

City University of Hong Kong

LT3211 Semantics

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Does “*jing1goi1*”(應該) express necessity or possibility in epistemic and deontic modality ?

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1. Introduction

There are at least three kinds of modalities expressing possibility and necessity: epistemic, deontic and logical. In English, modalities can be expressed with the same modals for all modalities. For instance *must* expresses necessity, while *may* expresses possibility. However, it becomes tricky to determine whether *should* expresses necessity or possibility.

This study wants to explore the relationship among the three common modal auxiliaries used in Cantonese i.e. *jing1goi1*(應該), *jat1ding6*(一定), *ho2nang4*(可能). It is predicted that the force of *jing1goi1* would be between necessity and possibility, but whether it is more inclined to the meaning of possibility or necessity would be the major objective. In order to make the study more precise, only epistemic and deontic modalities will be discussed. We also expect to see whether *jing1goi1* behaves differently under epistemic and deontic modalities.

2. Methodology

We divided our questionnaire into two parts which are further branched into epistemic and deontic expressions. Both parts uses the rating system from 1 to 7, with 1 being the weakest and 7 being the strongest. Two modals “*jat1ding6*” (must) and “*ho2nang4*” (may) are employed as comparing variables, which also serve as representatives of necessity and possibility.

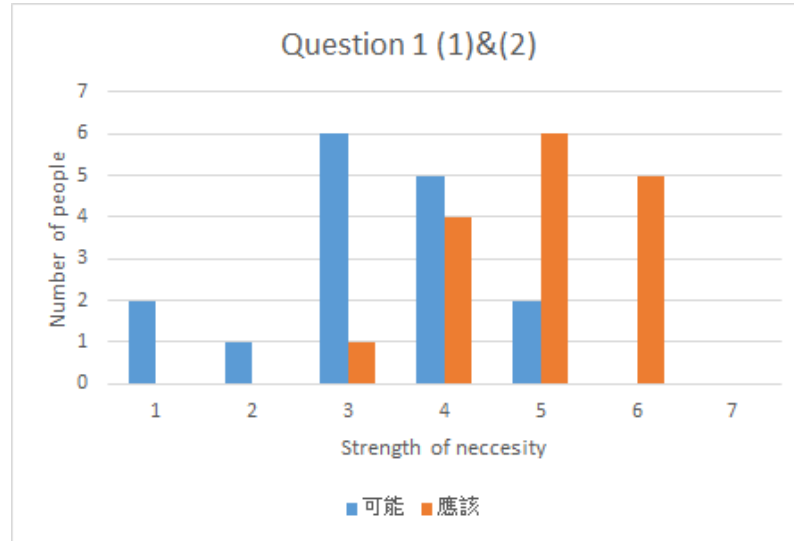
By asking the participants to rate eight different sentences, the first part aims to test the level of strength concerning the extent of necessity or certainty of the three modals. Different sentences are designed for *jat1ding6* and *ho2nang4* to specify their contexts and make their usage more reasonable and natural. In order to compare *jing1goi1* with *jat1ding6* and *ho2nang4* respectively, in each modality two sentences with *jing1goi1* are created just following the context of either *jat1ding6* or *ho2nang4*. From this, we aim to examine how strong *jing1goi1* is inclined to *jat1ding6* and *ho2nang4*, respectively.

The second part applies the three modals to the same statement sentences, followed by a clause with negation under the modal *ho2nang4*. In this way, all three sentences express the uncertainty of the speakers towards his conjecture. However, due to the meaning of necessity of some modals, such negation may cause a feeling of inappropriateness. Thus, the second part aims to test the level of appropriateness of these three modals, which then leads to the examination of the level of necessity. From this, we aim to find out whether *jing1goi1* is more inclined to necessity or possibility by comparing all three modals.

3. Data Results and Analysis

There are in total 16 university students ranging from 18 to 20 years old participating in our research.

