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Dr. Lai Yee Win

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The main purpose of this paper is to contrast the realizations of elements – processes, participant roles and circumstances in the English and Myanmar transitivity configurations following the network developed within the framework of Systemic Functional Linguistics. It is found that: English and Myanmar show similarity in the realizations of processes as verbal groups, participant roles as nominal groups, nominalization, adverbial groups, prepositional phrases, embedded clauses, and circumstances as nominal groups, adverbial groups, or prepositional phrases. However, they differ in that processes are also realized by copulas and participant roles by adjective/adjective groups in English, while processes are also realized by compound verbs, reduplicated verbs, or attributive verbs and circumstances by qualifying reduplicated adverbs or embedded clauses in Myanmar. The findings are rooted in the functional and typological prominences of the two languages, which may further shed light on a new perspective on the research of transitivity system for Systemic Functional Linguistics. This study also makes an important contribution to further studies of contrasting the realizations of elements in the transitivity configurations of Myanmar and other languages.

Keywords: systemic functional linguistics, contrastive study, realizations, transitivity configurations, english, myanmar.

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Keywords: systemic functional linguistics, contrastive study, realizations, transitivity configurations, english, myanmar.

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I. INTRODUCTION

Many linguists and scholars are especially interested in the way how to treat meaning in grammar. According to Halliday's (1985, 1994/2000) functional grammar, there are three types of meaning conveyed by the clause, namely experiential meaning, interpersonal meaning and textual meaning. Among them, experiential meaning has to do with the ways how language represents our experience of the external world and the inner world of our thoughts and feelings through clauses. In other words, our experience of happening, doing, sensing, meaning, being and becoming are turned into meaning and into wording. This experiential meaning is realized through transitivity system comprising three main components: by process, participant(s) in the process and circumstance(s) associated with the process. In other words, transitivity system is the representation of the experience of the world as different types of processes.

In recent years, the contrastive studies of transitivity systems between/across languages have grown significantly as macro linguistics. The previous studies cover the comparison of transitivity systems in English and other languages – Spanish, Chinese and Vietnamese (Lavid and Arus, 2002; Yuli and Yushan, 2012; Phan and Nguyen, 2015; and the like). In the literature, there are a scant number of contrastive studies of English and Myanmar from the Systemic Functional perspective. This study aims to contrast the realizations of elements in English and Myanmar transitivity configurations focusing on He et al.'s (2017) version of the transitivity system of English and Lai Yee Win's (2021) transitivity system of Myanmar. Contrary to previous studies, this study adopts He et al.'s

(2017) modification of the English transitivity system rather than Halliday's because He et al. (2017) makes a much more detailed description of the transitivity system of English in the realization of participant roles and the classification of participants from circumstances than Halliday (1985, 1994/2000, 2004, 2014).

This study uses two main qualitative research methods: descriptive method and explanation of the findings from the transitivity analysis of different genres of English and Myanmar texts, especially novels and news reports. The transitivity analysis of Myanmar clauses is provided with a systematic description of Myanmar script, IPA phonetic transcription, glosses and a word for word English translation. Being an empirical study, this study predominantly deploys the qualitative method of contrastive analysis. The data used in the study are taken from authentic texts.

II. PREVIOUS STUDIES OF CONTRASTING TRANSITIVITY SYSTEMS BETWEEN/ACROSS LANGUAGES

So far there have been a growing number of studies on the descriptions of transitivity systems in world languages. However, the studies on typological studies on transitivity systems and their realizations across languages are scant (e.g. Caffarel et al., 2004). The transitivity systems of French, German, Japanese, Tagalog, Chinese, Vietnamese, Telugu and Pitjantjatjara are proposed by Caffarel (2004), Steiner and Teich (2004), Teruya (2004), Martin (2004),

Halliday and McDonald (2004), Thai (2004), Prakasam (2004) and Rose (2004) respectively in Caffarel, Martin, and Matthiessen (2004). It is suggested in Halliday (1985, 1994/2000) and Matthiessen (1995) that transitivity systems across languages simultaneously realize different domains of experience and different modes of participating in the process (Caffarel et al., 2004: 135).

Based on Halliday's six major processes, Yuli and Yushan (2012) conduct a comparative study of English and Chinese transitivity systems in order

to deepen the understanding towards the two languages from a new aspect and give insight on E-C translation. The findings of their research indicate that the six processes of the English and Chinese transitivity systems are semantically the same in E-C translation although there is process transfer in certain circumstances. It is obvious that the components and sentence structures of the verbal process, behavioral process and existential process of the two languages are typically the same, whereas the distinctions of the passive voice and habitual usages exist in the material process, mental process and relational process due to their complexities. Therefore, the former three processes can remain unchanged in E-C translation, while the latter ones can experience process transfer in E-C translation.

Lavid and Arus (2002) undertake a contrastive functional study of nuclear transitivity in English and Spanish by means of the application of the transitive/ergative distinction developed by Davidse (1992) to material processes, mental processes and relational processes in both English and Spanish. A model of nuclear transitivity consists of three simultaneous systems: (1) a system of agency which is concerned with the presence or absence of the feature Agent, (2) a system of process type which is concerned with the semantic type of process involved, and (3) a system of causation which is concerned with the variable of instigation. The transitive and ergative systems in English and Spanish possess different grammatical properties which are realized by different lexical verbs. There is the transitive/ergative distinction between the semantically related verbs of English and Spanish. In such cases, the same process is expressed transitively in one language and ergatively in the other.

Al-Janabi (2013) carries out a contrastive study of transitivity analysis in English and Arabic short narrative texts. He analyzes the processes of transitivity used in two narrative short texts of English and Arabic based on Halliday's theory of transitivity. He highlights the role of these processes in portraying the features of the characters in such literary texts. The findings and results of the analysis indicate that the processes

of transitivity are semantically the same in English and Arabic in spite of appearing in different frequency.

Kaffashi et al. (2015) conducts a contrastive study of English and Persian narrative texts in terms of manner of expressing of relational attributive clauses based on Halliday and Matthiessen (2004). Accordingly, it investigates the possible similarities and differences regarding three components of Halliday's "transitivity process", namely: the process, participants and circumstances based on a corpus of 400 clauses: 200 from English and 200 from Persian. There are some differences in manner of expressing, the position and number of participants, and the kind of processes.

Phan and Nguyen (2015) make a comparison between English and Vietnamese Behavioral Clauses from the perspective of Halliday's transitivity system. Based on a corpus of English and Vietnamese literary work of the late 20th century and the early 21st century, Phan and Nguyen (2015) explore the relations between human behavior and language and identify English and Vietnamese verbs that realize behavioral process in terms of descriptive method and functional analysis. Phan and Nguyen (2015) characterize four subtypes of behavioral processes: material-behavioral processes, verbal-behavioral processes, mental-behavioral processes and behavioral processes in English and Vietnamese literary genre within the systemic functional framework of Martin, Matthiessen and Painter (1997), Bloor and Bloor (1995) and Eggins (1994).

ĐẶNG THỊ CẨM NGỌC (2015) investigates the similarities and differences between the linguistic features of material processes in English and Vietnamese based on the total number of 1640 samples related to material processes from "Perfect Spy" by Larry Berman and its Vietnamese translational equivalent *Điệp Viên Hoàn Hảo* translated by Đỗ Hùng. Findings indicate that in some cases the obligatory Actor in English clauses is omitted in Vietnamese translated clauses and it is similar to Goal. Sometimes the absence of Actor or Goal will be

found out when being translated into Vietnamese. It is also investigated that the verbs in Material processes of English are translated into the Verbs of Relational processes of Vietnamese.

NGUYỄN PHAN CẨM TÚ (2011) carries out the comparative study of the semantic and syntactic features of participants in the processes in English and Vietnamese from the perspective of Halliday's transitivity system. Descriptive and comparative methods are used in her study. The results of her study show that English and Vietnamese have the same kinds of process with the same numbers of participant in each. They are realized by the same configuration: *Participant + Process + (Participant) + (Participant)*.

Most of these contrastive studies between languages mentioned above are conducted in terms of Halliday's (1985, 1994/2000, 2004, 2014), Matthiessen's (1995) and Davidse's (1992) theories of transitivity. These theories of transitivity adopted in previous contrastive studies cannot make a specification of process types and participant roles. To fill this gap, the present study will adopt He et al.'s (2017) modified version of the transitivity system of English based on Halliday's (1985, 1994/2000, 2004, 2014) and Fawcett's (1980, 1987, forthcoming) hypotheses about transitivity. Based on He et al.'s (2017) transitivity system of English and Lai Yee Win's (2021) transitivity system of Myanmar, this study contrasts the realizations of processes, participant roles and circumstances in English and Myanmar transitivity configurations.

III. COMPARISON OF REALIZATIONS OF PROCESSES, PARTICIPANT ROLES AND CIRCUMSTANCES IN ENGLISH AND MYANMAR TRANSITIVITY CONFIGURATIONS

Transitivity system construes our experience of the world around us and inside us. It shows the experiential meanings of the language at the semantics level. According to Halliday and Matthiessen (2004: 175), there are three main components in transitivity structures. They are a process unfolding through time, the participants

involved in the process and circumstances associated with the process. In the semantic configuration, the process is the pivotal element and participants are inherent in the process. However, circumstantial elements are optional in the clause; they are not directly involved in the process (Halliday and Matthiessen 2004: 176). In the MOOD grammar processes function as Predicator realized by a verbal group; participants function as Subject or Complement, and they are structurally realized by nominal groups; circumstances map onto Adjuncts realized by adverbial groups or prepositional phrases. Halliday and Matthiessen (2004: 177) express the typical experiential functions of group and phrase classes as in Table 3-1.

Table 3-1: Typical experiential functions of group and phrase classes
(Halliday and Matthiessen 2004: 177)

| Type of Element | Typically Realized By |
|-----------------|---|
| process | verbal group |
| participant | nominal group |
| circumstance | adverbial group or prepositional phrase |

3.1 Comparison of realizations of processes in English and Myanmar transitivity configurations

As the transitivity system has been defined as the reflection of human experience, there is something in common in all languages. In the two languages studied in this study, it has been discovered that the main classifications of processes are similar. See Figure 3-2.

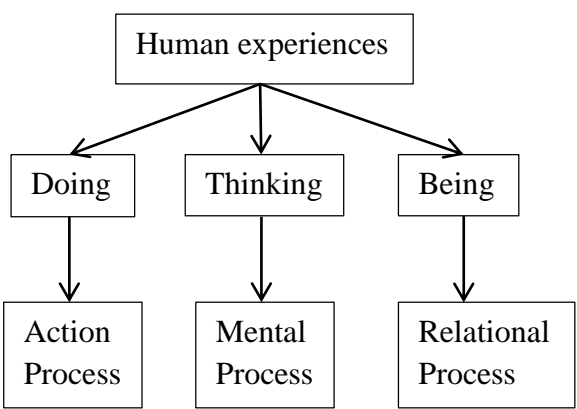


Figure 3-2: The transitivity processes represent universal human experiences

From Figure 3-2, it can be seen that human experiences can be divided into doing, thinking and being, which can be described by material, mental and relational processes respectively on the basis of Halliday’s model. However, in this study, the processes of doing are labeled as action processes rather than material processes following Fawcett (1980) and He (2022). Thus, it is observed that languages, though with large typological distinction, at a very general level, present relatively similar structures of types of processes, principally the three main processes with the aim of reflecting human activities universally. The action, mental and relational processes can be said to be universal due to the common feature of human beings: they do something; they think, feel and perceive, and they have relations with others. However, referring to the subdivision of each process, there occur clear differences. In this study, we can see the differences of realizations of processes in two languages. As it will be described in detail, in English, the mental processes are divided into three subtypes: perception, affection and cognition; the relational processes include three subtypes as attributive, identifying and symbolizing, while in Myanmar, the behavioral process is subsumed under the category of action process; the communicative process which is analogous to Halliday’s verbal process under the category of mental process, and the existential process under the category of relational process. Lai Yee Win (2021) claims that in Myanmar transitivity system, the action processes are categorized into four types: happening, doing,

creating and behaving; the mental processes into five categories: emotive, desiderative, perceptive, cognitive and communicative processes, and the relational processes into seven types: attributive, identifying, locational, directional, possessive, correlational and existential processes. The following will investigate similarities and differences in the English-Myanmar translation of processes. First of all, we will see the similarities and differences in realizations of action processes in English and Myanmar translated clauses.

3.1.1 Realizations of action processes in English and Myanmar transitivity configurations

English and Myanmar show the same potential realization of autonomous happening action

- (1) a. autonomous: happening action

Mg Pyone has died.

| Affected | Process |
|----------|---------|
|----------|---------|

- b. autonomous: happening action

မောင်ပြုံး ဆုံးရှာပြီ။

maunpyonn sonn-shar-bye.

Mg.Pyone die-COMP-PFV.DECL.SENTSUF

| Affected | Process |
|----------|---------|
|----------|---------|

‘Mg Pyone has died.’

‘Mg Pyone has died.’ However, there are some differences in realizations of influential happening action processes in English and Myanmar transitivity structures. The Myanmar autonomous happening action process clause (1b) is transformed into influential process (2b) by suffixing the causative marker -ငါး /zay/ to the happening process realized by the verb *die* which is influenced by an external instigator, the Agent. The Myanmar clause (2b) is translated into English with a change of lexical verb *kill* which realizes autonomous doing action process by

- (2) a. autonomous: doing action

Sunlight can kill germs.

| Agent | Process | Affected |
|-------|---------|----------|
|-------|---------|----------|

process as verbs concerning the change of a state or weather condition such as သေဆုံး /thaysonn/ ‘die’, ဖြစ်ပွား /phyitpwarr/ ‘happen/take place’, မြင့်တက် /myinttet/ ‘rise’, စတင် /satin/ ‘begin’, ပီးဆုံး /pyeesonn/ ‘finish/end’, ကျ /kya/, ရွာ /ywar/ ‘fall’, ပွင့် /pwint/ ‘open’, ကျိုး /kyoe/ ‘be broken’, တိုက် /taik/ ‘blow’, ဖြည့် /mye/ ‘ring’, and so on. For example, the English verb *die* realizes autonomous happening action process in English transitivity structure (1a). As shown by Example (1b), the Myanmar lexical verb ဆုံး /sonn/ which has the same semantic meaning as *die* in English realizes the same process of autonomous happening action in Myanmar transitivity structure.

changing the semantic process as in (2a) because an English autonomous happening action process like *Mg Pyone has died* does not alternate with an influential one such as *Someone has made Mg Pyone die*. Instead, we normally say *Someone has killed Mg Pyone* by changing the process in English although the Myanmar verb သေ /thay/ ‘die’ can be employed in both autonomous and influential happening action processes.

b. influential: happening action

နေရောင်ခြည်သည် ရောဂါပိုးများကို သေစေနိုင်သည်။
 nayyaunche-the yawgarpoe-myarr-go thay-zay-nain-the.
 sunlight-SBJMARK germ-PLMARK-OBJMARK die-CAUS-CAPAMOD.PRS-DECL.SENTSUF

| | | |
|-------|--------------|-----------|
| Agent | Af[[Affected | Process]] |
|-------|--------------|-----------|

‘Sunlight can make germs die.’

