

# THE LOGICAL CONSTRUCTIONS OF CONDITIONAL SENTENCES AND THE FUNCTIONS OF CONDITIONAL EXPRESSIONS: A CONTRASTIVE STUDY OF JAPANESE AND THAI

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## 1. Introduction

In a previous study I proposed another category of modality which I called Cognitive Modality: Causal, Temporal and Hypothetical, in order to explain sufficiently the meaning of conditional expressions in Japanese and Thai. In this paper, I focus on the logical constructions of conditional sentences and the functions of conditional expressions used in these sentences in both languages; namely, *thâa*, *hâak*, *mûaa* and *phɔɔ* in Thai and *ba*, *to*, *tara* and *nara* in Japanese respectively. The term logical construction used in this paper means the mental attitude of the speaker at the moment of utterance (I use P to refer to the antecedent and Q to refer to the consequence of a conditional sentence).

Look at the following sentences:

- (1) Jikan ga at *tara*, sentorea kuukoo e kengaku ni ikitai desu ne.
- (2) Eki ni tsui *tara* denwa o shite kudasai.
- (3) Kinoo Tookyoo e it *tara* Yamada san to atta.

If we translate (1) into Thai, it will be as (1)'

- (1)' *thâa* mii wee-laa yàak pay thîaaw sà-năam-bin sen-thrɔɔ-ææ ná.

Any native speaker of Thai will know that (1)' is a hypothetical sentence.

When one translates sentence (2) into Thai, one would add lææw (which expresses the meaning of completion) after *thâa* since sentence (2) holds the meaning of temporal supposition.

- (2)' *thâa* thŭŋ sà-thăa-nii lææw chûaay thoo-rá-sàp maa ná.

In the case of sentence (2)', the word *thâa* does not convey a hypothetical meaning anymore. Therefore *thâa* can be omitted leaving lææw alone to express temporal relation of P and Q. In sentence (3), the word *tara* in Japanese is used. However, this sentence will be expressed in Thai by using the word *tɔɔn*, *phɔɔ* or *mûaa* as shown below:

- (3)' a. *tɔɔn* pay too-kiaaw chǎn phóp khun yaa-maa-dà dooy baŋ-əən.  
b. *mûaa* pay too-kiaaw chǎn phóp khun yaa-maa-dà dooy baŋ-əən.

One should notice that in (3)', both a and b express the time of the occurrences in Q. However, both *tɔɔn* and *mûaa* do not hold the meaning of being surprised as in *tara* in Japanese. Thus, the adverb *dooy baŋ-əən* (unexpectedly) is required.

Let's look at sentence (4) below:

- (4) Mado o aketara/ *to*, yuki ga futte ita.  
When I opened the window, I found that it had been snowing.

In the case of sentence (4), the action of opening the window in P and the discovery in Q occur in an instant. Thus, *phɔɔ* is used instead of *tɔɔn* and *mûaa*. Panthumetha (1984) explains the meaning of *mûaa* that it denotes the occurrences in P and Q taking place at the same time. However, this does not imply that the two occurrences happen in an instant. (Nakagawa p.114)

- (4)' *phɔɔ* pəət nâ-tàaŋ kôo phóp wâa hî-má tòk.  
When I opened the window, I found that it had been snowing.

Look at sentence (5) and sentence (6) of Japanese and the translations in Thai below:

- (5) Haru ga kureba /*to*, hana ga saku.  
When spring comes, the cherry trees blossom.  
(5)' *mûaa* / *phɔɔ* thǔŋ ruŋ-duu bay-máypħlǐ dòk-máy kôo baan.  
(6) Taro wa okane ga aru *to*, ryokoo o suru.  
Whenever Taro has money, he goes traveling.  
(6)' *phɔɔ* thá-rôo mii ŋəən kôo pay thîaaw.

Sentence (5) and sentence (6) denote a causal meaning, that is, whenever P takes place Q will occur.

## 2. Cognitive Modality

Most grammarians explain the modality of conditional expressions in Japanese on the basis of objectivity and subjectivity. However, as illustrated in the sentences above, it is obvious that if one judges from the standpoint of objectivity and subjectivity this would not adequately explain Japanese conditionals and this applies to Thai conditional expressions as well. In the previous study, I proposed that in order to explain the meaning of conditional expressions in Japanese and Thai, one should know the speaker's knowledge of what is true or not true in the domains of realis and irrealis. As Palmer (1986) points out, in conditionals, there exist subcategories of the speaker's mental attitude. Thus, in the previous study I proposed another scale of mental attitude of the speaker along the scale of subjectivity and objectivity and this is the scale of what I call Cognitive Modality. Thus, the term modality used in the present study means the speaker's knowledge of P which can be divided into three categories: causal, temporal

and hypothetical. In the previous study, I proposed the scale of cognitive modality which is illustrated in Fig.1. It should be mentioned here that unlike Akatsuka (1983), in this study both the domains of realis and irrealis are in the subjective world and they are on a continuum. The definitions of the three categories of modality are as follows:

- a) **causal modality:** At the moment of utterance, the speaker believes that P is a fact and whenever P occurs Q would occur repeatedly; that is, P is the cause of the occurrence in Q as illustrated in sentences (5) and (6) above.
- b) **temporal modality:** At the moment of utterance, the speaker believes that P is true or P will be realized in the future time. This is illustrated in sentence (2) and sentence (3), see p.41.
- c) **hypothetical modality:** At the moment of utterance, the speaker knows that it is possible that P would realize or the speaker knows that it is impossible that P would be realized. Sentence (1) belongs to this category.

**Fig.1:** *Japanese and Thai cognitive modality and the epistemic scale*

Tim / Space	Actual World		Subjective World	
	Past	Future	Present / Past	
	Actual	Realis	Irrealis	
Linguistic World				
Meaning	realized, unexpected, temporal	Causal (trans- cendency) /temporal	unrealized, possible, hypothetical	unrealized, impossible, hypothetical
Japanese	<i>tara, to</i>	<i>ba,tara,to</i>	<i>ba,to,tara, nara</i>	<i>ba,tara,nara kamoshirenai daroo</i>
Thai	<i>mûaa phoo</i>	<i>mûaa phoo ,thâa hàak thâa..... lææw</i>	<i>thâa hàak mûaa</i>	<i>thâa, hàak kôo dii</i>

### 3. Prototypes of conditional expressions

It can be seen that many of the conditional expressions in both Japanese and Thai can be replaced by others. In other words, many conditional expressions have a usage in their own domain and at the same time they can be used in other domains. This notion of expansion has been introduced by Masuoka (1993 ) In the previous study, I adopted the notion of characteristic expansion in explaining the meaning and usage of these conditional expressions and I divided Cognitive Modality into 3 prototypes, namely “Causal Prototype”, “Temporal Prototype” and “Hypothetical Prototype” as shown in Fig.2

**Fig.2:** Prototypes of conditional expressions in Japanese and Thai

Characteristics	Japanese	Thai
<b>Causal Prototype</b>	<i>ba, to</i>	<i>mûaa, phɔɔ, thâa, hàak</i>
<b>Temporal Prototype</b>	<i>tara, to</i>	<i>mûaa, phɔɔ, thâa, hàak</i>
<b>Hypothetical Prototype</b>	<i>ba, to, tara, nara</i>	<i>thâa, hàak, mûaa</i>

#### 4. Logical Constructions of conditional sentences and the functions of conditional expressions

One can observe that each prototype shown in the table above has various expressions. Causal Prototype, for example, has *ba* and *to* in Japanese and *mûaa, phɔɔ, thâa, hàak* in Thai. One question would arise, what is the difference among them? To answer the question, it is significant to find out what the logical construction the conditional sentence has in using each of these expressions.

##### a) Causal modality

As explained before, causal meaning denotes that at the moment of utterance, the speaker believes that P is a fact and whenever P occurs Q would occur repeatedly; that is, P is the cause of the occurrence in Q. However, let's look at the following sentences again:

- (5) Haru ga kureba /to, hana ga saku.  
When spring comes, the cherry trees blossom.
- (5)' *mûaa/phɔɔ* thúŋ ruɯ-duu bay-máyphlî dòk-máy kô baan.
- (6) Taro wa okane ga aru to, ryokoo o suru.  
Whenever Taro has money, he goes traveling.
- (6)' *phɔɔ* thá-rôo mii nɔɔn kô pay thîaaw.

One can notice that sentence (5) in both languages indicate general events of which *ba* or *to* is used in Japanese and *mûaa* or *phɔɔ* is used in Thai. In sentence (6), only *to* in Japanese and *phɔɔ* in Thai is used respectively. One can see that in sentence (5), the occurrence in P and the occurrence in Q is related in terms of temporal and it is a general matter while the event in (6) is a specific matter. Look at sentence (7)

- (7) pà-kà-tî *thâa* lûuk-kháa mii nɔɔy ráan kô pît rew.  
Usually when there are few customers, the shop will close early.

We can see that *thâa*, which expresses a hypothetical meaning, can be used in a causal relationship between P and Q especially for specific events. In this case, the word pà-kà-tî (usually) is optional. However, when *thâa* is used, it implies the nuance of possibility.

The logical construction of both general and specific events of causal meaning: The speaker believes that when the occurrence in P is realized, the occurrence in Q will take place and this will occur repeatedly.

### The logical constructions of conditional sentences

In Japanese, both *ba* and *to* can be used to denote causal meaning. However, *ba* and *to* in Japanese, as Matsushita (1928) explains, have different nuances. That is *ba* expresses the meaning of causal relation of P and Q on logical reason while *to* denotes the meaning of causal relation between P and Q in the sense of actual event. Thus, one can see that in sentence (6) which is a specific event and the speaker focuses on the actual causal relation of P and Q rather than the time reference as in (5), *to* is used. Surprisingly, in Thai, we can also see that when the speaker focuses on the cause-effect, like *to* in Japanese, *phɔɔ*, which has the meaning of cause-effect, is used. Thus, the logical construction of the sentence of causal relation expressed by each expression can be categorized as shown in Fig.3 (t is used for true, f is used for false).

**Fig. 3:** The logical constructions of causal modality

Conditional Sentence	Conditional Expressions	P	Q	Meaning
<b>Japanese</b>	<i>ba</i>	t	t	logical causal relation
	<i>to</i>	t	t	actual causal relation
<b>Thai</b>	<i>mûaa</i>	t	t	temporal
	<i>phɔɔ</i>	t	t	actual causal relation
	<i>pàkà-tì... thâa /hàak</i>	t	t	possibility

Note that both *to* in Japanese and *phɔɔ* in Thai are used in statements describing events, in other words, the two words are used for sentences describing propositions in P and Q. Thus, expressions such as demand, request and so forth can not be used with *to* and *phɔɔ*.

#### b) Temporal modality

Temporal modality means that at the moment of utterance, the speaker believes that P is true or P will be realized. This is illustrated in sentence (2) and sentence (3) .

- (2) Eki ni tsui *tara* denwa o shite kudasai.  
When you arrive at the station, give me a call.
- (2)\* *thâa* thǔŋ sà-thâa-nii lææw chûaay thoo-rá-sàp maa ná.
- (3) Kinoo Tookyoo e it *tara* Yamada san to atta.  
Yesterday when I went to Tokyo, I happened to meet Mr. Yamada.
- (3)\* *mûaa* pay too-kiaaw chǎn phóp khun yaa-maa-dà dooy baŋ-əən.
- (4) Mado o aketara/ *to*, yuki ga futte ita.  
When I opened the window, I found that it had been snowing.
- (4)\* *phɔɔ* pəət nâ-tàaŋ kô phóp wâa hì-má tòk.  
When I opened the window, I found that it had been snowing.
- (8) Taro wa heya ni hairu to denki o tsuketa.  
When Taro went into the room, he turned on the light.
- (8)\* *phɔɔ* thaa-roo khâu hōŋ kô pəət fay.

In Japanese, *tara* has been treated as a conditional expression expressing with a high degree of subjectivity. However, Akatsuka (1983) cites that *tara* also expresses temporal meaning. Sentence (2) is one example of temporal meaning. In this sentence, the speaker believes that the occurrence in P will be realized in the near future and therefore the speaker expresses a request in Q. Since *tara* implies a high degree of subjectivity, it can be used with sentences expressing commands, requests and so forth.

In the Thai language *thâa*, which is usually used to express hypothetical meaning, can be used to express the meaning of temporal when used together with *lææw* (which denotes the meaning of completion). When denoting temporal meaning, *thâa* is optional.

Sentence (3) indicates that at the moment of utterance, the speaker knows P is true and it occurred in the past which was an unexpected event. However, since such a sentence expresses an occurrence in the past which can be replaced by *toki* (when), it is included in the temporal category in this study. In Japanese, *tara* and *to* can be used with no significant difference. In Thai, *mûaa* and *phɔɔ* are used with different meanings.

In the case of sentence (4), the action of opening the window in P and the discovery in Q occur in an instant. Thus, *phɔɔ* is used instead of *tɔɔn* and *mûaa*. As mentioned previously, Panthumetha (1984) explains the meaning of *mûaa*, that it denotes the occurrences in P and Q taking place at the same time. However, this does not imply that the two occurrences happen in an instant. (Nakagawa p.114) The meaning of sentence (3) is ambiguous; it could be that meeting Mr. Yamada took place right after having arrived in Tokyo or took place any time during my stay in Tokyo. Therefore *mûaa* and can be used but not *phɔɔ* since *phɔɔ* denotes merely an instant occurrences of P and Q. In sentence (8), the speaker expresses the occurrences in P and Q which occurred in an instant; therefore, *to* and *phɔɔ* are used in Japanese and Thai respectively. See Fig. 4

**Fig. 4:** The logical constructions of temporal modality

Conditional Sentence	Conditional Expressions	P	Q	Meaning
Japanese	<i>Tara</i>	t	t	temporal
	<i>Tara, to</i>	t	t	past event : discovery
	<i>to</i>	t	t	past event: instant
Thai	<i>thâa/hàak...lææw</i>	t	t	temporal
	<i>mûaa/tɔɔn...dooy baŋ-ɔɔn</i>	t	t	past event: discovery -instant
	<i>phɔɔ</i>	t	t	past event : discovery +instant

**c) Hypothetical meaning**

At the moment of utterance, the speaker knows that it is possible that P would be realized or the speaker knows that it is impossible that P would be realized. Look at the following sentences:

- (1) Jikan ga at *tara/ ba*, sentorea kuukoo e kengaku ni ikitai desu ne.  
If I have time, I would like to go to see Centrair Airport.
- (1)' *thâa* mii wee-laa yàak pay thîaaw sà-năam-bin sen-thrôo-ææ ná.
- (9) Hayaku okinai *to* maniwanao yo.  
If you don't get up early, you won't be in time.
- (9)' *thâa mây rîp tuuun kôo cà mây than ná.*
- (10) motto benkyoo sure*ba*, seiseki ga agaru deshoo.  
If you study harder, your grade would probably be better.
- (10)' *thâa / hàak / muâa* thəə khà-yăn riaan kwàa ní khán-ææn khonj cà dii khûn.
- (11) Yamada san ga dekirunara, watashi mo dekiru.  
If Mr. Yamada can do it, I can do it, too..
- (11)' *thâa / muâa* khun yaa -maa-da tham-dây chăn kôo tham-dây.
- (12) Edojidai ni umarete ireba, Tokugawa ieyasu ni aeta kamoshirenai.  
If I were born in the Edo era, I might have been able to see Ieyasu Tokugawa.
- (12)' *thâa / hàak chă*n kəət nay sà-măy ee-dôo chăn àat cà mii oo-kàat phóp kàp too-kù-ŋaa-wâa ii-ee-yaa-sú kôo dâ.

The logical constructions of sentence(1) and (9)~(12) can be explained as follows: The speaker is not certain that P will be realized, but if it is realized, then Q will occur. In Japanese *ba* is used when the speaker wants to express formality.

In sentence (9), The speaker is not certain that P will be realized, in case it is realized, Q will occur and usually in an undesirable result.

In sentence (10), the speaker utters a sentence expressing logical hypothetical relation between P and Q. Usually, when Q is a desirable result, *ba* will be used in Japanese while *thâa*, *hàak* and *muâa* can be used freely.

In sentence (11) in both Japanese and Thai, the speaker utters the sentence after having learned the new information from the listener. The speaker expresses the hypothetical attitude towards the information just learned from the listener implying the meaning that “if what has been told is true, then Q will occur”.

Sentence (12), the speaker knows that P is not true and Q would never be realized. The logical construction of the hypothetical modality can be summarized in Fig. 5.

**Fig. 5:** *The logical constructions of hypothetical modality*

Conditional Sentence	Conditional Expressions	P	Q	Meaning
<b>Japanese</b>	<i>ba</i>	f	f	hypothetical, possible, desirable result, formality
	<i>to</i>	f	f	hypothetical, possible expressing undesirable result
	<i>tara</i>	f	f	hypothetical, possible
	<i>nara</i>	f	f	hypothetical towards information, possible
	<i>ba,to,tara,nara</i>	f	f	hypothetical, impossible
<b>Thai</b>	<i>thâa,hàak</i>	f	f	hypothetical, possible
	<i>hàak</i>	f	f	hypothetical possible, expressing formality
	<i>thâa,hàak</i>	f	f	hypothetical, impossible
	<i>mûaa</i>	f	f	hypothetical towards information, possible

## 5. Conclusion

As illustrated in the examples above, it can be concluded that in explaining Japanese and Thai conditional expressions, it is crucial to examine the mental attitude of the speaker at the moment of utterance towards the realization of P in the domain of realis and irrealis. From this, one can know the semantic characteristics of each expression that can be appropriately used for the suitable conditional sentence to fit its logical construction. The findings of the study of the logical constructions of conditional sentences and the functions of the conditional expressions are as follows:

- 1) In both Japanese and Thai, conditional expressions in the same prototype; namely causal prototype, temporal prototype and hypothetical prototype have different nuances and functions
- 2) In Japanese *to* has a wide range of usage while in Thai language *thâa* is used widely with different meanings.
- 3) *tara* in Japanese and *thâa* in Thai share the similarity in that they both express hypothetical as well as temporal meanings. Besides, *to* in Japanese is similar to *phoo* in Thai in many aspects; they are used to combine two events that occur in an instant and both share the same feature in expressing causal relation of P and Q.
- 4) *ba* in Japanese is similar to *hàak* in Thai as expressing formality.
- 5) *nara* and *mûaa* express hypothetical meaning towards the information given by the listener of the conversation.
- 6) *to*, *tara* in Japanese is used in the past event and it expresses the meaning of



discovery an unexpected event. In Thai, *phɔɔ* is used with the same meaning. However, unlike *to* and *tara* in Japanese, *phɔɔ* is used in the case of instant occurrences only. When it is a discovery and the two events in P and Q do not occur in an instant, either *mûaa...dooy baŋ-æn* or *tɔɔn...dooy baŋ-æn* is used.

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