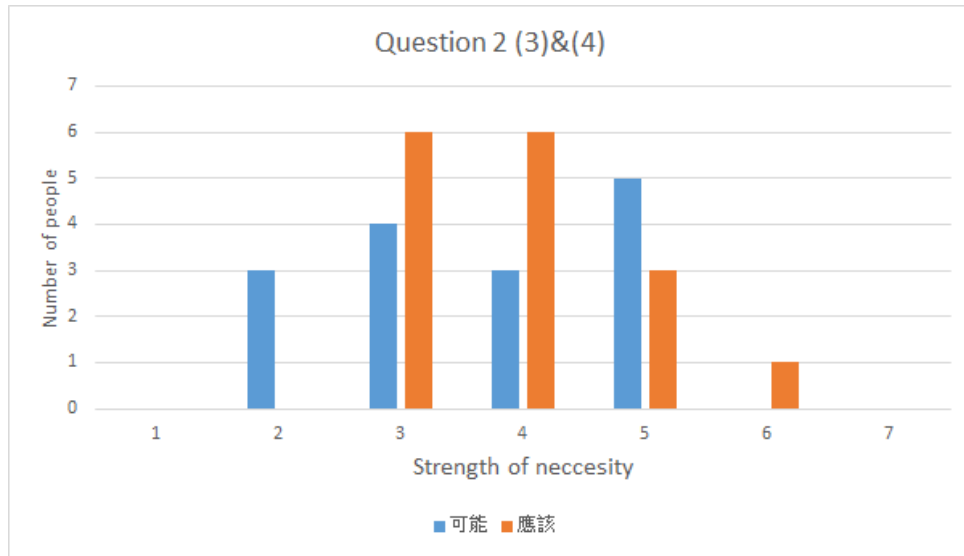
3.1 Part 1: Comparison between *ho2nang4* and *jing1goi1* (Deontic)



Graph 1. Strength of necessity of *ho2nang4* and *jing1goi1* in question 1

As *ho2nang4* ranges from 1 to 5, with the highest in 3 and the mean of 3.25, which is obviously weak, it proves that *ho2nang4* can be treated as a representative of possibility in deontic modality. On the other hand, *jing1goi1* ranges from 3 to 6, with the highest in 5 and the mean of 4.9375, which is evidently inclined to strong strength even in the weak context, and is significantly stronger than *ho2nang4*. This indicates that in deontic modality, *jing1goi1* is more inclined to the meaning of necessity and its force is stronger than *ho2nang4*.

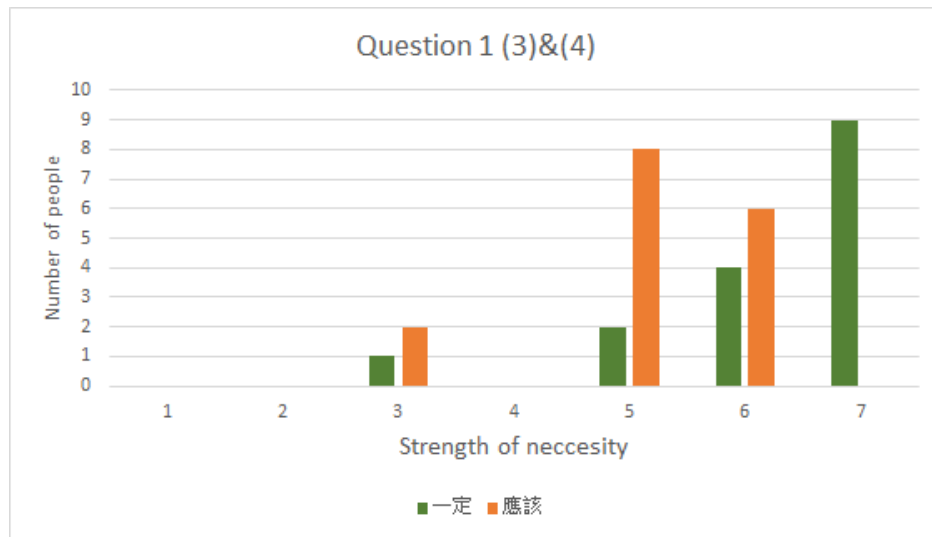
3.2 Part 1: Comparison between *ho2nang4* and *jing1goi1* (Epistemic)



Graph 2. Strength of necessity of *ho2nang4* and *jing1goi1* in question 2

The modal *ho2nang4* ranges from 2 to 5, with the highest in 5 and the mean of 3.4375, its force is apparently weak. Meanwhile, *jing1goi1* ranges from 3 to 6, with the highest in both 3 and 4 and the mean of 3.9375, which is neutral and a bit closer to the weak side. In this sense, *jing1goi1* is slightly stronger than *ho2nang4* that states possibility, but not as strong as that in deontic modality and its inclination towards necessity is not that evident.