Autonomous doing action process realizes an action initiated by the Agent (He et al. 2017: 33). In some cases, that action can extend to the second participant, the Affected or the Range or the Manner. In an autonomous doing action process clause, there is a process of doing and a participant inherent in that process, the Agent realized by nom.gp-the/ga/hmar. When the second participant is involved in this process, it may be the Affected realized by nom.gp-go or the Range realized by nom.gp or the Manner realized by adv.gp. both English and Myanmar show the same potential of realization of autonomous doing action process as doing action verbs such as ထိုင် /htain/ ‘sit’, ဖတ် /phat/ ‘read’, ရိုက် /yaik/ ‘beat’, စား /sarr/ ‘eat’, သောက် /thauk/ ‘drink’, ခတ် /that/ ‘kill’, ဖျက်ဆီး /phyetsee/ ‘destroy’, ကစား /gazarr/ ‘play’, and so on. Autonomous doing action process can be conflated with another process such as autonomous directional

relational process, and become a compound process, i.e. the autonomous doing action and directional relational process. This compound process is realized by lexical verbs such as လှမ်းသလျှောက် /lannshauk/ ‘walk’, ဝေးဝေး /thwarr/ ‘go’, လာ /lar/ ‘come’, လှည့် /hlet/ ‘turn’, etc. in the same way in English and

Myanmar transitivity structures. Nevertheless, in English, there are some lexical verbs which have the same spellings but different semantic meanings to realize different processes. For example, the English verb *open* can realize both autonomous happening action process and autonomous doing action process as in (3a) and (3b). Contrary to English, in Myanmar transitivity structures, autonomous happening and doing action processes are realized by different lexical verbs: ပွင့် /pwint/ and ဖွင့် /phwint/ respectively as in (4a) and (4b).

(3) a. autonomous: happening action

Juana’s were open too. eyes

| | | |
|----------|---------|--|
| Affected | Process | |
|----------|---------|--|

b. autonomous: doing action

Kino opened his eyes in the darkness.

| | | | |
|-------|---------|----------|--------------|
| Agent | Process | Affected | Circumstance |
|-------|---------|----------|--------------|

(4) a. autonomous: happening action

ဟွာနာ၏ မျက်လုံးများလည်း ပွင့်နေပြီ။

hwarnar-i myetlonn-myarr-le pwint-naybye.

Juana-GEN eye-PLMARK- open-PFV.DECL.SENTSUF
 ADDCONN

| | |
|----------|---------|
| Affected | Process |
|----------|---------|

‘Juana’s eyes were open too.’

b. autonomous: doing action

ကီနိုသည် အမှောင်ထဲတွင် သူ၏ မျက်လုံးများကို ဖွင့်ကြည့်လိုက်၏။
keno-the Ahmaun-htetwin thue-i myetlonn-myarr- phwint-kyi-laiki.
go
Kino- dark-LOC 3SG- eye-PLMARK- open-look-
SBJMARK GEN OBJMARK PFV.DECL.SENTSUF

| | | | |
|-------|--------------|----------|---------|
| Agent | Circumstance | Affected | Process |
|-------|--------------|----------|---------|

‘Kino opened his eyes in the darkness.’

Similarly, the English verb *break* can realize both autonomous happening action process and autonomous doing action process as in (5a) and (5b). However, different lexical verbs realize these two processes in Myanmar translation from (5a) and (5b). As shown in examples (6a) and (6b), the lexical verbs ကွဲ /kwe/ and ခွဲ /khwe/ realize autonomous happening action process and autonomous doing action process respectively.

(5) a. autonomous: happening action

The glass broke

| | |
|----------|---------|
| Affected | Process |
|----------|---------|

b. autonomous: doing action

He broke the glass in anger.

| | | | |
|-------|---------|----------|--------------|
| Agent | Process | Affected | Circumstance |
|-------|---------|----------|--------------|

(6) a. autonomous: happening action

ဖန်ခွက် ကွဲသွားပြီ။
phankhwet kwe-thwarrbye.
glass break-PFV.DECL.SENTSUF

| | |
|----------|---------|
| Affected | Process |
|----------|---------|

‘The glass broke.’

b. autonomous: doing action

သူ ဖန်ခွက်ကို ဒေါသနှင့် ရိုက်ခွဲလိုက်၏။
thue phankhwet-go dawtha-hnint yaik-khwe-laiki
3SG.NOM glass-OBJMARK anger-COM hit-break-PFV.DECL.SENTSUF

| | | | |
|-------|----------|--------------|---------|
| Agent | Affected | Circumstance | Process |
|-------|----------|--------------|---------|

‘Kino opened his eyes in the darkness.’

The following examples (7) and (8) illustrate similarities and differences in realizations of influential doing action processes in English and Myanmar transitivity structures. As shown in examples (7a) and (7b), English and Myanmar show the same potential of realizations of the influential process and the doing action process influenced by an external instigator in spite of their different transitivity structures.

(7) a. influential: doing action

| | | | | | |
|-------|------------|-----------|---------|----------|-------------------|
| I | encouraged | her | to do | this job | for the Minister. |
| Agent | Process | Af[[Agent | Process | Affected | Circumstance]] |

b. influential: doing action

| | | | | | |
|-----------|-----------------|----------|----------|----------------|----------------------------|
| ကျွန်မ | သူ့ကို | ဒီအလုပ် | လုပ်ဖို့ | ဝန်ကြီးအတွက် | တိုက်တွန်းရတယ်။ |
| kyama | thu-go | de-aloke | loke- | wingyee-atwet | taiktunn-yade. |
| | | | phot | | |
| 1SG.F.NOM | 3SG- OBJMARK | DEM-job | do-INF | Minister-PURP | encourage- DECL.SENTSUF |
| Agent | Af[[Agent | Affected | Process | Circumstance]] | Process |

‘I encouraged her to do this job for the Minister.’ (Journal Kyaw Ma Ma Lay 1957: 55)

On the other hand, we can find out different realizations of influential process in examples (8a) and (8b). Contrary to English, influential process is realized by postverbs such as သေ /zay/ and ကြိုင်း /khainn/ in Myanmar transitivity structures.

(8) a. influential: doing action

| | | | | |
|-------|-------------------------|-----------|--------------------------|------------|
| I | asked | her | to clean | the floor. |
| Agent | Process: influential | Af[[Agent | Process: doing action | Affected]] |

b. influential: doing action

| | | | |
|-----------|-------------|----------|----------------------------|
| ကျွန်မ | သူ့ကို | ကြမ်း | တိုက်ခိုင်းခဲ့တယ်။ |
| kyama | thu-go | kyann | taik-khainn-khet-de. |
| 1SG.F.NOM | 3SG-OBJMARK | floor | clean-ask-PST-DECL.SENTSUF |
| Agent | Af[[Agent | Affected | Process]] |

‘I asked her to clean the floor.’

Autonomous creating action processes realize the experience of bringing objects into being (He et al. 2017: 39). These processes are realized by creative action verbs such as သွေး /mwaye:/ ‘give birth to’, သရုပ် /yaye:sat/ ‘compose’, ဖုတ် /phoke/ ‘bake’, သဆောက် /sauk/ ‘build’, တီထွင် /tehtwin/ ‘invent’, and so on in English and Myanmar transitivity structures. Consider the following examples.

(9) a autonomous: creating action

Ma gave birth to the at the time when I passed the first year at
Aye first university.
Phyu baby
son

| Age nt | Proc ess | Proce ss Exten sion | Proce ss Exten sion | Creat ed | Circumstance |
|-----------|-------------|------------------------------|------------------------------|-------------|--------------|
| | | | | | |

b autonomous: creating action

ကျွန် တက္ကသိုလ် ပထမနှစ် အောင် အချိန် မအေးဖြူ သားဦးက ဖွားမြင်သည်။
တော်စ် သည့် န် လေးကို
kyan takatho pahta aun=t ach maaye:p tharr- phwarmyi
or ma- hi ein hyue ue:- n-the.
hnit galaye:-
go
1SG university first- pass= tim Ma.Aye. son- give.birth.t
year REL e Phyu first- o(PST)-
DIM- DECL.SENTS
OBJMARK UF

| Circumstance | Agent | Created | Process |
|--------------|-------|---------|---------|
| | | | |

‘Ma Aye Phyu gave birth to her first baby son at the time when I passed the first year at university.’ (Lae Twin Thar Saw Chit 2004: 68)

As Examples (9a) and (9b) describe, the Myanmar process of creating action is realized by the verb ဖွားမြင် /phwarmyin/ which has the same semantic meaning as the English creating action verb phrase *give birth to*. The English creating action process clause (9a) can be transformed into passive structure where the creating action process is realized by the verb *be* with the Process Extension *born*. See the example (9c). However, we cannot make any changes in realization of Myanmar creating action process as the verb ဖွားမြင် /phwarmyin/ and its transitivity structure in (9b).

(9) c. The first was born by Ma Aye at the time when I passed the
baby son Phyu first year at university.

| Created | Process | Process Extension | Agent | Circumstance |
|---------|---------|----------------------|-------|--------------|
| | | | | |

The different realizations of influential creating action processes in English and Myanmar transitivity structures can be seen in examples (10a) and (10b). In English transitivity structure of influential creating action process clause (10a), the influential process through which the outside participant, the Agent (the teacher) instigates a

creating action process is realized as a separate verb *ask to*, whereas in Myanmar transitivity structure (10b), the influential process performed by the Agent is realized as a postverb နှိုင်း /khainn/ 'ask to' which is suffixed to the creating action verb သရဲ /yaye/ 'write'.

(10) a. influential: creating action

| | | | | |
|-------------|----------------------|--------------|--------------------------|-----------|
| The teacher | asked | the students | to write | an essay. |
| Agent | Process: influential | Af[[Agent | Process: creating action | Created]] |

b. influential: creating action

| | | | |
|----------|--------------------|---------------|-----------------------|
| ဆရာက | ကျောင်းသားများကို | အက်ဆေးတစ်ပုဒ် | ရေးခိုင်းခဲ့တယ်။ |
| sayar-ga | kyaunntharr-myarr- | atsaye:-da- | yaye:-khainn-khet-de. |
| | go | boke | |
| teacher- | student-PLMARK- | essay-one-CLF | write-ask.to-PST- |
| SBJMARK | OBJMARK | | DECL.SENTSUF |
| Agent | Af[[Agent | Created | Process]] |

'The teacher asked the students to write an essay.'

Autonomous behaving action processes construe human behavior, including mental and verbal behavior out of processes of consciousness and physiological states (He et al. 2017: 127). He et al. (2017) classifies behavioral process as a separate one, not as a subtype of the action process. But in terms of He's (forthcoming) new model of Chinese transitivity system and Lai Yee Win's (2021) description of the transitivity system of Myanmar, behavioral process is subsumed under the category of action process. Behaving action processes are realized by lexical verbs with the grammatical features of action processes such as ချောင်းဆိုး /chaunnsoe/ 'cough', အက်ရှူ /athetshue/ 'breathe', နှာသစး /hnarsaye/ 'sneeze', ဝှောင်း /thann/ 'yawn', ဝှော်ဖင်းရှု /thetpyinncha/ 'sigh', ပပိုး /pyonn/ 'smile', ရယ် /ye/ 'laugh' and ငို /ngo/ 'cry', mental processes such as ကကည့် /kyi/ 'look', စိုက်ကကည့် /saikkyi/ 'stare', ခြေကကည့် /chaunnkyi/ 'peep' and ဘေးသထင် /narrhtaun/ 'listen', and verbal processes such as စကားသဖဟ /zagarrpyaw/

'chatter', အတင်းသဖဟ /atinnpayaw/ 'gossip', ညည်းညူ /nyeenyue/ 'moan' and တိုးတိုးသဖဟ /toetoeypyaw/ 'murmur' in English and Myanmar transitivity structures. These two languages show the same potential of realization of autonomous behaving action process despite different realizations of influential processes as in examples (11) and (12). As (11a) and (11b) illustrate, the behaving action process is realized by a single verb *screamed* in English transitivity structure, while it is realized by a compound verb သအော်ဟစ် ငိုသ ကး /orhit ngokywaye:/ 'scream, cry' in Myanmar transitivity structure. As shown in examples (12a) and (12b), despite the realization of English influential process as a separate verb *make*, the Myanmar influential process is realized as a postpositional causative affix သစ /zay/ to the behaving action process တုဝော်ရီ /tonye/ 'shiver' influenced by an external instigator, the Agent သကကာကြံကြွယ်ရာ အံကကီးက /kyaukmetphweyar athan-gyee-ga/ 'frightenig sound'.

(11) a. autonomous: behaving action

Coyotito screamed with pain in his box.

| Behaver | Process | Circumstance | Circumstance |
|---------|---------|--------------|--------------|
|---------|---------|--------------|--------------|

b. autonomous: behaving action

ကိုယိုတီးတိုးကား နာကျင်လွန်းသဖြင့် ပုခက်သေတ္တာထဲမှာပင် အော်ဟစ် ဝိုကြွေးလျက်ရှိလေသည်။

coyoteetoe- narkyin- pakhetthittar- orhit ngokywaye:-
garr lunn=thaphyint htehmar-bin hlyetshilaythe.
Coyotito- painful- box-LOC-EMPMARK scream cry-
SBJMARK AUG=CAUS.CONJ PROG.DECL.SENTSUF

| Behaver | Circumstance | Circumstance | Process |
|---------|--------------|--------------|---------|
|---------|--------------|--------------|---------|

‘Coyotito screamed with pain in his box.’ (John Steinbeck 1945: 7, Htin Lin 1999: 21)

(12) a. influential: behaving action

Frightening sound made Mary shiver.

| Agent | Process: influential | Af[[Behaver | Process: behaving action]] |
|-------|----------------------|-------------|----------------------------|
|-------|----------------------|-------------|----------------------------|

b. influential: behaving action

ကြောက်မက်ဖွယ်ရာ အသံကြီးက မေရီကို တုန်ရီစေခဲ့သည်။
kyaukmetphweyar athan-gyee-ga mayre-go tonye-zay-khet-the.
frightening sound-big.MOD- Mary- shiver-CAUS-PST-
SBJMARK OBJMARK DECL.SENTSUF

| Agent | Af[[Behaver | Process]] |
|-------|-------------|-----------|
|-------|-------------|-----------|

‘Frightening sound made Mary shiver.’ (Journal Kyaw Ma Ma Lay 1957: 189)

3.1.2 Realizations of mental processes in English and Myanmar transitivity configurations

Mental processes are the processes of sensing. They construe the experience of the world of our own consciousness (He et al. 2017: 65). He et al. (2017) describe four subtypes of mental processes, namely emotive, desiderative, perceptive and cognitive mental processes in their description of transitivity system of English. However, in He’s (2022) new version of transitivity system of Chinese and Lai Yee Win’s (2021) description of transitivity system of Myanmar, there are five subcategories of mental processes, namely emotive, desiderative, perceptive, cognitive and communicative mental processes. Each process can be either autonomous

or influential. Although He et al. (2017) describe communicative process as a separate one, it is taken as a subtype of mental process in He’s (2022) Chinese transitivity system and Lai Yee Win’s (2021) Myanmar transitivity system.

