-occurrence with each mood, and research that considers the linguistic environment has not been sufficiently advanced. However, my study's analysis revealed that in sentences where epistemic modality adverbs are used, there are influencing factors other than adverbs. In other words, not only adverbs but also other factors (related to the environment surrounding adverbs, region, and educational level) played a role in mood selection. Furthermore, according to decision tree analysis results, elements other than adverbs strengthened the co-occurrence characteristics of adverbs and moods.

In this study, I have statistically clarified the relationship between epistemic modality adverbs and moods, and factors other than adverbs that influence mood alternation. This implies that mood alternation in dubitative sentences is a multimodal phenomenon.