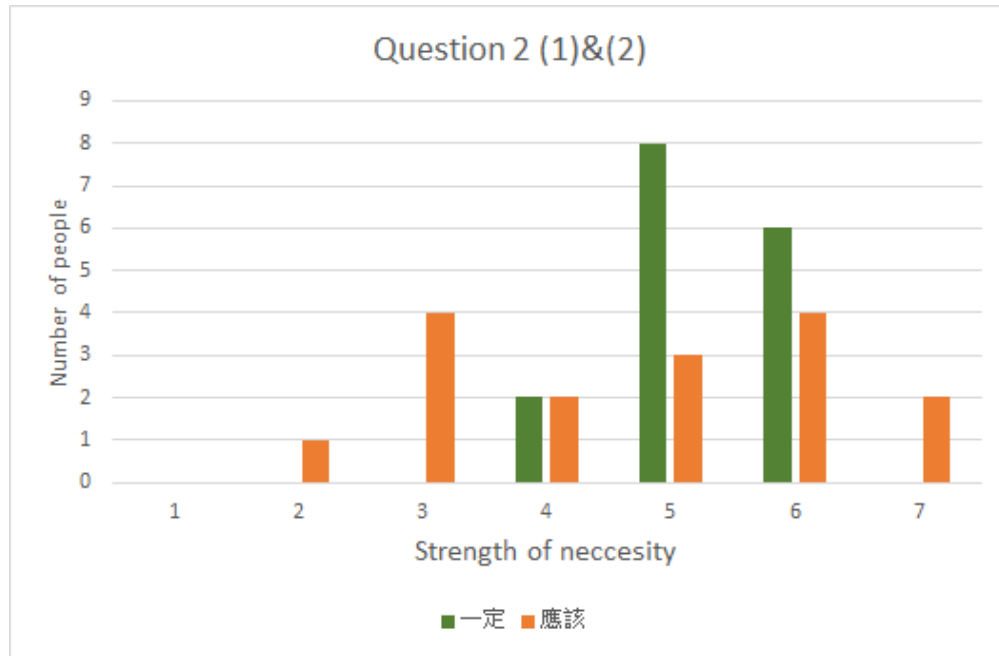
3.3 Part 1: Comparison between *jat1ding6* and *jing1goi1* (Deontic)



Graph 3. Strength of necessity of *jat1ding6* and *jing1goi1* in question 1

The target modal *jing1goi1* ranges from 3 to 6, with the highest in 5 and the mean of 5.125, which is obviously strong, while *jat1ding6* ranges from 3 to 7, with the highest in 7 and the mean of 6.25, which is clearly linked to strong strength of necessity. This shows that *jat1ding6* expresses necessity and is stronger than *jing1goi1*. Still, with the mean of 5.125, *jing1goi1* is more inclined to necessity in deontic modality.

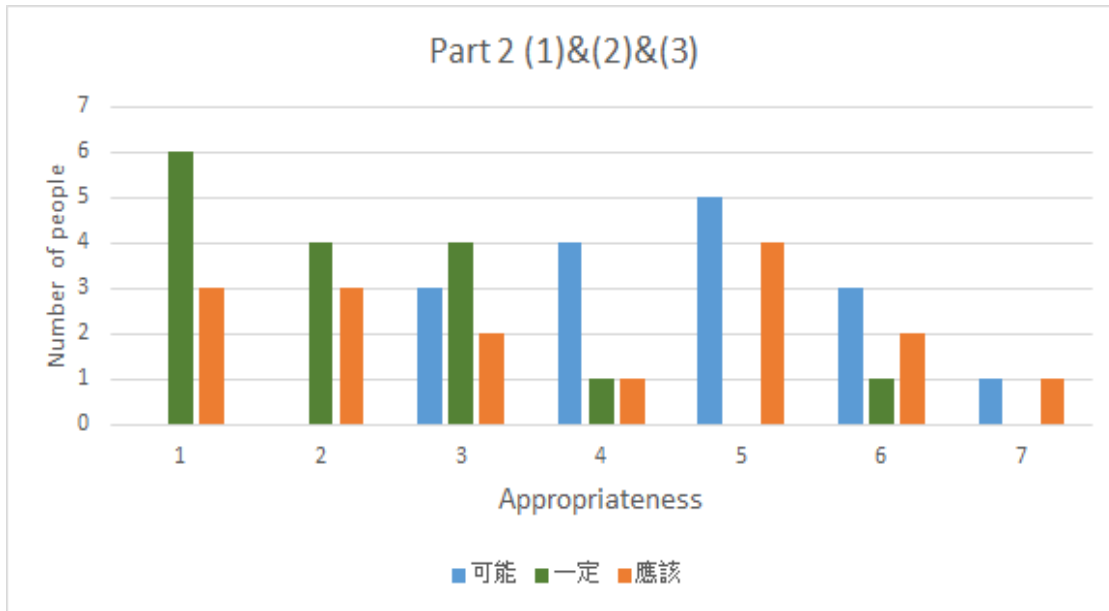
3.4 Part 1: Comparison between *jat1ding6* and *jing1goi1* (Epistemic)



Graph 4. Strength of necessity of *jat1ding6* and *jing1goi1* in question 2

The modal *jing1goi1* ranges from 2 to 7, with the highest in both 3 and 6, and the mean of 4.6875, which is slightly leaned to strong strength. In the meanwhile, *jat1ding6* ranges from 4 to 6, with the highest in 5 and the mean of 5.25, which is moderately strong. By looking at the data distribution, participants' perception towards *jat1ding6* is more assured than *jing1goi1*, which is centered in necessity. But the difference in the mean still proved that *jat1ding6* is stronger than *jing1goi1*. Compared to deontic modality, *jing1goi1* is less obviously inclined to the strong side, since the distribution is more disperse across the scale, and there are 5 participants regarding it as weak in its strength of necessity, more than 2 in deontic modality.

3.5 Part 2: Comparison among all three modals (Deontic)



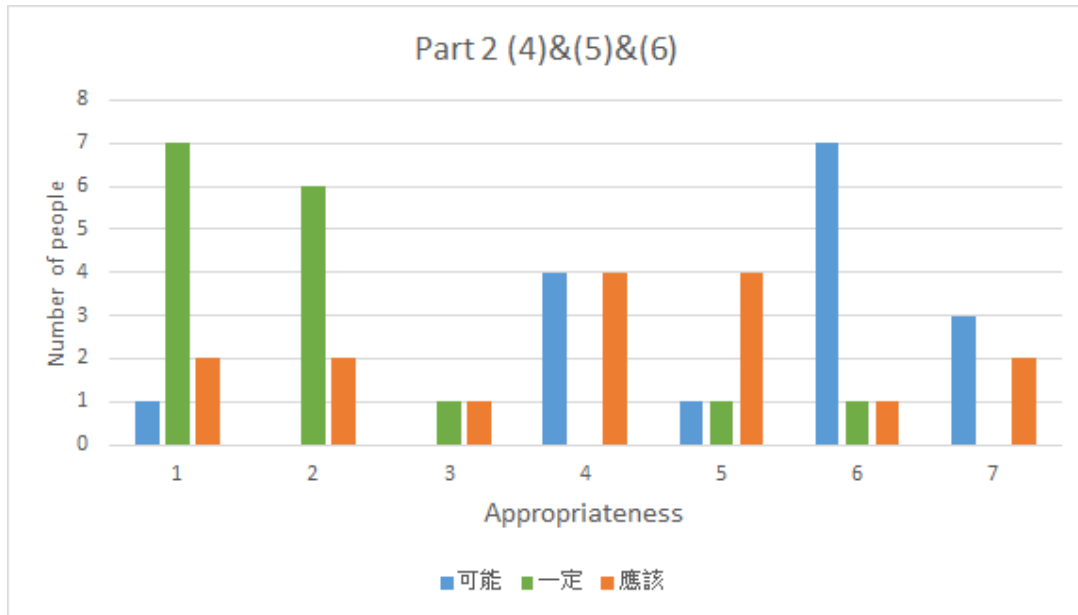
Graph 5. Appropriateness of the three modals in Questions 1,2,3

The modal *jat1ding6* ranges most from 1-4, with the highest in 1 and the mean of 2.25, which is linked to inappropriateness, while *ho2nang4* ranges most in 3-6, with the highest in 5 and the mean of 4.6875, which is linked to appropriateness. At the same time, *jing1goi1* ranges from 1 to 7, with the highest in 5 and the mean of 3.625.

It can be seen that the understanding of *jing1goi1* is very tricky and varies a lot from person to person according to its wide range. And the calculated standard deviation is 1.03. However, its mean 3.625 suggests that it is more inclined to inappropriateness. Although its peak appears in 5, more people chose inappropriateness, and the distribution spread more even in this side.

Therefore, the modal *jing1goi1* is basically more inclined to inappropriateness and thus closer to the role of *jat1ding6*.

3.6 Part 2: Comparison among all three modals (Epistemic)



Graph 6. Appropriateness of the three modals in questions 4,5,6

The modal *jat1ding6* ranges most from 1 to 3, with the highest in 1 and the mean of 2.0625, and *ho2nang4* ranges most from 4 to 7, with the highest in 4 and 5 and the mean of 5.3125. For the modal *jing1goi1*, it is widely dispersed from 1 to 7, with the mean of 4.0625, which is close to neutral and insignificantly leaned to appropriateness. The wide range again shows the great individual differences towards the understanding of *jing1goi1*. However, the standard deviation of 1.16 shows that the variation is greater than 1.03 in deontic modality. Compared to the deontic modality where *jing1goi1* is clearly inclined to necessity, in epistemic modality, although it is not clearly inclined to possibility, it is still less prone to necessity and mostly neutral.

4. Discussion

Overall, our observations are that the forces of *jing1goi1* in both modalities are not polar, but scalar, and the forces seem to differentiate in deontic and epistemic modalities.

On the one hand, it can be seen from our data results that *jing1goi1* does not simply express extreme necessity or possibility. On the contrary, it seems that its force is in between, which can be identified through the comparison with *jat1ding6* and *ho2nang4*. *jing1goi1* has a broader sense of meaning when compared to the other two modals, which makes its usage more common and varied. This makes the modal *jing1goi1* scalar instead of polar. The sense of *jing1goi1* in Cantonese is similar to *should* in English. This observation proves and supports the suggestion proposed by Salkie & Van der Auwera (2009:87) that the modal expressions can often be located on a scale considering its force, with *may* (similar to *ho2nang4*, states possibility) and *must* (similar to *jat1ding6*, states necessity) placed near the extremes of the scale. Moreover, the modals at intermediate points on the scale, are found to be more variable.

On the other hand, our study also found that the quantificational force of *jing1goi1* seems to depend on its modal basis, since in deontic modality, it is clearly leaned to the meaning of necessity; while in epistemic modality, its force is much weaker. Reasons may rely on the natures of the word “*jing1goi1*” and the features of the two different bases.

First, as Palmer claimed (2001:73), in English *should* is a modified form of “*must*”. Just as past-tense modals like *could/might* can be used to represent more tentative, weaker judgements, *should* notionally behaves as the past-tense form of *must* and thus can weaken the force of the modal, although it’s morphologically the past tense of *shall*. It is because *should* possesses a feature of conditionality, referring to events that would take place or would have taken place under certain conditions. Thus *should* differs from *must* in that the speaker admits the possibility that the event may not occur. The nature of the modal *should* gives us a clue that it is closer to the meaning of *must* and is supposed to be inclined to the extreme of necessity. This is well manifested in our data concerning the deontic modality, which shows that the Cantonese “*jing1goi1*” is very similar to English *should*, as its range and distribution are very close to *jat1ding6*, though a bit weaker.

However, our results about the epistemic modality turned out to be contrast to Palmer’s discussion, as the force of *jing1goi1* is much weaker than that in deontic modality. It may be related to the features of the bases and the meanings of *jing1goi1* in these modalities. While

deontic modality expresses something based on the rules we need to obey, *jinglgoil* in this discourse has a sense of coerciveness and obligation. It suggests a comparatively strong recommendation and close to requirement, which is relatively close to *jatlding6*. However, in epistemic modality, as it “indicates the speaker’s confidence or lack of confidence in the truth of the proposition” (Coates, 1990:2), it mainly expresses evaluation, opinions and attitudes of the speakers towards the factual events, which states the likelihood of the scenario. As Stubbs puts it 'Whenever speakers (or writers) say anything, they encode their point of view towards it' (Stubbs, 1987:1), it is explicated in epistemic modality in particular, since it concerns more about the speakers’ evaluations and views compared to deontic modality. Thus in epistemic modality, as subjectivity and modality are closely related, there is more subject variations and are intended to involve more uncertainty. Since it’s based on different individual experiences, it’s lack of a comparatively general tendency. While the epistemic one is more likely to contain uncertainty across different responses from individuals, in deontic it is generally inclined to express necessity. Thus the force of “should” in epistemic is more or less weaker than that in deontic.

5. Limitations

First, the observations are subject to individual variations as people have different perception and comprehension towards the three modal auxiliaries. The sample number is limited, as there are only 16 participants for this questionnaire. Since they are of the same age group and similar education level, the data collected cannot accurately reflect the behavior of using the three modals of most speakers. Also, as only three modals were examined, the results are rather narrow and lack of generalisation.

6. Conclusion

In conclusion, whether *jinglgoil* is closer to *possibility or necessity* should depend on the context. Due to the nature of *jinglgoil* being scalar rather than polar, more individual differences can be observed in its daily usage. Moreover, in the case of *jinglgoil*, it seems that the interpretation of its force depends on the basis, for which we mainly investigate into the epistemic and deontic modality. The force of *jinglgoil* is stronger in deontic modality and it is very obviously inclined to necessity. Nevertheless, in epistemic one such inclination disappears and the force becomes much weaker. Some preliminary exploration on the reasons of the different tendencies are given. It is implied that *jinglgoil* is generally inclined to necessity according to its conditionality nature. It is the different natures of two bases, namely the need to express obligation in deontic modality, and the tendency to express judgements and attitudes in epistemic modality, that eventually influences the different tendencies of *jinglgoil*.

References:

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- Salkie, R., Busuttil, P., & Van der Auwera, J. (2009). *Modality in English: Theory and description* (Vol. 58). Walter de Gruyter.
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Questionnaire for Cantonese Speakers

Date: _____

Name (Abbreviation): _____ Gender: _____ Age: _____

PART 1

Read the sentences carefully, and judge the **strength of necessity/certainty** expressed by them. Choose one number from 1 to 7.

1: Very weak

2: Moderately weak

3: Slightly weak

4: Neutral

5: Slightly strong

6: Moderately strong

7: Very strong

1. How strong is the necessity of doing more exercises?

- (1) 如果你想考好啲，你可能要多啲練習。 _____
- (2) 如果你想考好啲，你應該要多啲練習。 _____
- (3) 如果你想攞滿分，你一定要做多啲練習。 _____
- (4) 如果你想攞滿分，你應該要多啲練習。 _____

2. How strong is the certainty of raining outside?

- (1) 大家都擔住遮，出面一定落緊雨。 _____
- (2) 大家都擔住遮，出面應該落緊雨。 _____
- (3) 有幾個人擔住遮，出面可能落緊雨。 _____
- (4) 有幾個人擔住遮，出面應該落緊雨。 _____

PART 2

Read the sentences carefully, and judge the **appropriateness** of the sentences. Choose one number from 1 to 7.

- 1: Very inappropriate
- 2: Moderately inappropriate
- 3: Slightly inappropriate
- 4: Neutral
- 5: Slightly appropriate
- 6: Moderately appropriate
- 7: Very appropriate

- (1) 你可能要多啲練習，但都可以唔做。 _____
- (2) 你一定要做多啲練習，但都可以唔做。 _____
- (3) 你應該要多啲練習，但都可以唔做。 _____

- (4) 出面可能落緊雨，但都可能冇落雨，我都唔知。 _____
- (5) 出面一定落緊雨，但都可能冇落雨，我都唔知。 _____
- (6) 出面應該落緊雨，但都可能冇落雨，我都唔知。 _____

— End of Questionnaire —