Autonomous emotive mental processes realize our feelings or emotions. This subtype of mental process is realized by the *like* type of verbs such as ကကိုက် /kyaik/ ‘like’, နှစ်က် /hnitthet/ ‘like’, ခြစ် /chit/ ‘love’, မြှော် /monn/ ‘hate’, သပှ်ရှင် /pyorshwin/ ‘rejoice’, ဂုဏ်ယူ /gonyue/ ‘exult’, သကကာက်ရွံ့ /kyaukywunt/ ‘dread’, ငြ်းည်း /wannne/ ‘grieve’, အံ့သြ /antaw/ ‘marvel’, သလးစား /laye:zarr/ ‘admire’, သောင်တရ /naundaya/ ‘regret’, and the *please* type of verbs

such as ဆွေသဆောင် /swesaun/ 'attract', သန့်ကြက်လှော် /chaukhlant/ 'startle', တိုက်တွန်းအားသပေး /taiktunnarrpaye:/ 'encourage', နှစ်ခြိုက် /hnittheik/ 'comfort', စိတ်ဝင်စားသစ /seikwinzarrzay/ 'interest', ထိတ်လန့်သစ /hteiklantzay/ 'shock', စိုးရိမ်ပူပန်သစ /soeyeinpuebanzay/ 'worry', မြောပေးနိုးခြင်းဝယ်သစ /mawpannnwannnezay/ 'weary' and စိတ်ဓာတ်ကျသစ /seikdatkyazay/ 'depress' in English and Myanmar transitivity structures. In some English clauses, the emotive meaning is represented by multi-word verbs. For example, He [Em] is [Pro] satisfied [PrEx1] with [PrEx2] the result of his hard work [Ph] where the

emotive process is realized by the verb *be*. However, in its Myanmar translated clause, the emotive process is realized by the *like* type of emotive verb သကျေပ် /kyaynat/ 'be satisfied' as in (13a). Example (13b) is an influential emotive mental process in Myanmar, where there is the causative postverb သစ /say/ through which the Agent influences an emotive process to come into view. The influential emotive mental process သကျေပ်သစ/kyaynatsay/ in Myanmar transitivity structure is translated into English as the please type of emotive verb *satisfy* which realizes an autonomous emotive mental process in English

(13) a. autonomous: emotive mental

| | | |
|-------------|---|-------------------------------|
| သူသည် | သူကြိုးစားမှုရလဒ်နှင့်ပတ်သက်ပြီး | ကျေနပ်တယ်။ |
| thue-the | thu-kyoezarrhmu-yalat-hnintpatthetpyee | kyaynat-te. |
| 3SG-SBJMARK | 3SG.GEN-hard.work-result-concerned.with | be.satisfied.PRS-DECL.SENTSUF |

| Emoter | Phenomenon | Process |
|--------|------------|---------|
|--------|------------|---------|

'He is satisfied with the result of his hard work.'

b. influential: emotive mental

| | | |
|----------------------------------|-------------|------------------------------------|
| သူကြိုးစားမှုရလဒ်က | သူကို | ကျေနပ်စေတယ်။ |
| thu-kyoezarrhmu-yalat-ka | thue-go | kyaynat-say-de. |
| 3SG.GEN-hard.work-result-SBJMARK | 3SG-OBJMARK | be.satisfied-CAUS.PRS-DECL.SENTSUF |

| Agent | Af[[Emoter | Process]] |
|-------|------------|-----------|
|-------|------------|-----------|

'The result of his hard work satisfies him.'

Autonomous desiderative mental processes realize our desires. This subtype of mental process is realized by lexical verbs that indicate our desire for something such as လိုချင် /lochin/ 'want', ဩချောင် /hmyorlint/ 'hope', လိုအပ် /loat/ 'require', တြိးတ /tannta/ 'long for' and so on in English and Myanmar transitivity structures.

Autonomous perceptive mental processes realize our senses: sight, feeling, hearing, smell and taste. These processes are realized by lexical verbs such as မြင် /myin/ 'see', ခြံစားခြံ /khanzarrmi/ 'feel' or 'perceive', ကကား /kyarr/ 'hear', အနံ့ရ /anantya/ 'smell', ဖြည်းကကည့် /myeekyi/ 'taste', ခြုံငုံကြည့်ကကည့် /phyatkhanekyi/ 'glimpse', and so on in English and Myanmar transitivity structures.

Autonomous cognitive mental processes realize mental abilities and processes concerning knowledge such as memory, judgment, evaluation, attention, reasoning, comprehension, etc. (He et al. 2017: 83). These cognitive mental processes are realized by verbs expressing cognitive meanings such as ခံ /thi/ 'know', ထင် /htin/ 'think', ယုံကကည် /yonkye/ 'believe', ဘေးလည် /narrle/ 'understand', ခံခြံခြံ /thichinmi/ 'wonder', ခံယေယှစ် /thanthayaphyt/ 'doubt', ဘေးလည်သောသပါက် /narrlethabawpauk/ 'realize', စိတ်ကူး /seikkue/ 'imagine', အိပ်ကြက် /eikmetmet/ 'dream', ခြေခြေ /khanthmann/ 'guess', ဝေတိရ /thadiya/ 'remember', and so on in English and Myanmar transitivity structures.

Autonomous communicative mental processes realize the experience of exchanging information through language. This communicative mental process is realized by lexical verbs such as သတတ /pyaw/ 'tell', သဆွေးသနွေး /swaye:nwaye/ 'discuss', သြဖတ /phorpya/ 'state', အစီရင်တင်ဖတ /aseyinkhantinya/ 'report', ဝေတိသတ /thadipaye/ 'warn', အကကံသတ /akyanpaye/ 'advise', သြး /maye/ 'ask', ရှင်းဖတ /shinnpya/ 'explain', ခြူးကျူး /cheekyue/ 'praise', and so on in English and Myanmar transitivity structures.

English and Myanmar show the same potential of realization of autonomous mental processes as the lexical verbs which have the same semantic meanings in both languages. Examples (13a) and (13b) illustrate autonomous perceptive mental process type structures in which the Myanmar and English realizations closely resemble each other, where the perceptive mental processes in English and Myanmar transitivity structures are realized by English verb 'hear' and Myanmar verb ကကား /kyarr/ which are the same in meaning. However, in the examples (14a) and (14b), different lexical verbs with different semantic meanings realize cognitive mental process in English and Myanmar transitivity structures. In English cognitive mental process clause (14a), the process is realized by the verb *remember*. But this clause is translated into Myanmar by changing the lexical verb with different meaning ထင်ည် /htinthe/ 'think' which realizes the same process as English clause as in (14b). Moreover, the realizations of processes as different lexical verbs realizing different processes can also be seen in English-Myanmar translation (15a) and (15b).

(13) a. autonomous: perceptive mental

Kino heard the little splash of morning waves on the beach. (John Steinbeck 1945: 2)

| Perceiver | Process | Phenomenon |
|-----------|---------|------------|
|-----------|---------|------------|

b. autonomous: perceptive mental

| | | | | |
|----------------------|-------------|----------------------------------|-------|-----------------------|
| ကမ်းခြေတို့မှ | နံနက်ခင်း | လှိုင်းပုတ်သံကလေးများကို | ကီနို | ကြားရသည်။ |
| kannchay-dot-hma | nannetkhinn | hlainn-pokethan-galaye:-myarr-go | keno | kyarr-yathe. |
| beach-PLMARK-ABLMARK | morning | wave-sound-DIM-PLMARK-OBJMARK | Kino | hear-PRS.DECL.SENTSUF |

| Phenomenon | Perceiver | Process |
|------------|-----------|---------|
|------------|-----------|---------|

'Kino heard the little splash of morning waves on the beach.' (Htin Lin 1999: 13)

(14). a autonomous: cognitive mental

Kino could never seeing when he awakened. (John Steinbeck 1945: 2)
remember Juana's
eyes closed

| Cognizant | Process | Phenomenon | Circumstance |
|-----------|---------|------------|--------------|
|-----------|---------|------------|--------------|

b autonomous: cognitive mental

သူ နိုးနေခိုက် ဟွာနာမျက်လုံ မှိတ်ထားသ ကိနို မမြင်ဘူးခဲဟု ထင်သည်။
းများ ည်ကို
thue noe=naykhaik hwarnar- hmeikhtarr ken ma-myin- htin-the.
myetlonn- -the-go o bue:-khet=hu
myarr
3SG awaken=when. Juana-eye- close- Kin NEG-see- think-
CONJ PLMARK DECL.SENT o NEGDECL.SENT DECL.SENT
SUF- SUF- SUF
OBJMARK PST=COMPL

| | | | | | |
|-----|----|------------------|-----|-------------------|--|
| Ph | | | | Pro: auto cog men | |
| Ph | | | Per | Pro: auto | |
| | | | c | perc men | |
| Cir | Af | Pro: auto do act | | | |

‘Kino thinks that he has not seen Juana’s eyes closed when he awakened.’ (Htin Lin 1999: 13)

(15) a. autonomous: behaving action

She was looking at him as she was always looking
at him when he awakened.

| Behaver | Process | Process Extension | Range | Circumstance |
|---------|---------|-------------------|-------|--------------|
|---------|---------|-------------------|-------|--------------|

b autonomous: perceptive mental

ကိနို နိုးလာတိုင်း ဟွာနာသည် ကိနိုအား ကြည့်လျက်သ တွေ့ရသည်။ ။
keno noelar=dainn hwarnar- keno-arr kyi-hlyet- twayt-yathe.
the thar
Kino awaken=whenever.CONJ Juana- Kino- look-PROG- find-
SBJMARK OBJMARK EXCL DECL.SENTSUF

| | | |
|--------------|------------|---------|
| Circumstance | Phenomenon | Process |
|--------------|------------|---------|

Compared to English transitivity, influential processes are rarely used in Myanmar. English influential processes are typically transformed into Myanmar autonomous processes by changing the causer Agent into a circumstance in English-Myanmar translation. Compare the examples (16a) and (16b).

(16). a influential: cognitive mental

For Nan when it made her miss her very
Aung, these father much.
flowers
bloomed,

| | | | | | | | |
|--------------|--------------|-------|----------------------|---------------|---------------------------|------------|----------------|
| Circumstance | Circumstance | Agent | Process: influential | Af[[Cognizant | Process: cognitive mental | Phenomenon | Circumstance]] |
|--------------|--------------|-------|----------------------|---------------|---------------------------|------------|----------------|

b autonomous: cognitive mental

နန်းအောင် ဝါဆိုပန်း ပွင့်ရင် အဖေကို အရမ်းသတိရတယ်။
ကတော့ တွေ့

nannaun- warzo- pwint=yin aphayt- ayann-thadiya-de.
gadort pann- go
dway

Nan.Aun waso- bloom=CON father- AUG-remember-PRS.DECL.SENTSUF
g- flower- D.CONJ OBJMAR
SBJMARK PLMARK K

| | | | |
|-----------|--------------|------------|---------------------------|
| Cognizant | Circumstance | Phenomenon | Process: cognitive mental |
|-----------|--------------|------------|---------------------------|

‘When Waso flowers blooms, Nan Aung remembers her father very much.’

(<http://sealang.net/burmese/bitext.htm>)

3.1.3 Realizations of relational processes in English and Myanmar transitivity configurations

The significant difference in realizations of autonomous attributive relational processes in English and Myanmar transitivity structures lies in that in English transitivity structures, the English attributive verb ‘be’ is employed to realize the attributive process for representing both the quality and the status of the Carrier as in (17a) and

(17b), whereas in Myanmar transitivity structures, the attributive process for representing the quality of the Carrier is realized by attributive verbs such as ကျန်းပြာဝေဝံစွမ်းဝေည် /kyannmar-thanswann-the/ ‘be healthy and strong’, while the process for representing the status of the Carrier is realized by the Myanmar copula verb ဖြစ်သည် /phyit-the/ ‘be’ as in (18a) and (18b).

(17) a. autonomous: attributive relational

| | | |
|---------|---------|---------------------|
| Kino | is | healthy and strong. |
| Carrier | Process | Attribute |

b. autonomous: attributive relational

| | | |
|---------|---------|--------------|
| Kino | is | a young man. |
| Carrier | Process | Attribute |

(18) a. autonomous: attributive relational

| | |
|--------------|---------------------------------|
| ကိနိုသည် | ကျန်းမာသန်စွမ်းသည်။ |
| keno-the | kyannmar-thanswann-the |
| Kino-SBJMARK | healthy-strong-PRS.DECL.SENTSUF |
| Carrier | Process |

‘Kino is healthy and strong.’ (Htin Lin 1999: 17)

b. autonomous: attributive relational

| | | |
|--------------|--------------|----------------------|
| ကိနိုသည် | ငယ်ရွယ်သူ | ဖြစ်သည်။ |
| keno-the | ngeywe-thue | phyit-the. |
| Kino-SBJMARK | young-person | COP.PRS-DECL.SENTSUF |
| Carrier | Attribute | Process |

‘Kino is a young man.’ (Htin Lin 1999: 17)

Autonomous identifying relational processes construe the symbolization or identity of an entity. This identifying relational process is typically realized by the copula verb ဖြစ်သည် /phyitthe/ ‘be’ in Myanmar transitivity configurations. In English, there are definite and indefinite articles: *the* and *a/an* which can be used in nominal groups to distinguish the attributive processes from the

identifying processes. However, as there is no definite article *the* in Myanmar, we can distinguish attributive processes from identifying processes by means of the reversibility of the positions of two participants. The positions of the Token and the Value can be reversible in identifying processes, whereas the positions of the Carrier and the Attribute in attributive processes

cannot be reversible. In an identifying clause, the two participants, named Token and Value, stand in a symbolic relation, in which the Token is identified as the Value. The typical Myanmar identifying verb is ဖြစ်ည် /phyitthe/ 'be' which is analogous to English copula verb *be*.

Other Myanmar verbs such as အပ်သး /amyepaye:/ ‘name’, ဆိုလို /solo/ ‘mean’ and

အဓိပ္ပာယ်ပြုသည့် /adeikbephwintso/ ‘define’ realize identifying process in Myanmar transitivity structures. Since the two participants are equated with each other, the order of the participants may be either Token[^] Value[^] Process as in (19a) or Value[^] Token[^] Process as in (19b).

- | | | | | |
|---------|---|--------------------------------|---------------------------|--------------------------|
| (19) a. | ရန်ကုန်မြို့သည် | မြန်မာပြည်၏ | စီးပွားရေးမြို့တော် | ဖြစ်သည်။ |
| | yangon-myot-the | myanmarpye-i | seebwarryaye:- myotdor | phyit-the. |
| | Yangon-town- SBJMARK | Myanmar-GEN | commercial-city | COP.PRS- DECL.SENTSUF |
| | Token | Value | Pro: auto iden rel | |
| | ‘Yangon is the commercial city of Myanmar.’ | | | |
| b. | မြန်မာပြည်၏ | စီးပွားရေးမြို့တော်မှာ | ရန်ကုန်မြို့ | ဖြစ်သည်။ |
| | myanmarpye-i | seebwarryaye:- myotdor-hmar | yangon-myot | phyit-the. |
| | Myanmar-GEN | commercial-city- SBJMARK | Yangon-town | COP.PRS- DECL.SENTSUF |
| | Value | Token | Pro: auto iden rel | |
| | ‘The commercial city of Myanmar is Yangon.’ | | | |

Autonomous locational relational processes realize the relationship between one entity and its location (He et al. 2017: 111). Autonomous directional relational processes realize the static direction of an entity (He et al. 2017: 111). Directional relational processes are realized by processes of movement such as သွေ့လျား /ywaytsharr/ ‘move’, လာ /lar/ ‘come’, ဦးတည် /ue:te/ ‘lead’, ပျံ့နှံ့ /pyanthnant/ ‘spread’, and so on. Autonomous possessive relational processes realize the relationship between two entities in terms of possessing. These possessive relational processes are realized by lexical verbs such as ရယူ /ya/ ‘get’, ရှိ /shi/ ‘have’, ပိုင်ဆိုင် /painsain/

‘possess’ or ‘own’, ပါဝင် /parwin/ ‘contain’, and so on. Among them, the most general and representative verb which realizes the ‘possessive’ process in Myanmar is ရှိ /shi/ ‘have’. Autonomous correlational relational processes realize the relationship between two entities. Correlational processes are realized by lexical verbs representing the connection between two people or two things or two entities such as လက်ထပ် /lethtat/ ‘marry’, သစ္စာပေး /saytatzat/ ‘be engaged with’, နှိုယှဉ် /hnainnshin/ ‘compare’, လိုက်ကြိုက် /laikphet/ ‘match (with)’, and so on. Autonomous existential relational processes realize the existence of an entity in a certain location. They

relate an entity to the fact of its existence. Existential process in Myanmar transitivity structures is typically realized by lexical verbs ရှိ /shi/, တည်ထား /tehtarr/, တည်ရှိ /teshi/ 'exist', while existential process in English transitivity structures can be realized by the verb *be* and many other verbs that construe static meanings such as *exist, lie, remain, arrive, enter, spring up, rise, stand, emerge, and so on* (He et al. 2017: 146). In Myanmar, the verb ရှိ /shi/ may also realize a possessive process where it has the semantic meaning 'have'. In Myanmar the existential verb ရှိ /shi/ can be interpreted either as existential when

the Existent and the Location appear as participants or as possessive when it has two participants: Possessor and Possessed, like the verb 'have' in English. In Myanmar existential construction, there exist two participants named Existent and Location, and the typical realization of this kind of process by verbs such as ရှိ /shi/, တည်ထား /tehtarr/ and တည်ရှိ /teshi/ which has the semantic meaning *exist*. The common optional semantic configurations of existential processes are Existent^Location^Process and Location^Existent^Process. See Examples (20) and (21).

(20) မြို့သည် မြစ်ဝကျယ်၏ ကမ်းပေါ်တွင် တည်ထားသည်။

myot-the myitwa-kye-i kann-portwin tehtarr-the.
town-SBJMARK estuary-broad.MOD-GEN beach-on.LOC lie.PFV-DECL.SENTSUF

| | | |
|----------|----------|---------------------------|
| Existent | Location | Pro: auto existential rel |
|----------|----------|---------------------------|

'The town lay on a broad estuary.' (Htin Lin 1999: 33)

(21) အိမ်၏ မျက်နှာစာတွင် မြက်ခင်းပြင် ရှိသည်။

ein-i myethnazar-twin myetkhinnpyin shi-the.
house-GEN front-LOC lawn exist.PRS-DECL.SENTSUF

| | | |
|----------|----------|---------------------------|
| Location | Existent | Pro: auto existential rel |
|----------|----------|---------------------------|

'There is lawn in front of the house.'

The Myanmar lexical verb ရှိ /shi/ convey two semantic meanings: *exist* and *have*.

Therefore, it can realize two processes: existential relational process and possessive relational process in Myanmar transitivity structures. The realization of possessive process by the Myanmar verb ရှိ /shi/ which has the same semantic meaning as *has* in English can be seen in the

example (22).

(22) စက်ဘီးတွင် ဘီးနှစ်ဘီး ရှိသည်။

setbeinn-twin beinn-hna-beinn shi-the.
bicycle-LOC wheel-two-CLF have.PRS-DECL.SENTSUF

| | | |
|-----------|-----------|--------------------------|
| Possessor | Possessed | Pro: auto possessive rel |
|-----------|-----------|--------------------------|

'A bicycle has two wheels.'

3.2 Comparison of realizations of participant roles in English and Myanmar transitivity structures

Following He's (2022) new model of Chinese transitivity system, the Myanmar transitivity system is described as distinguishing between three major process types. These are the 'action', 'mental' and 'relational' process types. Each process type has its own subtypes. Action process is divided into four subtypes: autonomous and influential happening, doing, creating and behaving action processes. Mental process is classified into five subtypes: autonomous and influential emotive, desiderative, perceptive, cognitive and communicative mental processes. Relational process is categorized into seven subtypes: autonomous and influential attributive, identifying, locational, directional, possessive, correlational and existential relational processes.

They are structurally realized as configurations of a Process and the participants. Syntactically, a participant role can be conflated with the Subject or the Complement which is typically realized by a nominal group.

3.2.1 Realizations of participant roles in English and Myanmar action processes

Autonomous happening action process contains only one participant, the Agent only and the Affected only. It is structurally realized as configurations of a Process and a participant of Agent + Process and Affected + Process in English and Myanmar. There is no such configuration of It/There + Pro + Af in Myanmar but in English. We can study the similarities and differences in realizations of participants in English and Myanmar autonomous happening action processes in the following examples.

(22) စက်ဘီးတွင် ဘီးနှစ်ဘီး ရှိသည်။

setbeinn-twin beinn-hna-beinn shi-the.

bicycle-LOC wheel-two-CLF have.PRS-DECL.SENTSUF

| | | |
|-----------|-----------|--------------------------|
| Possessor | Possessed | Pro: auto possessive rel |
|-----------|-----------|--------------------------|

'A bicycle has two wheels.'

| | |
|---------|-------------------|
| Subject | Finite/Predicator |
|---------|-------------------|

(Journal Kyaw Ma Ma Lay 1957: 45)

(2) a. Autumn has come.

| | | |
|----------|----------------------------|------------|
| Affected | Pro: auto happening action | |
| Subject | Finite | Predicator |

b. ဆောင်းဦးသို့ ရောက်လာပြီဖြစ်၏။

saunnue:-thot yauk-larbye-phyiti.

autumn-OBJMARK come-PFV-DECL.SENTSUF

| | | |
|----------|----------------------------|--|
| Affected | Pro: auto happening action | |
| Subject | Finite/Predicator | |

(Journal Kyaw Ma Ma Lay 1957: 45)

The process types in (3a) and (3b) are both autonomous doing action, so the structural configuration is Agent + Process + Affected in English, and Agent + Affected + Process in Myanmar. In English doing action process clause (3a), the Agent (the servant) is conflated with Subject, while the Affected (the door) is conflated with Complement. Structurally, they are realized by nominal groups. On the other hand, in Myanmar doing action process clause (3b), the

Agent အသံမြီဝှံ /asaykhan-the/ 'the servant' is conflated with Subject and is realized by a common noun အသံမြီ /asaykhan/ 'servant' in nominative case marked by a nominative case marker -ဝှံ /the/, while the Affected တံခြံကို /dagarr-go/ 'the door' is conflated with Complement and is realized by a common noun တံခြံ /dagarr/ 'door' in accusative case marked by an objective suffix -ကို /go/. Therefore, we can see that case realizes the syntactic functions of participants in Myanmar transitivity structures.

(4) a. My son will read the books.

| | | | |
|---------|------------------------|------------|------------|
| Agent | Pro: auto doing action | | Range |
| Subject | Finite | Predicator | Complement |

(John Steinbeck 1945: 33)

b. ငါးသားက စာအုပ်တွေကို ဖတ်မှာ။

nga-tharr-ga saroke-dway-go phat-hmar.

1SG.GEN-son-SBJMARK book-PLMARK-OBJMARK read-IRR.ASS

| | | |
|---------|------------|------------------------|
| Agent | Range | Pro: auto doing action |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 56)

In English doing action process clause (4a), the Agent (My son) is conflated with the Subject and is realized by a nominal group; the Range (the books) is conflated with the Complement and is also realized by a nominal group. In Myanmar doing action process clause (4b), the Agent ငါးသားက /nga-tharr-ga/ 'my son' is conflated with Subject and is realized by a nominal group in nominative case marked by a nominative suffix

-က /ga/; the Range စာအုပ်တွေကို /saroke-dway-go/ 'the books' is conflated with Complement and is realized by a nominal group in accusative case marked by an objective suffix -ကို /go/. Besides the realization of the PR Range in doing action process as a nominal group, it can also be realized as a prepositional phrase in English and Myanmar as in (5a) and (5b).

(5) a. The children climbed to the top of the hill.

| | | |
|---------|------------------------|------------|
| Agent | Pro: auto doing action | Range |
| Subject | Finite/Predicator | Complement |

b. ကလေးများသည် တောင်ကုန်းထိပ်သို့ တက်ခဲ့ကြသည်။

khalaye:-myarr-the taunkonn-hteik-thot tet-khet-gya-the.

child-PLMARK-SBJMARK hill-top-ALL climb-PST-PLMARK-DECL.SENTSUF

| | | |
|---------|------------|------------------------|
| Agent | Range | Pro: auto doing action |
| Subject | Complement | Finite/Predicator |

(6) a. Her stepmother treated her cruelly.

| | | | |
|---------|------------------------|------------|------------|
| Agent | Pro: auto doing action | Affected | Manner |
| Subject | Finite/Predicator | Complement | Complement |

b. သုမိသွေးက သူ့ကို ရက်စက်ကြမ်းကြုတ်စွာ ပြုမူဆက်ဆံခဲ့တယ်။
 thu-midwaye:-ga thu-go yetsetkyannkyokeswar pyumuesetsan-khet-de.

3SG.GEN- stepmother- 3SG- cruelly treat-PST-
 SBJMARK OBJMARK DECL.SENTSUF

| | | | |
|---------|------------|------------|------------------------|
| Agent | Affected | Manner | Pro: auto doing action |
| Subject | Complement | Complement | Finite/Predicator |

The construction in (6a) and (6b) is accounted for as a kind of autonomous doing action process with three participants: Agent, Affected and Manner. In English autonomous doing action process clause (6a), the Agent (her stepmother) is conflated with Subject and is realized as a nominal group; the Affected (her) is conflated with Complement and is realized as a pronoun; the Manner is another Complement which is realized as an adverb. In Myanmar autonomous doing action process clause (6b), the Agent သုမိသွေးက /thu-midwaye:-ga/ 'her stepmother' syntactically functions as Subject and is realized as a nominal group in nominative case marked by a nominative suffix -က /ga/; the Affected သူ့ကို /thu-go/ 'her' syntactically functions as Complement and is realized as a pronoun in dative case marked by an objective suffix -ကို /go/; the Manner also functions as Complement and is realized as an adverb.

The Agent, Affected and Range in processes of doing action show the same potential of realization as a noun or nominal group, and the

Manner as an adverb or adverbial group in English and Myanmar. The significant difference in realization of participants in processes in English and Myanmar is that case (nominative, dative and accusative) marks the syntactic functions of Subject and Complement elements in Myanmar construction by means of suffixes: -ည် /the/, -က /ga/, -ပြော /hmar/ for nominative, -ကို /go/, -နို့ /thot/, -အား /arr/ for objective case, whereas there is no case marker to realize the syntactic functions of participants in English construction.

Autonomous creating action process may include one or two participants. If there is one participant involved in this process, it is the Created. If there are two participants involved in it, there are the Agent and the Created. The PR Agent is typically animate, whereas the Created can be either animate or inanimate. The Agent and the Created in processes of creating in English and Myanmar show the same potential of realization as a noun or nominal group as in (7a) and (7b).

(7) a. Juana usually makes corncakes for breakfast.

| | | | | |
|---------|--------------|---------------------------|------------|--------------|
| Agent | Circumstance | Pro: auto creating action | Created | Circumstance |
| Subject | Adjunct | Finite/Predicator | Complement | Adjunct |

b. ဟွာနာသည် နံနက်စာအတွက် ပြောင်းဆန်မုန့် ဖုတ်လေ့ရှိသည်။

hwarnar-the nannetsar-atwet pyaunnsanmont phoke-laytshithe.

Juana-SBJMARK breakfast-PURP corncake bake-PRS.DECL.SENTSUF

| | | | |
|---------|--------------|------------|---------------------------|
| Agent | Circumstance | Created | Pro: auto creating action |
| Subject | Adjunct | Complement | Finite/Predicator |

The process type in (7a) and (7b) is autonomous creating action process, so the structural configuration is Agent + Process + Created in English and Agent + Created + Process in Myanmar. In English creating action process (7a), the Agent (Juana) is conflated with Subject and is realized as a proper noun; the Created (corncakes) is conflated with Complement and is realized as a common noun. In Myanmar creating action process (7b), the Agent ဟွာနာ /hwarnar-the/ 'Juana' is conflated with Subject and is realized as a proper noun in nominative case marked by nominative suffix -ေည် /the/; the

Created သဖဟင်းဆေပြီ /pyaunnsanmont/ 'corncake' is conflated with Complement and is realized as a common noun.

Autonomous behaving action process may contain one or two participants. If there is one participant involved in this process, it is the Behavior. If there are two participants involved in it, there are the Behavior and the Range. The PR Behavior is typically animate, whereas the Range can be either animate or inanimate. The Behavior and the Range in processes of behaving in English and Myanmar show the same potential of realization as in (8a) and (8b).

(8) a. Kino dreamed that Coyotito could read.

| | | |
|----------|---------------------------|------------|
| Behavior | Pro: auto behaving action | Range |
| Subject | Finite/Predicator | Complement |

(John Steinbeck 1945: 48)

b. ကီနိုသည် အိပ်မက်ထဲ၌ ကိုယိုတီးတိုး စာဖတ်တတ်သည်ဟု မြင်မက်၏။

keno-the eikmet- koyoteetoe sarphat-tat-the=hu myinmet-i
htehnaik

Kino- dream-LOC Coyotito read-CAPAMOD- dream-DECL.SENTSUF
SBJMARK DECL.SENTSUF=COMP

| | | | |
|----------|--------------|-------|---------------------------|
| Behavior | Circumstance | Range | Pro: auto behaving action |
| Subject | Complement | | Finite/Predicator |

(Htin Lin 1999: 76)

The process type in (8a) and (8b) is autonomous behaving action process, so the structural configuration is Behavior + Process + Range in English and Behavior + Range + Process in Myanmar. In English behaving action process (8a), the Behavior (Kino) is conflated with Subject and is realized as a proper noun; the Range (that Coyotito could read) is conflated with Complement and is realized as a finite clause. In Myanmar behaving action process (8b), the Behavior ကိနိုဝှ်း /keno-the/ ‘Kino’ is conflated with Subject and is realized as a proper noun in

nominative case marked by nominative suffix -ဝှ်း /the/; the Range ကိုယိုတီးတိုးစာဂြိုတ်တတ်ည်ဟု /koyoteetoe sarphat-tat-the=hu/ ‘that Coyotito could read’ is conflated with Complement and is realized as a finite clause. The Behavior in processes of behaving indicates the same potential of realization as a nominal group in English and Myanmar, while the Range shows the same potential of realization as a nominal group or a finite clause in both languages. Table 3-3 illustrates a comparison of realizations of participants in action processes in English and Myanmar.

Table 3-3: A comparison of realizations of participants in action processes in English and Myanmar configurations

| Process type | Subtype of action process | Participant | Realization of participant in English configurations | Realization of participant in Myanmar configurations |
|--------------|---------------------------|-------------|--|--|
| | happening | Agent | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with nominative case marker: -သည် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Affected | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with objective case marker: -ကို /go/, -သို့ /thot/ or -အား /arr/ |
| | | Agent | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with nominative case |

| | | | | |
|--------|----------|----------|--|--|
| action | doing | | | marker: -သည် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Affected | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with objective case marker: -ကို /go/, -သို့ /thot/ or -အား /arr/ |
| | | Range | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with objective case marker: -ကို /go/, prepositional phrase |
| | | Manner | adverb or adverbial group | adverb or adverbial group |
| | creating | Agent | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with nominative case marker: -သည် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Created | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with objective case marker |
| | behaving | Behavior | pronoun, proper noun, common noun, nominal group | pronoun, proper noun, common noun, nominal group with nominative case marker: -သည် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Range | nominal group, finite clause | nominal group, finite clause |

3.3.2 Realizations of participant roles in English and Myanmar mental processes

According to He’s (2022) new model of Chinese transitivity system, mental processes are divided into five subtypes: autonomous and influential emotive, desiderative, perceptive, cognitive and communicative mental processes. The two major participants involved in autonomous emotive

mental process are Emoter and Phenomenon. The Emoter is the PR which represents the one who feels, so it can be a human or an animate being. The Phenomenon is a thing or an act or an event or a fact targeted by the feeling process (He et al. 2017: 67). There are some differences in realizations of participants in emotive mental processes of English and Myanmar as in the following examples.

(9) a. He was afraid of strangers.

| | | | | |
|---------|-------------------|-------|-------|------------|
| Emoter | Pro | PrEx1 | PrEx2 | Phenomenon |
| Subject | Finite/Predicator | | | Complement |

(John Steinbeck 1945: 69)

b. သူသည် မျက်နှာစိမ်းများကို ကြောက်သည်။

thue-the myethnaseinn-myarr-go kyauk-the.

3SG-SBJMARK stranger-PLMARK-OBJMARK fear-PRS.DECL.SENTSUF

| | | |
|---------|------------|--------------------------|
| Emoter | Phenomenon | Pro: auto emotive mental |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 105)

The Emoter and the Phenomenon in processes of emotion in English and Myanmar indicate the same potential of realization as in (9a) and (9b). In English emotive mental process clause (9a), the Agent (he) is conflated with Subject and is realized as a pronoun; the Affected (strangers) is conflated with Complement and is realized as a nominal group. In Myanmar emotive mental process clause (9b), the Agent သူသည် /thue-the/

‘he’ is conflated with Subject and is realized as a pronoun in nominative case marked by nominative suffix -ေည် /the/; the Affected မျက်နှာစိမ်းများကို /myethnaseinn-myarr-go/ ‘strangers’ is conflated with Complement and is realized as a nominal group in dative case marked by objective suffix -ကို /go/. However, we can see the difference of the realization of the Phenomenon in processes of emotion in English and Myanmar as in (10a) and (10b).

(10) a. He was afraid of failing the exam.

| | | | | |
|---------|-------------------|-------|-------|------------|
| Emoter | Pro | PrEx1 | PrEx2 | Phenomenon |
| Subject | Finite/Predicator | | | Complement |

- b. သူ စာမေးပွဲ ကျရှုံးမှာကို စိုးရိမ်ခဲ့သည်။
 thue sarmaye:pwe kyashonn-hmar-go soeyein-khet-the.
 3SG.NOM exam fail-IRR-OBJMARK worry-PST-DECL.SENTSUF

| | | |
|---------|------------|--------------------------|
| Emoter | Phenomenon | Pro: auto emotive mental |
| Subject | Complement | Finite/Predicator |

In English and Myanmar emotive mental process clauses (10a) and (10b), the Emoter ခု /thue/ 'he' is conflated with Subject, representing the same potential of realization as a pronoun in both languages. However, the Phenomenon in process of emotion in English is realized as a non-finite clause as in (10a), whereas the Phenomenon in process of emotion in Myanmar is realized as a finite clause with an objective suffix -ကို /go/ as in (10b). The elements of structure (10b) can easily change position without information about syntactic function being lost, as in example (10c). Different from elements in process of emotion in Myanmar, those in English cannot change position without changing the meaning of the process. See Example (10d).

- (10) c. စာမေးပွဲ ကျရှုံးမှာကို သူ စိုးရိမ်ခဲ့သည်။
 sarmaye:pwe kyashonn-hmar-go thue soeyein-khet-the.
 exam fail-IRR-OBJMARK 3SG.NOM worry-PST-DECL.SENTSUF

| | | |
|------------|---------|--------------------------|
| Phenomenon | Emoter | Pro: auto emotive mental |
| Complement | Subject | Finite/Predicator |

- (10) d. Failing in the exam upset him.

| | | |
|------------|--------------------------|------------|
| Phenomenon | Pro: auto emotive mental | Emoter |
| Subject | Finite/Predicator | Complement |

The two main PRs involved in autonomous desiderative mental process are Desiderator and Phenomenon. The Desiderator is the PR which represents the one who wants something, so it can be a human or an animate being. The Phenomenon is a thing or an event targeted by the desiderative process. These participants show the same potential of realization in English and Myanmar as in (11a) and (11b).

- (11) a. Mg Lu Aye decided to be a bachelor.

| | | |
|-------------|-------------------------------|------------|
| Desiderator | Pro: auto desiderative mental | Phenomenon |
| Subject | Finite/Predicator | Complement |

- b. မောင်လူအေးသည် လူပျိုကြီး လုပ်နေမည်ဟု ဆုံးဖြတ်ထားခဲ့၏။
 maunlueaye:-the luebyogyee loke-naymye=hu sonnphyat-htarrkhet-i.
 Mg.Lu.Aye-SBJMARK bachelor do-IRR.ASS=COMP decide-PST-DECL.SENTSUF

| | | |
|-------------|------------|-------------------------------|
| Desiderator | Phenomenon | Pro: auto desiderative mental |
| Subject | Complement | Finite/Predicator |

The process type in (11a) and (11b) is autonomous desiderative mental process. In English desiderative mental process clause (11a), the Desiderator (Mg Lu Aye) is conflated with Subject and is realized as a proper noun, while the Phenomenon (to be a bachelor) is conflated with Complement and is realized as a infinitival clause. In Myanmar desiderative mental process clause (11b), the Desiderator မြောင်လူသအးဝံ့ /maunlueaye:-the/ ‘Mg Lu Aye’ is conflated with Subject and is realized as a proper noun in nominative case marked by nominative affix -ဝံ့ /the/, while the Phenomenon လုပ်သေပြည်ဟု /luebyogyee loke-naymye=hu/ ‘will do as a bachelor’ is conflated with Complement and is realized as a finite clause. Therefore, although the Desiderator in processes

of desideration in English and Myanmar describes the same potential of realization as a pronoun or nominal group, the Phenomenon shows different realizations as in (11a) and (11b).

Autonomous perceptive mental process consists of two main participants: Perceiver and Phenomenon. The Perceiver is the PR which represents the one who perceives something, so it is a human or an animate being. The Phenomenon is a thing or an event targeted by the perceptive process. Typically, the Perceiver and the Phenomenon in processes of perception in English and in Myanmar indicate the same potential of realization as a nominal group. Moreover, they can also be realized as finite or non-finite clause. Consider the following example:

(12) a. He saw them moving along.

| | | |
|-----------|-----------------------------|------------|
| Perceiver | Pro: auto perceptive mental | Phenomenon |
| Subject | Finite/Predicator | Complement |

(John Steinbeck 1945: 95)

b. သူတို့ လာနေကြသည်ကို သူ မြင်ရသည်။
thuedot lar-nay-gya-the-go thue myin-yathe.
3PL come-PROG-PLMARK-DECL.SENTSUF- 3SG see-PRS. DECL.SENTSUF
OBJMARK

| | | |
|------------|-----------|-----------------------------|
| Phenomenon | Perceiver | Pro: auto perceptive mental |
| Complement | Subject | Finite/Predicator |

(Htin Lin 1999: 140)

The process type in (12a) and (12b) is autonomous perceptive mental process, so the structural configuration is Perceiver + Process + Phenomenon in English and Phenomenon + Perceiver + Process in Myanmar. In English perceptive mental process clause (12a), the Perceiver (he) is conflated with Subject and is realized as a pronoun, while the Phenomenon (them moving along) is conflated with Complement and is realized as a nominal group. In Myanmar perceptive mental process clause (12b), the Perceiver ခု /thue/ ‘he’ is conflated

with Subject and is realized as a pronoun, while the Phenomenon လာနေကြသည်ကို /thuedot lar nay-gya-the-go/ ‘that they are coming’ is conflated with Complement and is realized as a finite clause in accusative case marked by objective affix -ကို /go/. Therefore, although the Perceiver in processes of perception in English and Myanmar describes the same potential of realization as a pronoun, the Phenomenon in perceptive processes shows different realizations as a nominal group in English and as a finite clause in Myanmar as in (12a) and (12b).

The two principal participants involved in autonomous cognitive mental process are Cognizant and Phenomenon. The Cognizant is the PR which represents the one who thinks, knows and understands something, so this PR is a human or an animate being. The Phenomenon is a thing

or an event targeted by the cognitive process. Structurally, the Cognizant is typically realized as a nominal group in both languages: English and Myanmar. The Phenomenon can be realized as a nominal group or a finite or non-finite clause. Consider the following examples.

(13) a. They knew the doctor.

| | | |
|-----------|----------------------------|------------|
| Cognizant | Pro: auto cognitive mental | Phenomenon |
| Subject | Finite/Predicator | Complement |

(John Steinbeck 1945: 11)

b. သူတို့သည် ဆရာဝန်ကိုလည်း သိကြသည်။

thuedot-the sayarwin-go-le thi-gya-the.

3PL-SBJMARK doctor-OBJMARK-ADDCONN know-PLMARK-PRS.DECL.SENTSUF

| | | |
|-----------|------------|----------------------------|
| Cognizant | Phenomenon | Pro: auto cognitive mental |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 26)

Example (13a) is an English cognitive mental process clause in which the Cognizant (they) is realized as a pronoun and the Phenomenon (the doctor) is realized as a nominal group. Example (13b) is a Myanmar cognitive mental process clause in which the Cognizant သူတို့သည် /thuedot the/ 'they' is realized as a pronoun in nominative case marked by nominative affix -ေည် /the/ and

the Phenomenon ဆရာဝန်ကို /sayarwin-go/ 'the doctor' is realized as a nominal group in dative case marked by objective affix -ကို /go/. Like German, since syntactic functions are overtly marked by case in Myanmar, elements of structure can easily change position without information about syntactic function being lost as in (13c).

c. ဆရာဝန်ကိုလည်း သူတို့ သိကြသည်။

sayarwin-go-le thuedot thi-gya-the.

doctor-OBJMARK-ADDCONN 3PL know-PLMARK-PRS.DECL.SENTSUF

| | | |
|------------|------------|----------------------------|
| Phenomenon | Cognizant | Pro: auto cognitive mental |
| Subject | Complement | Finite/Predicator |

(14) a. He knew what they were.

| | | |
|-----------|----------------------|------------|
| Cognizant | Pro: auto cog mental | Phenomenon |
| Subject | Finite/Predicator | Complement |

(John Steinbeck 1945: 95)

- b. သူတို့ ဘာတွေဖြစ်နေသည်ကို သူ သိသည်။
 thuedot bardway-phyit-nay-the-go thue thi-the.
 3PL what-happen-PROG-DECL.SENTSUF-OBJMARK 3SG know-PRS.DECL.SENTSUF

| | | |
|------------|-----------|----------------------|
| Phenomenon | Cognizant | Pro: auto cog mental |
| Complement | Subject | Finite/Predicator |

(Htin Lin 1999: 140)

The Cognizant in process of cognition in (14a) and (14b) shows the same potential of realization as a pronoun, while the Phenomenon represents different realizations as a wh-clause in English and as a finite clause in Myanmar cognitive mental process clause.

Autonomous communicative mental process contains three participants: Communicator, Communicatee and Communicated. This

communicative process is analogous to Halliday's verbal process including three participants: Sayer, Receiver and Verbaige. The Communicator is the PR which represents the one who delivers the message; the Communicatee is the one who receives the message; the Communicated is the content of the message. The realizations of these three participants in communicative process can be studied in the following example.

- (15) Mg Lu Aye replied his parents that he wants to stay peacefully alone.
 a.

| | | | |
|--------------|--------------------------------|--------------|--------------|
| Communicator | Pro: auto communicative mental | Communicatee | Communicated |
| Subject | Predicator | Complement | Complement |

- b. မောင်လူအေးလည်း အေးအေးနေပါရစေဟူ၍သာလျှင် မိခင်ဖခင်တို့ထံသို့ စာပြန်လိုက်လေ၏။
 maunlueaye:-le aye:aye:-nay- mikhin-phakhin- sar-pyan-laiklayi.
 bayazay=hueywayttharhlyin dot-htanthot
 Mg.Lu.Aye- peacefully-stay-POLREQ=COMP mother-father- letter-reply-
 ADDCONN PLMARK-ALL PFV.DECL.SENTSUF

| | | | |
|--------------|--------------|--------------|--------------------------------|
| Communicator | Communicated | Communicatee | Pro: auto communicative mental |
| Subject | Complement | Complement | Predicator |

(Science Mg Wa 1998:16)

The Communicator and the Communicatee in communicative processes of English and Myanmar show the same potential of realization by a proper noun or a nominal group as in (15a) and (15b). Contrary to the Communicator and the Communicatee, the Communicated can be realized not only by a pronoun or a proper noun or a nominal group but also by a finite or non finite clause. For instance, in English and Myanmar communicative mental process clauses (15a) and (15b), the Communicated is conflated with the Complement and is realized by a relative clause. Table 3-4 illustrates a comparison of realizations of participants in mental processes in English and Myanmar.

Table 3-4: A comparison of realizations of participants in mental processes in English and Myanmar configurations

| Process type | Subtype of mental process | Participant | Realization of participant in English | Realization of participant in Myanmar |
|--------------|---------------------------|-------------|--|--|
| mental | emotive | Emoter | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with nominative case marker: - သည့် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Phenomenon | pronoun, proper noun, nominalization, nominal group, finite or non-finite clause | pronoun, proper noun, nominalization, nominal group, finite or non-finite clause with objective case marker: -ကို /go/ |
| | desiderative | Desiderator | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with nominative case marker: - သည့် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Phenomenon | pronoun, proper noun, nominalization, nominal group, finite or non-finite clause | pronoun, proper noun, nominalization, nominal group, finite or non-finite clause with objective case marker: -ကို /go/ |
| | perceptive | Perceiver | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with or without nominative case marker |
| | | Phenomenon | pronoun, proper noun, nominalization, | pronoun, proper noun, nominalization, nominal |

| | | | | |
|--|---------------|--------------|---|--|
| | | | nominal group, finite or non-finite clause | group, finite or non-finite clause with objective case marker: -တို့ /go/ |
| | cognitive | Cognizant | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with or without nominative case marker |
| | | Phenomenon | nominal group, finite or non-finite clause | nominal group, finite or non-finite clause with objective case marker: -တို့ /go/ |
| | communicative | Communicator | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with nominative case marker: -သည့် /the/ or -က /ga/ |
| | | Communicatee | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with objective case marker: -တို့ /go/, -သို့ /thot/ or -အား /arr/ |
| | | Communicated | pronoun, nominal group, finite or non-finite clause | pronoun, nominal group, finite or non-finite clause |

3.3.3 Realizations of participant roles in English and Myanmar relational processes

According to He's (2022) new model of Chinese transitivity system, relational processes are divided into seven subtypes: autonomous and influential attributive, identifying, locational, directional, possessive, correlational and existential relational processes. The two major participants involved in autonomous attributive relational process are Carrier and Attribute. The Carrier is typically realized by a noun or a nominal group. The PR Attribute is the PR which expresses the class type of an entity, so it is realized by a nominal group. In some attributive processes, the Attribute is covert when the verb described by the process realizes the quality of an entity. The following examples provide a comparison of realizations of participants in autonomous attributive relational processes of English and Myanmar.

- (16) a. Kino is a brave man.

| | | |
|---------|---------------------|------------|
| Carrier | Pro: auto attri rel | Attribute |
| Subject | Finite/Predicator | Complement |

(John Steinbeck 1945: 69)

- b. ကိနိုသည် ရဲရင့်သူ ဖြစ်သည်။

keno-the yeyint-thue phyit-the.

Kino-SBJMARK brave-man COP-PRS.DECL.SENTSUF

| | | |
|---------|------------|---------------------|
| Carrier | Attribute | Pro: auto attri rel |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 140)

- (17) a. U Pho Thaung's daughter, Ma Hla Tin is lovely.

| | | |
|---------|---------------------|------------|
| Carrier | Pro: auto attri rel | Attribute |
| Subject | Finite/Predicator | Complement |

- b. ဦးဖိုးသောင်း၏သမီး မလှတင်သည် ချစ်စဖွယ်ကောင်း၏။

ue:phoethaunn-i-thamee mahlatin-the chitsaphwekaunn-i.

U.Pho.Thaung-GEN-daughter Ma.Hla.Tin-SBJMARK be.lovely-PRS.DECL.SENTSUF

| | |
|---------|---------------------|
| Carrier | Pro: auto attri rel |
| Subject | Finite/Predicator |

(Science Mg Wa 1998: 20)

The process type in (16a) and (16b) is both attributive relational in which the Carrier and the Attribute show the same potential of realization by a proper noun or a nominal group in English and Myanmar. In English attributive relational process clause (17a), the Carrier (U Pho Thaung's daughter, Ma Hla Tin) is conflated with the Subject and is realized by a nominal group, and the Attribute (lovely) is conflated with the Complement and is realized by an adjective which represents the quality of the Carrier. On the other hand, in Myanmar attributive relational process clause (17b), there is no PR Attribute, and the attributive process is realized by a verb 'be lovely'; the Carrier ဦးဖိုးသောင်း၏သမီး /ue:phoethaunn-i-thamee mahlatin-the/ 'U Pho Thaung's daughter, Ma Hla Tin' is conflated with the Subject realized by a nominal group in

nominative case with a nominative affix -ေည် /the/.

The two main PRs involved in autonomous identifying relational process are the Token and the Value in terms of He's (forthcoming) new model of Chinese transitivity system. The structural configuration of this subtype of relational process in English is Token + Process + Value (or) Value + Process + Token, while that of relational process in Myanmar is Token + Value + Process (or) Value + Token + Process. The position of the Token and the Value is reversible. The realizations of the Token and the Value by a nominalization, a nominal group or a finite or non-finite clause in autonomous identifying relational processes of English and Myanmar can be seen as in (18a) and (18b).

- (18) One of the most important is being able to make Human
a. necessities for the development of a Capital develop more and
country more.

| Token | Pro: auto idenrel | Value |
|---------|-------------------|------------|
| Subject | Finite/Predicator | Complement |

- b နိုင်ငံ ဖွံ့ဖြိုးတိုးတက် အရေးပါဆုံး လိုအပ်ချ လူသားအရ အားကောင်းသည်ထ ပြုလုပ် ဖြစ်သည်။
တစ်နိုင်ငံ ရေးအတွက် သော က်တစ်ရပ် င်းအနီးကို က်အားကောင်းအော နိုင်ရေး
င်င် မှာ င် ဝင်
nain phwintphyo ayaye:pa loetchet luetharra arrkaunnthehteta pyulo phyit-
ngan etoetetyaye: rzonnth -ta-yet- yinnahne rrkaunn-aun ke- the.
-ta- -atwet w hmar e-go nain-
nain yaye:-
ngan bin
coun developmen most.imp necessit Human.C develop.more.an make- COP-
try- t-for.PURP ortant y-one- apital- d.more-INF.PURP CAPAM PRS.DEC
one- CLF- OBJMARK OD- L.SENTS
CLF SBJMARK NMLZ- UF
EMPM
ARK

| Token | Value | Pro: auto iden rel |
|---------|------------|--------------------|
| Subject | Complement | Finite/ |

(https://www.burmalibrary.org/sites/burmalibrary.org/files/obl/mal_14.3.19.pdf)

The same potential of realization of the Token by a nominal group in identifying relational process can be observed in English and Myanmar. For instance, in English identifying relational process clause (18a), the Token (one of the most important necessities for the development of a country) is conflated with Subject and is realized as a nominal group, while the Value (being able to make Human Capital develop more and more) is conflated with Complement and is realized as a non-finite clause. On the other hand, in Myanmar identifying relational process clause (18b), the Token နိုင်ငံတစ်နိုင်ငံ ဖွံ့ဖြိုးတိုးတက်သရားအတွက် အသရားပါဆုံးသော လိုအပ်ချက်တစ်ရပ်ပြာ /nainngan-ta-nainnganphwintphyoetoetetyaye:-atwet ayaye: parzonnthaw loetchet-ta-yet-hmar/ 'one of the

most important necessities for the development of a country' is conflated with Subject and is realized by a nominal group in nominative case marked by a nominative suffix -ပြာ /hmar/, while the Value လူသားအရင်းအနှီးကိုအားသကောင်းည်ထက်အားသကောင်းသအောင် ဖပုလုပ်နိုင်သရား/luetharrayinnahnee-go arrkaunnth- htetarrkaunn aun pyuloke-nain-yaye:/ 'being able to make Human Capital develop more and more' is conflated with Complement and is realized by a nominalization. In (18a) and (18b), although the Token in English and Myanmar identifying relational processes shows the same potential of realization by a nominal group, the Value is realized differently as a non-finite clause in English and as a nominalization in Myanmar.

The two main participants involved in autonomous locational relational process are Carrier and Location. Structurally, the Carrier is typically realized by a noun or nominal group which is either animate or inanimate; the Location is typically realized by a prepositional phrase. Consider the following example.

- (19) a. The town lay on a broad estuary.

| | | |
|---------|-------------------|------------|
| Carrier | Pro: auto loc rel | Location |
| Subject | Predicator | Complement |

(John Steinbeck 1945: 17)

- b. မြို့သည် မြစ်ဝကျယ်၏ ကမ်းပေါ်တွင် တည်ထားသည်။

myot-the myitwakye-i kann-portwin tehtarr-the.
town-SBJMARK estuary-GEN bank-on.LOC lie.PFV-DECL.SENTSUF

| | | |
|---------|------------|-------------------|
| Carrier | Location | Pro: auto loc rel |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 33)

The two main participants involved in autonomous directional relational process are Carrier and Direction: Source/Path/Destination. Structurally, the Carrier is typically realized by a noun or nominal group which is either animate or inanimate; the Direction: Source/Path/Destination is typically realized by a prepositional phrase. Consider the following example.

- (20) a. The smoke came from those brush houses.

| | | |
|---------|-------------------|-------------------|
| Carrier | Pro: auto dir rel | Direction: Source |
| Subject | Predicator | Complement |

- b. ထိုတဲများမှလည်း မီးခိုးများ တက်လာသည်။

hto-te-myarr-hma-le meekhoe-myarr tet-lar-the.
DEM-brush.house-PLMARK-ABLMARK- smoke-PLMARK rise-come-
ADDCONN PRS.DECL.SENTSUF

| | | |
|-------------------|---------|-------------------|
| Direction: Source | Carrier | Pro: auto dir rel |
| Complement | Subject | Finite/Predicator |

The two main participants involved in autonomous possessive relational process are Possessor and Possessed. Structurally, the Possessor and the Possessed are typically realized by a noun or nominal group which can be either animate or inanimate. Consider the following example.

(21) a. Kino has got the Pearl of the World.

| | | |
|-----------|--------------------------|------------|
| Possessor | Pro: auto possessive rel | Possessed |
| Subject | Predicator | Complement |

b. ကိနိုသည် ဧရာမပုလဲကြီးကို ရထားသည်။
keno-the ayyarma-pale-gyee-go yahtarr-the.
Kino-SBJMARK great.MOD-pearl-AUG-OBJMARK get.PFV-DECL.SENTSUF

| | | |
|-----------|------------|--------------------------|
| Possessor | Possessed | Pro: auto possessive rel |
| Subject | Complement | Finite/Predicator |

(Htin Lin 1999: 50-51)

The two main participants involved in autonomous correlational relational process are Correlator1 and Correlator2. Structurally, the Correlator1 and the Correlator2 are typically realized by a noun or nominal group which can be either animate or inanimate. Consider the following example.

(22) a. The greenish yellow matches with her golden skin.

| | | | |
|-------------|-------------------|------------|-------------|
| Correlator1 | Pro: auto cor rel | PrEx | Correlator2 |
| Subject | Finite/Predicator | Complement | |

b. စိမ်းဝါရောင် ပါတိတ်ဝမ်းဆက် သူ၏ ရွှေရောင်ဝင်းဆက်သော အသားအရေနှင့် လိုက်ဖက်လှသည်။

· မှာ ငွ်
seinnwaryaun parteikwannse thue shweyaunwinnsetth atharrayay- laikphet-hlathe.
t-hmar -i aw hnint
greenish.yello batik-SBJMARK 3SG- golden skin-COM match-
w GEN PRS.DECL.SENTSUF

| | | |
|-------------|-------------|-------------------|
| Correlator1 | Correlator2 | Pro: auto correl |
| Subject | Complement | Finite/Predicator |

(Journal Kyaw Ma Ma Lay 1957: 125)

The two main participants involved in autonomous existential relational process are Existent and Location. Structurally, the Existent is typically realized by a noun or nominal group, while the Location is typically realized by a prepositional phrase. These participants show the same potential of realization as in (23a) and (23b).

(23) a. Across the brush fence were other brush houses,

| | | |
|----------|----------------------------------|------------|
| Location | Pro: auto existential relational | Existent |
| Subject | Predicator | Complement |

| | | | |
|----|----------------------------------|---------------------------|-------------------------------------|
| b. | ချုံတန်းဝင်းတား၏တစ်ဖက်တွင် | အခြားသစ်ခက်တဲများ | ရှိသည်။ |
| | chontannwinntarr-i-ta-phet- twin | acharr-thitkhette-myarr | shi-the. |
| | brush.fence-GEN-one-side-LOC | other-brush.house- PLMARK | exist-PRS.DECL.SENTSUF |
| | Location | Existent | Pro: auto existential relational |
| | Subject | Complement | Finite/Predicator |

Table 3-5 illustrates a comparison of realizations of participants in relational processes in English and Myanmar configurations.

Table 3-5 A comparison of realizations of participants in relational processes in English and Myanmar configurations

| Process type | Subtype of relational process | Participant | Realization of participant in English | Realization of participant in Myanmar |
|--------------|-------------------------------|-------------|--|---|
| relational | attributive | Carrier | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with nominative case marker: -သည် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Attribute | nominal group, adjective | nominal group |
| | identifying | Token | a nominalization, a nominal group or a finite or non-finite clause | a nominalization, a nominal group or a finite or non-finite clause |
| | | Value | a nominalization, a nominal group or a finite or non-finite clause | a nominalization, a nominal group or a finite or non-finite clause |

| | | | | |
|--|-------------|---------------------------------------|-------------------------------------|---|
| | locational | Carrier | a noun or nominal group | a noun or nominal group with nominative case marker: -သည့် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Location | prepositional phrase | prepositional phrase |
| | directional | Carrier | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with or without nominative case marker: -သည့် /the/, -က /ga/ or -မှာ /hmar/ |
| | | Direction: Source/Path/Destination | prepositional phrase | prepositional phrase |
| | possessive | Possessor | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group with nominative case marker: -သည့် /the/, -တွင် /twin/ or -မှာ /hmar/ |
| | | Possessed | a noun or nominal group | a noun or nominal group |

| | | | | |
|--|---------------|-------------|--|--|
| | correlational | Correlator1 | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group in nominative case marked by nominative affix |
| | | Correlator2 | pronoun, proper noun, nominal group | pronoun, proper noun, nominal group |
| | existential | Existent | a noun or nominal group | a noun or nominal group |
| | | Location | prepositional phrase | prepositional phrase |

3.4 Comparison of realizations of circumstances in English and Myanmar transitivity structures

Circumstance or circumstantial element is the third component of the transitivity system that expresses an experiential meaning and closely associated with the processes. Different from processes and participants, circumstances are always optional elements rather than obligatory components of the clause, normally providing necessary information to make the meaning expressed by the clause more complete.

Structurally, circumstances are realized by circumstantial Adjuncts which contribute to the experiential meaning of the clause. They tell us when, where, how, or why a process takes place. Experiential Adjuncts realize Circumstantial Roles of time, which can be further classified into time position, duration, repetition, periodic frequency and usuality, and other Circumstantial Roles expressing place, accompaniment, instrument, comparison, concurrent state, subsequent state, manner, method, body part, degree and process manner (He et al. 2015: 48). In accordance with Fawcett (2008: 168), these circumstantial Adjuncts are filled by units such as

nominal groups (e.g. the day after tomorrow and here), prepositional groups (e.g. in the park), quality groups (e.g. very slowly) and quantity groups (e.g. very much).

Adjuncts expressing quasi-experiential logical relationships express cause, ground, purpose, concession and condition. In addition, Adjuncts may also express validity, affective, interpersonal, inferential or discursual meaning. Both English and Myanmar circumstantial elements can be similarly realized by Halliday's (1994:151) nine main types of circumstantial elements: (1) Extent (distance or duration), (2) Location (spatial or temporal), (3) Manner, (4) Cause, (5) Contingency, (6) Accompaniment, (7) Role, (8) Matter, (9) Angle.

The spatial and temporal circumstantials of Extent and Location form a four-term set as shown in Table 3-6.

Table 3-6: Circumstantials of Extent and Location

| | Spatial | Temporal |
|---------------------------------------|--|---|
| Extent (including interval) | Distance ဆယ်မိုင်လောက် /semainlauk/ ‘for ten miles’ | Duration အတန်ကြာပြီ /atankyarbye/ ‘for a long time’ ခဏတာ /khanatar/ ‘for a short time’ Frequency နှစ်ကြိမ် /hnakyein/ ‘two times’ usuality အမြဲတမ်း /amyedann/ ‘always’ |
| Location | Place ကျွန်ုပ်တို့နေထိုင်သောတိုက်ရှေ့လူသွားလမ်းဘေး၌ /kyanokedot nayhtain=thaw taik-shayt luethwarrlann-baye:hnaik/ ‘by the walk in front of our apartment building’ တောထဲ၌ /taw-htehnaik/ ‘in the forest’ | Time ညနေတိုင်း /nyanay-dainn/ ‘every evening’ |

Extent construes the extent of the unfolding of the process in space-time: the distance in space over which the process unfolds or the duration in time during which the process unfolds. The interrogative forms for Extent are how far?, how long?, how many times? The typical structure of the Circumstantial expression of Extent is a nominal group with quantifier, either definite, e.g. ten miles, five days, or indefinite, e.g. many miles, a long time; this occurs either with or without preposition *for* (Halliday and Matthiessen 2014: 315).

There may be no Adjuncts, or one or more Adjuncts in a clause. The position of Adjuncts in English and Myanmar clauses is flexible. In English clauses, Adjuncts may come after Complements, before the Subject, between the Operator and the Main Verb, or between the Main Verb and the Complement. However, in Myanmar clauses, Adjuncts may come before and after the Subject and the Complement. As shown in (24a) and (24b), the circumstantial element expressing time duration which is realized by a prepositional phrase အတော်ကြာပီ /atankyarbye/ ‘for some

time' appears in the same position, after the Main Verb, at the end of English and Myanmar clauses. In English clause (24a), the circumstantial element expressing time duration which is realized by a prepositional phrase *for some time* comes after the Main Verb. Similarly, in Myanmar clause (24b), the circumstantial element expressing time duration which is realized by an adverbial group အတန်ကြာပြီ။ /atankyarbye/ 'quite long' also comes after the Main Verb.

- (24) a. The roosters had been crowing for some time.

| | | |
|---------------|------------------------|----------------------|
| Agent | Pro: auto doing action | Circumstance |
| Subject | Predicator | Adjunct |
| Nominal group | Verbal group | Prepositional phrase |

- b. ကြက်ဖုတို့ တွန့်နေသည်မှာ အတန်ကြာပြီ။
 kyetpha-dot tun-naythehmar atankyarbye.
 rooster-PLMARK crow-PROG.DECL.SENTSUF quite.long

| | | |
|---------------|------------------------|-----------------|
| Agent | Pro: auto doing action | Circumstance |
| Subject | Finite/Predicator | Adjunct |
| Nominal group | Verbal group | Adverbial group |

However, the positions of Circumstantial Roles of Extent and Location expressing Distance and Place respectively in (25a) and (25b) are different. In English clause (25a), Circumstantial Roles of Extent and Location which are conflated with Adjuncts and are realized by prepositional phrases come after the Main Verb, while in Myanmar clause (25b), they come between the Subject and the Main Verb.

- (25) a. Geologists had to walk about ten miles in the forest.

| | | | |
|---------------|------------------------|----------------------|----------------------|
| Agent | Pro: auto doing action | Circumstance | Circumstance |
| Subject | Predicator | Adjunct | Adjunct |
| Nominal group | Verbal group | Prepositional phrase | Prepositional phrase |

- b. ဘူမိဗေဒပညာရှင်တို့သည် တောထဲ၌ ဆယ်မိုင်လောက် လမ်းလျှောက်ခဲ့ကြသည်။
 buemibaydapyinnyarshin- taw-htehnaik se-main-lauk lannshauk-khet-gya-
 dot-the
 geologist-PLMARK-SBJMARK forest-in.LOC ten-mile- walk-PST-PLMARK-
 about.ABLMARK DECL.SENTSUF

| | | | |
|---------------|----------------------|----------------------|------------------------|
| Agent | Circumstance | Circumstance | Pro: auto doing action |
| Subject | Adjunct | Adjunct | Finite/Predicator |
| Nominal group | Prepositional phrase | Prepositional phrase | Verbal group |

There are three Circumstantial Roles of usuality, place and time involved in English clause (26a), where they are conflated with Adjuncts and the Circumstantial Roles of usuality are realized by adverbial groups (e.g. always); the CRs of time are realized by nominal groups (e.g. ညသေတိုင်း /nyanaydainn/ 'every evening'), prepositional phrase (e.g. လင်းပြီခီးအကြာတွင် /linnkharneeahmaun-twin/ 'in the near dark'), adverbial groups (e.g. အခုလက်တင် /akhulaye:din/ 'just now') or adverbial clauses

(e.g. ခေါ်သောကြောင့် /thue noe-naykhaik/ 'when he awakened'), and the CRs of place are realized by a prepositional phrase (e.g. along the river bank). There are two Circumstantial Roles of place and time involved in Myanmar clause (26b), where they are conflated with Adjuncts and the Circumstantial Role of time ညသေတိုင်း /nyanay-dainn/ 'every evening' is realized by a nominal group and the Circumstantial Role of place မြစ်ကြီးဝေးတွင် /myit-kannhnaphue:-twin/ 'along the river bank' is realized by a prepositional phrase

(26) I always walk along the river every evening.

a. bank

| | | | | |
|---------|-----------------|------------------------|----------------------|---------------|
| Agent | Circumstance | Pro: auto doing action | Circumstance | Circumstance |
| Subject | Adjunct | Predicator | Adjunct | Adjunct |
| Pronoun | Adverbial group | Verbal group | Prepositional phrase | Nominal group |

b. ကျန်တော်သည် ညနေတိုင်း မြစ်ကမ်းနဖူးတွင် လမ်းလျှောက်လေ့ရှိသည်။

kyanor-the nyanay-dainn myit-kannhnaphue:-twin lannshauk-laytshithe.

1SG.M-SBJMARK evening-every river-bank-LOC walk-PRS.DECL.SENTSUF

| | | | |
|---------|---------------|----------------------|------------------------|
| Agent | Circumstance | Circumstance | Pro: auto doing action |
| Subject | Adjunct | Adjunct | Finite/Predicator |
| Pronoun | Nominal group | Prepositional phrase | Verbal group |

The circumstantial element of Manner expresses Means, Quality, and Comparison. Halliday (2000: 154) states that means represents the means whereby a process takes place. Means basically answers the question 'What with?' and 'How?' It is typically realized by a prepositional phrase with the preposition *by* or *with* in English and ဖြင့် /phyint/ 'by' or နှင့် /hnint/ 'with' in Myanmar, for instance, မီးရထားဖြင့် /meeyahtarr-phyint/ 'by train' and ဖြင့်လှည်းနှင့် /myinnhle-hnint/ 'with horse-cart'. This subtype of circumstance is also realized by an adverbial clause in both languages. The circumstantial element of quality whose interrogative is 'How?' in English transitivity

structures is expressed by an adverbial group in a calmer tone in *He said in a calmer tone, too much* in *He ate too much*, or by *-ly* adverb *heavily* in *It is raining heavily*. The circumstantial element of quality in Myanmar transitivity structures is also expressed by an adverbial group ငြိမ်းတောအားရနှင့် /wannthararryahnint/ 'joyfully', or by an adverb သပျာ်သပျာ်ပါးပါး /pyorpyorparrrparr/ 'happily'. This subtype of circumstance is also realized by a prepositional phrase or an adverbial clause in both languages. Therefore, the circumstantial element of quality shows the same potential of realization in English and Myanmar transitivity structures. The

interrogative of a circumstantial expression of Comparison is ‘What...like?’ Comparison is expressed by a prepositional phrase with the preposition *like* or *unlike* in English, for example, *like a cat’s lips* in *Her lips drew back from her teeth like a cat’s lips*, and ကဲ့စို့ /ketthot/, ခြောက်

/thaphwe/, ပြာ /pamar/ ‘like’ in Myanmar as in the following example (27). This subtype of circumstance is also realized by an adverbial clause with *as* if in English and Myanmar transitivity structures.

(27) ဟွာနာ၏ နက်မှောင်သော မျက်လုံးများ ရှိန်းလက်သော ကြယ်ရိပ်များသဖွယ် အရောင်ထွက်သည်။

| | | | | | |
|---------|-------------|-----------|-------------|------------------|-----------------|
| | | မှ | | ယ် | |
| hwarnar | nethmauntha | myetlonn- | shonnlettha | kye-yeik- | ayaunhtwet-the. |
| -i | w | myarr- | w | myarr-thaphwe | |
| | | hma | | | |
| Juana- | dark.MOD | eye- | shiny.MOD | star-reflection- | glitter- |
| GEN | | PLMARK- | | PLMARK-CMPR | PRS.DECL.SENTSU |
| | | ABLMARK | | | F |

| | | |
|---------------|----------------------|------------------------|
| Carrier | Circumstance | Pro: auto attri rel |
| Subject | Adjunct | Finite/Predicator |
| Nominal group | Prepositional phrase | Verbal group |

‘Juana’s dark eyes glitter like little reflected stars.’ (Htin Lin 1999: 13)

The circumstantial element of Cause contains three subcategories: Reason (‘Why?/As a result of what?’), Purpose (‘What for?’) and Behalf (‘Who for?’). A circumstance of reason provides the reason for which a process takes place (Halliday 2000: 155). It is typically realized by a prepositional phrase with *through*, *of*, *because of*, *as a result of*, *thanks to*, etc. A circumstance of reason can also be realized as an adverbial clause with *because* or *as* in *We have to be there early*

as it is Friday. Similarly, in Myanmar transitivity structures, a circumstance of reason is realized by a prepositional phrase with the preposition သကကောင့် /gyaunt/ ‘because of’ or by an adverbial clause with သောသကကောင့် /gyaunt/ ‘because’. As in (28a) and (28b), a circumstance of reason, the sub-category of cause in English and Myanmar transitivity structures is conflated with Adjunct and is realized by an adverbial clause with *because*.

(28) a. Because the story has been it has taken root in every man’s mind.
told so often,

| | | | | |
|------------------|----------|------------------------------|------|----------------------|
| Circumstance | Existent | Pro: auto existential rel | PrEx | Location |
| Adjunct | Subject | Predicator | | Complement |
| Adverbial clause | Pronoun | Verbal group | | Prepositional phrase |

| | | | | | | |
|---|------------|------------|--------------|----------|-------------|-----------------------|
| b | ဤအကြောင်း | မကြာခဏ | ပြောကြသဖြင့် | လူတိုင်း | စိတ်အာရုံထဲ | အမြဲစိတ်တွယ်လျက် |
| . | ကို | | ၌ | ၏ | ယ် | စွဲမြဲနေသည်။ |
| | e-akyaunn- | makyarkhan | pyaw-gya- | lue- | seikaryon- | amyittwehlyetswemye |
| | go | a | thaphyint | dainn-i | htewe | -naythe. |
| | DEM-story- | often | tell- | person- | mind-in.LOC | root-PRS.DECL.SENTSUF |
| | OBJMARK | | PLMARK- | every- | | |
| | | | CAUS | GEN | | |

| | | | |
|------------------|--|----------------------|---------------------------|
| Circumstance | | Location | Pro: auto existential rel |
| Adjunct | | Complement | Finite/Predicator |
| Adverbial clause | | Prepositional phrase | Verbal group |

A circumstance of purpose whose interrogative is ‘What for?’ represents the intention for which a process takes place. It is typically realized by a prepositional phrase with *for*, *for the purpose of*, *for the sake of*, *in the hope of*, etc. For example, *for* in *Let’s eat out for dinner*. It is also realized by an infinitival clause; for example, *in order to* in *Study hard in order to pass the exam*. A circumstance of purpose indicates the same potential of realization as a preposition phrase or an infinitival clause in both English and Myanmar. As (29a) and (29b) show, a circumstance of purpose shows the same potential realization as an adverbial clause, i.e. an infinitival clause in English and Myanmar transitivity structures.

- (29) a. The early pigs were already beginning their ceaseless turning of twigs and bits of wood to see whether anything to eat had been overlooked.

| | | | |
|---------------|------------------------|---------------|--------------------|
| Agent | Pro: auto doing action | Affected | Circumstance |
| Subject | Predicator | Complement | Adjunct |
| Nominal group | Verbal group | Nominal group | Infinitival clause |

b စောစော ဝက်များ သစ်ကိုင်း ထင်းချောင်းများ စားစရာ ရလို့ရ မရပ်မနား ထိုးလှန်ရှာဖွေလျှ
 . ဝ သည် များ၊ အောက်၌ အကျန်အကြွင်း ငြား ကံရှိကြပြီ။
 နိုးနေ
 လေးများ
 ဝေ

sawsa wet- thitgai htinnchaunn- sarrzayar- yalo mayatma htoehlan-
 w- myarr- nn- myarr- akyanakywi ya- narr sharphway-
 noe- the myarr, aukhnaik nn-laye:- nyarr hlyetshi-gya-
 nay=t myarr bye.
 haw

early- pig- twig- wood- food- get- ceaseless turn-search-
 awake PLMAR PLMAR PLMARK- remaining- PURP ly PROG-PLMARK-
 - K- K under.LOC DIM-PLMARK DECL.SENTSUF
 PROG= K
 REL

| | | | |
|---------------|------------------|-----------------|------------------------|
| Agent | Circumstance | Circumstance | Pro: auto doing action |
| Subject | Adjunct | Adjunct | Finite/Predicate or |
| Nominal group | Adverbial clause | Adverbial group | Verbal group |

A circumstance of behalf whose interrogative is 'Who for?' represents a person on whose behalf or for whose sake the action is undertaken. It shows the same potential of realization by a prepositional phrase with the preposition *for*, *for the sake of*, *in favor of*, *on behalf of* in English and အတွက် /atwet/ 'for' in Myanmar. In addition, in Myanmar transitivity structures, a circumstance of behalf is realized by a nominal group, for example, လှလှကိုယ်စား /hlahla-kozarr/ 'on behalf of Hla Hla'.

Circumstantials of Contingency whose interrogative is 'If what?' include three subcategories: Condition, Concession, Default. Circumstantials of condition are realized by a prepositional phrase with *in case of*, *in the event of* or by an adverbial clause with *if*, *in case* in English transitivity structures, whereas they are realized by an adverbial clause with လျှင် /hlyin/, ရင် /yin/ 'if' in Myanmar transitivity structures. Concession circumstantials are realized by a prepositional phrase with the preposition *in spite of*, *despite* or by an adverbial clause with *although*, *unless* in English transitivity structures. However, they are realized by an adverbial clause with သော်လည်း /thorle/ သဖြင့် /paymet/ 'although' in Myanmar transitivity structures.

Circumstantial expressions of default are typically realized by a prepositional phrase with a complex preposition such as *in the absence of* and *in default of* in English transitivity structures. On the other hand, circumstantial expressions of default in Myanmar are realized by an adverbial clause.

A circumstantial expression of accompaniment whose interrogative is 'Who/ What else?' and 'Who/What with?' is distinguished into two subcategories: comitative and additive. A comitative circumstantial is expressed by a prepositional phrase with the preposition *with* for positive aspect and *without* for negative; for example, *with* in *She is coming to the theatre with her sister*. An additive circumstantial is typically realized by a prepositional phrase with the preposition *besides*, *as well as* for positive aspect

and *instead of* for negative; for example, *instead of* in *You probably picked up my keys instead of yours*. Similarly, in Myanmar transitivity structures, comitative circumstantials are realized by a prepositional phrase with the prepositions နှင့် /hnint/ 'with' or နှင့်အတူ /hnintatue/ 'together with', and additive circumstantials are also realized by a prepositional phrase with the preposition အဖွင့် /apyin/ 'besides'.

A circumstance of Role has two subcategories: Guise and Product. The interrogative of a circumstance of Role is 'What as?' and conveys the meaning of 'be' (attribute or identity) in the form of a circumstance (Halliday 2000: 157). A circumstantial expression of Role is typically realized by a prepositional phrase with the preposition *as* or other complex prepositions such as *by way of*, *in the role of*, *in the form of*, *in the shape of* and *in the guise of*; for example, *in the role of* in *He is coming back here again in the role of detective*. Another small sub-category of Role, product circumstantial answers the question 'What into?', construing the meaning of 'become'. This circumstance of Product is realized by a prepositional phrase with the preposition *into* as in *They've turned the house into an office*. Circumstantials of Role are realized by a prepositional phrase with the preposition အဖြစ် /aphyt/ 'as', 'into' in Myanmar transitivity structures in the same way as English.

According to (Halliday 2000: 157), a circumstance of Matter is closely associated with verbal processes; it is the circumstantial equivalent of the Verbiage, the content of the message. The interrogative of this category is 'What about?', and the circumstantial element of matter indicates the same potential of realization as a prepositional phrase in English and Myanmar transitivity structures. The common prepositions expressing matter in English are *about*, *concerning*, *of* and *with reference to*, while those in Myanmar are အသကကင်း /akyaunn/ 'about' and နှင့်ပတ်သက်၍ /hnintpatthetywayt/ 'concerning'.

A circumstance of Angle which corresponds to the interrogative ‘From what point of view?’ is realized by a prepositional phrase with the preposition *according to, in accordance with, in terms of, in the view/opinion of, from the standpoint of*. Similarly, the circumstance of Angle also shows the same potential of realization as a prepositional phrase with the preposition အရ /aya/ ‘according to’ in Myanmar transitivity structures. Typically, most circumstances in English and Myanmar transitivity structures are

realized by prepositional phrases. But prepositional phrases do not always function as circumstances. In Myanmar, as in English, the correspondence established between the semantic category of circumstance and its realization as a prepositional phrase is misleading. There are some universally recognized exceptions. See Example (30) where a prepositional phrase takes the participant role of Range in behavioral process because it is an integral element without which the meaning is odd in the clause.

| | | | | | |
|----------------|---------|---------------------|-----------|-------------|-----------------|
| (30) ထို့နောက် | အမိုးမှ | တွဲလောင်းဆွဲချထားသေ | ကိုယိုတီး | ပုခက်သေတ္တာ | လှမ်းကြည့်လိုက် |
| တွင် | | ၀ | တိုး၏ | ဆီသို့ | သည်။ |
| htotnaukt | amoe- | twelaunnswechahta | koyoteet | pakhetthitt | hlannkyi- |
| win | hma | rrthaw | oe-i | ar-sethot | laikthe. |
| then | roof- | hanging | Coyotito | box-ALL | look- |
| | ABLMA | | -GEN | | PFV.DECL.SEN |
| | RK | | | | TSUF |

| | | | |
|--|---------------|----------------------|---------------------------------|
| | (Behr) | Range | Pro: auto behaving action |
| | (Subje ct) | Complement | Finite/Predic ator |
| | | Prepositional phrase | Verbal group |

‘And then he looked at the hanging box where Coyotito slept.’ (Htin Linn 1999: 12)

The structure of prepositional phrase in English is preposition + nominal group, while the structure of prepositional phrase in Myanmar is nominal group + preposition. The traditional mapping from prepositional phrases to Adjunct to circumstance is rather unsatisfactory for analyzing the transitivity status of prepositional phrase in Myanmar. Prepositional phrase of place for example, are often obligatory from both a syntactic and semantic viewpoint and relegating them to the outer ring as circumstances ‘merely attendant on the process’ does not reflect this

integral role. It would also seem essential to draw clear distinctions between the various levels of analysis (semantic, syntactic and pragmatic). Some prepositional phrases, whilst optional from a syntactic viewpoint, are nevertheless strongly bound to the process because they carry an important information load. For example, the prepositional phrase *onto the table* plays a participant function as a Direction: Destination in action process clause *She put her bag onto the table*. Most prepositional phrases expressing place and direction takes the participant roles of

locational and directional processes, but not the circumstantial roles in English and Myanmar transitivity structures.

Circumstances in English and Myanmar transitivity structures are also realized by nominal groups (e.g. တစ်နေ့လုံး /tanaytlonn/ ‘all day’), adverbial groups (မြဲမြဲ /mayatmanarr/ ‘ceaselessly’), adverbial clauses with because, if, although, when and infinitival clauses. Table 3- 7 summarizes the realizations of circumstances in English and Myanmar transitivity configurations

Table 3-7: Realizations of circumstances in English and Myanmar transitivity configurations

| Type of Circumstance | | English | | | | Myanmar | | | |
|----------------------|------------|---------------|----------------------|-----------------|------------------|---------------|----------------------|-----------------|------------------|
| | | Nominal group | Prepositional phrase | Adverbial group | Adverbial clause | Nominal group | Prepositional phrase | Adverbial group | Adverbial clause |
| Extent | Distance | | + | + | | | + | + | + |
| | Duration | + | + | + | + | + | | + | + |
| Location | Place | | + | | | | + | | + |
| | Time | + | + | + | + | + | + | + | + |
| Manner | Means | | + | | | | + | | |
| | Quality | | | + | + | | | + | + |
| | Comparison | | + | | + | | + | | + |
| | Degree | | | + | | | | + | |
| Cause | Reason | | + | | + | | + | | + |
| | Purpose | | + | | + | | + | | + |
| | Behalf | | + | | | + | + | | |
| Contingency | Condition | | | | + | | | | + |
| | Concession | | + | | + | | | | + |
| | Default | | + | | + | | | | + |

| | | | | | | | | | |
|---------------|------------|--|---|--|--|---|---|--|---|
| Accompaniment | Comitative | | + | | | | + | | |
| | Additive | | + | | | | + | | + |
| Role | Guise | | + | | | | + | | |
| | Product | | + | | | + | | | + |
| Angle | | | + | | | | + | | |

Extent construes the distance in space and the duration in time of the unfolding of the process (Halliday and Matthiessen 2014: 264). As Table 5-6 indicates, circumstantials of distance in English transitivity structures are realized by a prepositional phrase or an adverbial group; for example, the prepositional phrase *for miles* in *You can see for miles from here* and the adverbial group *about four miles* in *That night they went about four miles*. On the other hand, circumstantials of distance in Myanmar transitivity structures are realized by a prepositional phrase, an adverbial group or an adverbial clause. The realization of the circumstantial of distance as an adverbial clause can be seen in Myanmar transitivity structures but not in English. Consider the following example.

| | | | | | | | | | | | | |
|------|-----------|-----------------------|----------------------|-----------------------------|-----------------------|-------------------|---------------|--------------------|-----------------|-----------------|-----------------------|---------------------------|
| (31) | | ပတ်ဝန်းကျင်ရှိ | အရာအားလုံးတို့သည် | ကွယ်ပျောက်သွားကြကုန်လျက် | လှူဒါန်းသော | မြေနီလမ်းနှင့် | လှသာလျှင် | ဤဘေးကင်း၌ | ရှိကတသတ်ပတ်လုံး | တစ်သက်ပတ်လုံး | မဆုံးနိုင်အောင် | လျှောက်ပေးလိုက်မည်။ |
| | | patwinnk-yin-shi | ayar-arrrlon-dot-the | kwepya-kthwarr-gyagon=hlyet | hshau-k-nay=thaw | myayn-elann=hnint | hla-tharhlyin | e-lawk-agyee-hnaik | shi=gar | tathe-tpatl-onn | ma-sonn-nain-aun | shauk-naylaik-chinmi-the. |
| | | surr-oun-ding-LOC | thing-all-SBJMARK | disappea-r.PFV-PLMARK=CONJ | Hl-a-PROG=RELOC | path=a-nd.CO-NJ | HI-a-EXCL | DEM-worl-d-LOC | exi-st=CO-NJ | whol-e.life | NEG-end-CAPAMO D- INF | walk-OPT.PRS-DECL.SENTSUF |
| | (Ag) | Cir: Concurrent State | | | Cir: Concurrent State | | | | | Cir: Duration | Cir: Distance | Pro: action |
| | (Subject) | Adjunct | | | Adjunct | | | | | Adjunct | Adjunct | Finite/Predicator |
| | | Adverbial clause | | | Adverbial clause | | | | | Nominal | Adverbial | Verbal group |
| | | | | | | | | | | group | adverbial clause | |

‘All the things in the surroundings had disappeared and Hla wanted an endless walk for the whole life, thinking as if there were only Hla and the path where she was walking in the world.’ (Htin Lin 1999: 16)

Circumstantials of duration in English transitivity structures are realized by a nominal group with definite or indefinite quantifier (e.g. *all day* in *They sat silently all day in the darkness of the house*), a prepositional phrase with preposition *for* (e.g. *for some time* in *The roosters had been crowing for some time*), an adverb of time (e.g. *usually* in *They usually go for a walk*; *immediately* in *Sam immediately offered to help*) or an adverbial clause (e.g. *until she had finished speaking* in *He waited until she had finished speaking*). However, circumstantials of duration in Myanmar transitivity structures are realized by a nominal group with definite or indefinite quantifier, an adverb of time or an adverbial clause. Unlike English, the realization of the circumstantial of duration as a prepositional phrase cannot be found out in Myanmar transitivity structures. Consider the following examples.

- | | | | | | |
|------|-----------------|------------|---------------|----------------------|----------------------------------|
| (32) | သူတို့သည် | တစ်နေ့လုံး | အိမ်၏ | အမှောင်ပိုင်းတွင် | ထိုင်နေကြသည်။ |
| | thuedot-the | tanaytlonn | ein-i | ahmaunbainn- twin | htain-nay-gya-the. |
| | 3PL- SBJMARK | all.day | house- GEN | darkness-LOC | sit-PROG-PLMARK- DECL.SENTSUF |

| | | | |
|---------|------------------|----------------------|-------------------|
| Agent | Cir: duration | Cir: place | Pro: action |
| Subject | Adjunct | Adjunct | Finite/Predicator |
| Pronoun | Nominal group | Prepositional phrase | Verbal group |

'They sat silently all day in the darkness of the house.' (Htin Lin 1999: 127)

- | | | | | | | | |
|------|-----------|------------|-------|---------|------------------|--------------|--------------|
| (33) | ကင်းမြီးဧ | အဆိပ်ဆူးပါ | အမြီး | နောက်ဘ | တဖြောင့်တည်းရှိဧ | ချက်ချင်းဆို | ကော့ထောင်ပစ် |
| | ောက်၏ | သော | သည် | က်တွင် | ော်လည်း | သလို | လိုက်သည်။ |
| | kinnmee | aseiksue: | ahm | naukph | taphyaunthtesh | chetchinn | korthtaun- |
| | kauk-i | parthaw | ee- | et-twin | i=thawle | sothalo | pyitlaikthe. |
| | | | the | | | | |
| | scorpion | stinging | tail- | behind | be.straight=alt | in.a.flash. | whip.up- |
| | -GEN | | SBJM | | hough.CONJ | of.time | PFV.DECL.SEN |
| | | | ARK | | | | TSUF |

| | | | |
|---------------|------------------|--------------------|-------------------|
| (Ag) | Cir: Concession | Cir: duration | Pro: action |
| (Subj ect) | Adjunct | Adjunct | Finite/Predicator |
| | Adverbial clause | Adverbial group | Verbal group |

‘His stinging tail was straight out behind him, but he could whip it up in a flash of time.’
(Htin Lin 1999: 19)

(33) မပြန်ဖြစ်သည်မှာ တစ်လကျော်သွားပြီ။

ma-pyanphyit-thehmar ta-la-kyor-thwarrbye.

NEG-return-DECL.SENTSUF one-month-over-PFV.DECL.SENTSUF

| | | |
|--------|-------------------|------------------|
| (Ag) | Pro: action | Cir: duration |
| (Subj) | Finite/Predicator | Adjunct |
| | Verbal group | Adverbial clause |

'I have not returned home for over one month.' (Lae Twin Thar Saw Chit 161)

Location construes the place and time of the unfolding of the process (Halliday and Matthiessen 2014: 265). Circumstantials of place shows the same potential of realization by a prepositional phrase in English and Myanmar transitivity structures as in (34a) and (34b).

(34) a. Outside the door he squatted down.

| | | | |
|----------------------|---------|-------------------|------|
| Cir: place | Agent | Pro: action | PrEx |
| Adjunct | Subject | Finite/Predicator | |
| Prepositional phrase | Pronoun | Verbal group | |

(John Steinbeck 1945: 3)

b. တံခါးအပြင်ဘက်တွင် သူသည် ဆောင့်ကြောင့်ထိုင်လိုက်၏။

| | | |
|-----------------------|-------------|-----------------------------|
| dagarr-apyinbetwatwin | thue-the | sauntgyaunthtain-laiki. |
| door-outside | 3SG-SBJMARK | squat.down-PFV.DECL.SENTSUF |
| Cir: place | Agent | Pro: action |
| Adjunct | Subject | Finite/Predicator |
| Prepositional phrase | Pronoun | Verbal group |

(Htin Lin 1999:14)

However, the significant difference in the realization of the circumstance of place between English and Myanmar is that the circumstance of place is realized by an adverbial clause in Myanmar transitivity structures, but not in English.

(35) သရက်ပင်အနီး ရောက်လျှင် သက်သက်သည် ထိုင်ချလိုက်သည်။

thayet-pin-anee yauk=hlyin thetthet-the htaincha-laikthe.

mango-tree-near.LOC arrive=if.CONJ Thet.Thet-SBJMARK squat.down-PFV.DECL.SENTSUF

| | | |
|------------------|-------------|-------------------|
| Cir: place | Agent | Pro: action |
| Adjunct | Subject | Finite/Predicator |
| adverbial clause | Proper noun | Verbal group |

'Thet Thet squatted down near the mango tree.'

Manner has four subcategories: Means, Quality, Comparison and Degree. Circumstance of Means shows the same potential of realization by a prepositional phrase with prepositions such as *by*, *through*, *with*, *by means of*, *out of* and *from* in English and Myanmar transitivity structures. The realization of the circumstance of means as a prepositional phrase with prepositions such as ