The Syntactic and Functional Structures of Intonation Unit in Thai*

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1. Introduction.

In natural speech, utterances are produced in chunks. This utterance chunk is often accompanied by characteristic prosodic features, such as initial pitch reset, final vowel lengthening, initial (or post) pauses, and steady declination in pitch over time. This chunk, though fuzzy at times in naturalistic data, is more often than not salient perceptually and has been identified variously as "tone unit", "breath group," "intonation group," and "intonation unit." We adopt the term, "intonation unit" (IU henceforth) here, because it has been most strongly associated with the research tradition that analyzes naturally occurring discourse rather than made up data in the literature (Chafe 1987; Chafe 1994, Du Bois 1993).

IUs have both syntactic and functional structures. Syntactically, IUs may correspond to a clause, phrase, or lexical item. Functionally, they expresses ideational content, textural coherence, interpersonal concerns, and other aspects of communication. One theoretical issue that has arisen in IU research is the relationship between the syntactic and functional structures of IU. For example, it has been found that Japanese speakers use phrasal IUs more often than English speakers (Iwasaki 1993). A typical phrasal Japanese IU contains both an ideational component and interpersonal component, the latter of which is expressed by an array of pragmatic particles. It is interesting from a typological point of view, then, to examine if Thai speakers resort to the phrasal IU strategy since Thai also has a mechanism to encode the interpersonal function through similar pragmatic particles. This is the first question I ask in this paper.

The second question I pose is whether both syntactic and functional structures of Thai IUs are constant across discourse genres. This question is important since such an inter-genre comparison will discriminate the influence of the cognitive pressure from social pressure in the formation of IUs. In this study, I compare three sets of oral discourse, which are different in terms of setting (experimental or casual) and purpose (informing or sharing information, or chatting), as well as content. Features that appear differently across the three data sets, are something language users control according to genre difference, while those that do not change may reflect something that a speaker does not have conscious control of, and may reflect cognitive constraint imposed on the language user.

2. The Data

The three sets of data used for this research represent three different genres of spoken discourse. The first data set, "Pear Story" narratives, were solicited in an experimental setting from speakers who have seen a short silent film "Pear Story" (Chafe 1980). In this story a young boy on a bicycle steals a basketfull of

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pears from a man who is picking pears from a pear tree. The boy falls off the bike when he sees a girl on another bike coming from the opposite direction. Three boys show up and help the little boy, who gives pears to them in return. The three boys walk past the pear picker, who looks at them suspiciously. After having seen the film, a subject is asked to retell the story in front of the interviewer, who is supposed to have not seen the film.

The second data set, "Earthquake," is a conversation between two young female students, who talk about their experiences in and after the earthquake which hit Los Angeles in January of 1994. The two participants met for the first time at the time of conversation. The setting is not formal and the goal is to share their experiences. In the segment analyzed in the present paper, they talk about the damage, first impression, and friends who suffered various sorts of damage, and give a description of Americans' reaction to the disaster. They not only report what has happened but also evaluate what they have experienced.

The third data set, "Students," is an informal conversation between two close college students. The setting is extremely casual, and as such there is no clear goal of conversation except to maintain the friendship. In the portion analyzed here, they talk about how they missed each other right before the conversation, indicating where they have been, who they have seen, and what they have done, and also what happened to them the previous night after they parted.

In order to make a reasonable comparison, I analyzed a similar number of IUs in each data set as shown below. Since one "Pear Story" narrative is short, four different narratives were combined. Also in Earthquake and Students, there are more IUs which are non-substantial (e.g., backchannels and laughter tokens), so the initial number of IUs taken from these data sets are larger than that from "Pear Story" narratives.

Three "Pear Story" narratives (Pear)	255 IUs
Earthquake (EQ)	300 IUs
Students (ST)	300 IUs

3. Analysis of Syntactic Structure

For syntactic analysis, I used the following five categories: Simplex clause, Complex clause, Part of clause, Isolated word and phrase, and Others. The result of this analysis will follow the explanations of each syntactic type.

3.1. Definitions of different syntactic structures

<u>Simplex clauses (SC)</u> contain minimally an overt predicate. One or more argument(s) or adjunct(s) without clausal modification may appear. Intransitive verbs¹ are likely to appear with their subject noun phrase (often with an inanimate referent) as in (1).

Though it is not our major concern in the present paper, it should be noted that SCs may be classified according to the type of predicate. No a priori classification of a predicate is given, but its categorization is determined by the context in which a predicate appears. This sensitivity is necessary for Thai, in which many verbs take the same form for both transitive and intransitive senses. For example, hàw bark' is an intransitive verb in man hàw "It barked," but structurally is a transitive verb in man hàw khon "It barked (at) people." Actual situations are more complex than this since non-overt arguments abound in Thai. Thus, hàw in man hàw in some cases should be considered as a transitive verb if the situation clearly demands that the direct object be associated with the verb.

(1) khỏon lon maa léew (EQ 13)² thing down come ASP

"Things fell off already."

Transitive verbs, on the other hand, are usually accompanied by the overt direct object noun phrase but not the subject noun phrase (Du Bois). Thus (2) is a typical transitive clause, while (3) is unusual. However, both are SCs.

- (2) kamlang kèp pŏnlamáay (PS #14:3)
 ASP collect fruits "(He) is collecting fruits."
- (3) phèan kawiii kô sĕu sterio maa (EQ 173) friend Korean HP buy stereo ASP "(My) Korean friend had bought a stereo."

<u>Complex clauses (CC)</u> are of four types. Classification into subtypes requires a theory which is based on a careful analysis of clause structure. The following classification should be regarded as tentative.

CC1: Paratactic construction: This construction combines two (or more) simple clauses paratactically. The two (or more) events depicted in this construction are relatively independent of each other, as evidenced by different subjects, aspectual markings, polarities associated with different clauses, and/or an intervening conjunction. The following two serve as examples.

- (4) yang noon mây lúu lêan (EQ:4)
 still sleep NEG know thing
 "(I) was still sleeping (and) didn't know (about the earthquake)."
- (5) mây chây nâŋ tố rêck tẻ ?ûm pay khâw hôŋ náam ŋay (ST:25) NEG right sit desk first but I go enter bathroom PP "No, I was sitting on the first desk, but I went into the restroom."

CC2: Serial construction: The serial construction is similar to paratactic construction, but what is expressed in this construction is conceived as one event. From a structural point of view, this means that the two serialized verbs are not independently marked with aspectual and other verbal information. Causative, passive and purpose constructions are considered as serial constructions. However, other highly grammaticalized serialization which indicates, for example, directional, aspectual and other information is not considered as serial construction.

- (6) dəən kin maa kan (Pear #16:60) walk eat come together "(They) were walking towards (him) together eating (pears)."
- (7) 26 dəən klap pay phit mòt léew (ST:263) oh walk return go turn-off all ASP "Oh, (they) returned and turned off everything."

Glosses used for Thai examples are as follows: ASP (aspect marker), C (complementizer), EMPH (emphasis particle), HP (highlighting particle), NEG (negative), PP (pragmatic particle)

- (CC3) Hypotactic construction: This construction consists of a dependent (adverbial) clause and the main clause. In some cases a dependent clause is marked with an overt subordinator such as welaa 'when' or thâa 'if.' In others, the main clause is introduced by the particle kô.
- (8) thầa ?alay kèat khên nhi kháw lấpphit chôp từa ?een nhi bèp (EQ 130) if something happen PP they be responsible self PP like "If something happens, they would be responsible themselves."
- (9) kháw kô maa tùat kô mây mii ?alay (EQ 94) they HP come investigate HP NEG have something "Though they came to check, there was nothing."
- (CC4) Complement and relative constructions: Complement construction is a construction with a verb which takes the complement, often marked by a complementizer waa or thii.
- (10) kháw saŋkèet hěn wâa man hǎay pay (Pear #16:67) he notice see C it disappear go "He notices that it has disappeared."
- (11) kô bòok wâa hǐw náam (ST 112) HP tell C thirsty "So (I) told (her) that I was thirsty."

Sometimes a complementizer does not appear as in (12) below.³

(12) kháw bòok Yùm yùu roon ?ahǎan nè (ST 106) he say Um stay dining hall PP "He said Um was at the dining hall."

A relative clause is marked with *thii*. This construction appears often as part of a simplex or complex clause. The next example shows a case where the subject noun phrase is relativized in a simplex clause.

(13) khon thii kamlan kèp phonlamáay yan yùu bon tônmáay (Pear #14:17) person C ASP collect fruits still stay up tree "The man who is collecting fruits is still up in the tree."

<u>Part of a clause</u>: An IU is recognized as part of a clause when it combines with the next IU to create a complete clause. If the second IU in this case can be considered independent, then it is coded as SC or CC.

(14) (EQ) 57 mây hěn NEG see

58 mii ?alay.. nâa ca: tòkcay ?alay 1əəy have something induce ASP surprise something EMPH

"I don't see

 $^{^3}$ There is a rather frequent appearance of IUs which end with waa. Such IUs are classified as a simplex clause.

anything that are surprising at all."

An IU is also considered as part of a clause when it is the second part of a serial construction following the first part, or when it is a prepositional phrase which accompanies a verb in the preceding IU. The next is of the second type.

(15) (EO)

97 chây kháw bèp ?aw khon ?òɔk maa yes they like take thing out come

98 nôok têk một loạy outside building all EMPH

"Yes, they took out everything from the building."

<u>Words and phrases</u>: Isolated words and phrases which are not part of a clause are classified as one category.

Others: In this category are included backchannel expressions, reactive tokens, fragmental IUs, laughter tokens and other miscellaneous tokens.

3.2. Result of syntactic analysis

The result of syntactic analysis is shown in Table 1. The total number of IUs is greater than the actual number of IUs in each data set because some IUs are coded for two different categories (e.g., it is coded as SC and C4 if an IU is a simplex clause containing a relative clause.)

	SC	CC1	CC2	CC3	CC4	PC	W	Oth	Ttl
Pear	150	9	37	20	7	18	7	23	271
	55.3%	3.3%	13.6%	7.3%*	2.5%	5.9%	2.5%	8.4%	100%
EQ	142	12	17	12	7	23	18	72	303
	48.8%	3.9%	5.6%	3.9%	2.3%	7.5%	5.9%	23.7%	100%
ST	155	12	15	18	8	9	5	81	303
	51.5%	3.9%	4.9%	5.9%	2.6%	2.9%	1.4%	26.7%	100%
Total	447	33	69	50	22	50	30	176	877
	50.9%	3.7%	7.8%	5.7%	2.8%	5.7%	3.4%	20.0%	100%

[Table 1] Syntactic structure of IUs in the three data sets

One noticeable trend in Table 1 is the higher frequency of serial construction (CC2) in Pear compared to the other two data sets. This is perhaps due to the object of description in Pear, which consists of many temporally sequenced actions by the people in the story. Another point of interest is the higher frequency of the "Other" category in EQ and ST compared to Pear. This is because EQ and ST are interactive conversations and are comprised of many tokens of backchannel expressions, reactive tokens, and laughter tokens. Pear, on the other hand, being a monologue, does not contain many such IUs.

In the following discussion, I will examine only SC, CC and PC (i.e., substantive IUs). Table 2 shows the frequency of these substantive IUs. In this table, different types of CCs are combined as one.

	SC	CC	PC	Total
Pear	150 (61.4 %)	73 (29.9 %)	21 (8.7 %)	244 (100%)
EQ	142 (66.6 %)	48 (22.5 %)	23 (10.9 %)	213 (100%)
ST	155 (71.4 %)	53 (24.4 %)	9 (4.2 %)	217 (100%)

[Table 2] Distribution of SC, CC and PC in the three data sets

The pattern of distribution is very similar among the three data sets with SC being the most favored type of IU. We will come back to this point later.

4. Analysis on Functional Components

For functional component analysis, I used the following four categories: Ideational component (ID), Text-coherence component (CO), Interpersonal component (IT), and regulatory component (RG). The first three categories have been identified as metafunctions of language by Halliday (1985). Though Halliday maintains that these functions do not have direct correlation to forms, it is to some extent possible to identify the function of different linguistic expressions (Iwasaki 1993). The last functional component (RG) corresponds partially to Chafe (1994)'s notion of regulatory IU. Explanations of each functional component type is in order.

<u>Ideational component (ID)</u>: The ideational functional component sketches out the image of realities and ideas as perceived by the speaker.

Text-coherence component (CO): This function connects one part of a discourse to another (anaphoric and cataphoric functions) or points to an item in the speech context (exophoric function). (See Halliday and Hasan 1976.) I identify as lexical items of cohesion in Thai the highlighting particle, kb, and conjunctives, such as phrb 'because' and thâa 'if.'

Interpersonal component (IT): Some lexical items indicate sensitivity towards the addressee in the communication process. In English, such phrases as "y'know" or "let me tell you" serve this function. In Thai specialized lexical items and expressions attached to utterances carry out this task, which include speech level markers (e.g., khá, khráp), pragmatic particles (e.g., ná, nā, ŋay), and other expressions such as réə 'really?' chây mây 'right?' Also included in this category are backchannel expressions and reactive tokens (e.g., ciŋ réə 'Is that so?')

Regulatory component (RG): This component shows a speaker's orientation towards what he is expressing. Some tokens express speaker's validation, hedges, exclamation, and emphasis on the message. Some examples of RG are as follows.

Validation: - mág ('maybe'), 13k ('on the contrary'), mây 1úu ('not sure')

Hedges: bèep ('like'), yannia ('like this') Exclamation: 260y, 2úy, 2aw, 2e, háy

Emphasis: 122y

Though boundaries between the above mentioned items, especially between [IT] and [RG], are not always straightforward (Chafe 1994:61), and tokens listed as examples in each category may cross boundaries, discourse environments are often helpful to sort out tokens according to the categories proposed here.

The result of Functional Component analysis is summarized in Table 3. Since the IUs under consideration are substantive IUs (i.e., SC, CC or PC), they all contain by definition the component [ID].

	Pear	EQ	ST	Total
ID	80	88	78	246
ID CO	92	45	30	167
ID IT	18	17	51	86
ID RG	7	38	24	69
ID CO IT	19	4	21	44
ID CO RG	6	15	2	23
ID IT RG	6	1	8	15
ID CO IT RG	- 4-7	2		2
Total	228	210	214	652

[Table 3] Functional component analysis

Table 3 shows a skewed distribution of IU types according to the number of functions coded. In order to see this trend more clearly, IUs were categorized according to the number of functional components coded in one IU. See Table 4 below.

	Pear	EQ	ST	Total
1 Component	80	88	78	246 (37.7%)
2 Components	117	100	105	322 (49.3%)
3 Components	31	20	31	82 (12.5%)
4 Components	0	2	0	2 (0.5%)
Total	228	210	214	652 (100%)

[Table 4] The number of Functional components coded in one IU

Tables 3 and 4 show that the favored number of functional components expressed in one IU in all three data sets is two (i.e., [ID CO], [ID IT] or [ID RG]). The second most favored number is one, which is always [ID]. That is, a speaker either produces [ID] or adds one additional message to [ID] in each IU. These two types of IU comprise 87.0 % of all IUs under consideration. IUs containing three components are rare, and those containing all four are almost non-existent.

5. Discussion

With the findings shown above, we are ready to answer the two questions posed at the outset of the paper. Concerning the syntactic structure of IU, we learned that Thai IUs tend to be Simplex clauses like English. According to Table 2 we saw earlier Simplex clauses occupy 61.4% (Pear), 66.6% (EQ) and 71.4%

(ST). Chafe (1994:63) reports that about 60% of substantive IUs in his English data are single-clauses, or our Simplex clauses. Since this simplex clausal tendency is not influenced by different discourse types, it may suggest that the tendency is a result of the cognitively induced principle of language. Chafe Chafe (1987:36-7) suggests that there is a constraint which may be called "one new concept at a time" constraint, which restricts the amount of new information coded in one IU. Furthermore, typically new information expressed in the predicate is anchored to given information (or active concept) expressed in the subject of a clause. It will be interesting how this system applies to Thai, which does not require the overt subject in a clause. We will not, however, pursue this point any further in this paper.

The question about the syntactic structure of IU was proposed because of the relatively large inventory of pragmatic particles both in Thai and Japanese. However, the results show that Thai IUs are not similar to Japanese IUs in this respect. It is instructive at this point to compare the structure of Thai IU with that

of Japanese IU.

(17)

Pear #14

(16)	(from <i>BOMBING</i>) ⁴ atashi wa nee* I TOP PP	• • • • • • • • • • • • • • • • • • •	I, y'know.
2	uchi-de kiita no ne? home-LOC hear:PAST SE PP		heard at home, y'know.
3	sono are wa ne? that that one TOP PP		that thing, y'know.
4	hoosoo wa ne? broadcast TOP PP	**	that broadcast, y'know.
5	<i>kazoku-de</i> . family-with		with my family.

"I heard that broadcast at home with my family."

In the above excerpt, the speaker adds a pragmatic particle, ne or nee, to IUs 1 through 4. The function of these particles is to solicit involvement of the addressee in the communication process. Like Japanese, Thai has many pragmatic particles and ná seems very close functionally to ne/nee in the above Japanese data. Thus it was suspected that Thai speakers would produce many phrasal IUs. In fact, there are some instances in which Thai IUs present a similar pattern to (16) above. Consider (17) and (18) below.

31	?ây takrâa phŏnlamáay náa oh basket fruits PP	the fruit basket, y'know,
32	man kɔ̃ lòn mòt ləəy it HP fall all EMPH	it fell down completely.
(18) 64	Pear #14 dèk săam khon nia child three person PP	the three boys, y'know,

⁴ Glosses used in the Japanese sample are: LOC (locative), PP (pragmatic particle), SE (sentence extension), and TOP (topic). Intonations are indicated by /*/ (falling intonation), /?/ (rising intonation) and // (lowering intonation).

65 thuu phonlamaay kin yuu carry fruits eat ASP

were eating the fruits.

However, this type of IU production is extremely rare in the present data. While one study shows that over 30% of Japanese IUs are of phrasal type (Iwasaki 1993), Table 2 earlier shows that only 4.2% (ST) to 10.9% (EQ) are such type of IU. Moreover, even when an IU takes the form of PC (Part of a clause), it usually does not contain the [IT] component as the following Table shows.

	Pear	EQ	ST	Total
# of PC	21	23	9	53
# of PC containing [IT]	6	1	0	7

[Table 5] The number of PC and the number of PC containing [IT]

Only 7 out of 53 of phrasal IUs contain the interactional component. More typical patterns surrounding PC are shown in examples below. (Some examples were shown earlier.)

(19) (ST)

270 piin khâw bâan I climbed to enter the house

climb enter house

271 sǒon rôop twice.

(20) (EQ)

chây khấw bèp ?aw khôon ?bok maa "Right, they took out everything yes they like take thing out come

98 nôok tùk một loạy * out of the building."
outside building all EMPH

In (19) and (20) above, information is incrementally added to the information expressed in the previous IU. Quantifiers as in (19) and prepositional phrases as in (20) are often found in this type of IU sequence. In (21) and (22) below, the motivation of PC seems to reflect the cognitive process of word search.

(21) (Pear #14)
37 man kôo chủay kan kèp "They helped (the boy) to collect they HP help together collect ... phonlamaay say takraa hay fruits put basket BEN "They helped (the boy) to collect fruits into the basket for (him)."

(22) (EQ)

111 ... pen .. měan pen tèk bèp be similar be building like

112 ... khởn ?ofis phùak mòo ?alay yànnia of office group doctor something like that

"(It')s like, (it')s like a building of doctors' offices, something like that."

When a speaker uses a pragmatic particle, he usually put it at the end of a clause. (See earlier examples (5) and (12).)

The fact that Thai speakers do not employ many phrasal IUs suggests that the mere presence of pragmatic particles in a language does not induce the phrasal IU strategy. What influences the different patterns of IU in Japanese and Thai seems to reside in the way in which grammatical relation are expressed in a clause. In Japanese, grammatical relations are marked on the noun by means of grammatical and semantic particles (Shibatani personal communication), whereas in Thai they are expressed mainly through word order. In the latter type of language, separation of arguments and adjuncts from the predicate may produce confusion. Since in English grammatical relations are expressed through word order as well as the subject-verb agreement, the unity of clause may be even stronger.⁵

The second question I posed at the outset of the paper was whether or not both syntactic and functional structures of Thai IUs are constant through discourse genres. Syntactically, as we have already discussed, Simplex clause is the most favored in all the data sets. Functionally, as we briefly mentioned, the number of functions coded in one IU is similar (2 or 1). However, though the bi-component IU is the most favorite type across the three data sets, the composition of the two component, is very different among them. Tables 6 (part taken from Table 1) below shows this point.

	Pear	EQ	ST	Total
ID CO	92 ←	45 ←	30	167
ID IT	18	17	51 ←	86
ID RG	7	38 ←	24	69

[Table 6] The number of different bi-component IUs

Among the three types of bi-component IU, [ID CO] is most favored in Pear, [ID CO] and [ID RG] are favored in EQ, and [ID IT] is favored in ST. The same point is repeated in Table 7, which compares the number of IUs which contain each of the three functional components regardless of the total number of components in an IU.

	Pear (228 IUs)	EQ (210 IUs)	ST (214 IUs)
CO+	117 (51.3%)	66 (31.4%)	53 (24.7%)
IT +	43 (18.8%)	24 (11.4%)	80 (37.3%)
RG +	19 (8.3%)	56 (26.6%)	34 (15.8%)

[Table 7] The number of IUs containing CO, IT or RG

⁵ Primacy of grammatical coding influencing the phrasal IU strategy is supported in Korean, another language which codes grammatical relations on the noun phrase with particles. Even though Korean does not have equivalents to Japanese pragmatic particles, phrasal strategies are employed (Sung-ock Sohn, personal communication). Politeness particle yo in Korean is not considered a pragmatic particle, but it works in a similar way to Japanese pragmatic particle, ne in the production of IU. This suggests that the presence of grammatical and semantic particles is a stronger factor than pragmatic particles in inducing phrasal structure. However, more rigorous investigation in this language is needed to confirm this hypothesis.

This discrepancy may be understood if we consider the nature of each data set carefully. Recall that Pear is a retelling of a story presented visually. Many actions and events happen one after another in the story. The speaker's task is to relate these actions and events with each other. Thus, the [CO] component is extremely important. However, the [RG] component, which includes hedges and exclamations, should be avoided in this type of discourse because it downplays the objective accuracy in the report. (This attitude of reporting may be culturally different. See Tannen (1980).) Also, Pear is basically a monologue, and there is no need to use an interpersonal component, thereby involving an addressee.

Like Pear, EQ also contains many IUs with [CO] component since this discourse consists of a series of events and actions that took place during and after the earthquake. The difference, however, is observable in the frequency of [RG] in EQ. This is because unlike the objective report demanded for Pear, with tokens of exclamation (260y, 26y, 26aw, 2e, hey) and emphasis (199y), EQ reveals personal feelings and an evaluation of events reported. Also noticeable in EQ is frequent uses of the so-called hedges (bèep 'like,' yangia 'like this'), which mark

the informal nature of the conversation. The following is one example.

(23) (EQ 46) kháw bèp tuuntên mâak they like nervous a lot

"They were like really nervous."

It is [IT] that is most frequent among the three components in ST because the two friends are allowed to freely display their interactive stances in this very casual conversation.

(24) kô .. nâŋ ?à? (ST 95) HP sit PP "So I was sitting (there)!"

(25)... hôŋ núun nà? (ST 44) room over there PP "That room over there!"

Some tokens of [IT] mark mutual sharedness of information. A speaker can openly demand the addressee who is close to him to accept his reasoning or recall specific information in casual conversation, which may not be appropriate if the addressee is not a close friend

- (26) phó pên khâw pay nay hôn chây plàw là? (ST 42) because Apple enter go in room right not PP "Because Apple went into the room, isn't that right?"
- (27) mây núk wâa cà klàp yen gay (ST 267)
 NEG think C ASP return late PP
 "(I) didn't think that (I) would return late, right?"
- Conclusion

A typical IU in Thai is a Simplex clause with two functional components. These tendencies may be general across languages since Simplex clausal tendency is observed in English, and the tendency of bi-functional component is observed in Japanese. Moreover, these tendencies are common across the discourse types we examined. It is possible then that these tendencies reflect fundamental human

linguistic activities. Further cross-language, cross-genre comparisons will reveal more about the cognitive and social pressures that shape IUs in human language.

A specific typological suggestion was made regarding the frequency of Simplex clause over Part of a clause in Thai as compared to in Japanese. Thai speakers put pragmatic particles at the end of a clause and do not readily break up a clause to put in pragmatic particle, while Japanese speakers insert a pragmatic particle after a phrase and put a juncture after such an IU. The different strategies found between Thai and Japanese are related to how grammatical relations are coded in the two languages. Since noun phrases are marked for grammatical relations in Japanese, they are more independent than noun phrases in Thai, whose grammatical relation is coded through word order. This suggests a strong connection between grammar of a language and the shape of the IU in that language. I hope that the research presented here has opened an opportunity to explore the relationship between grammar and language use from a crosslinguistic perspective.

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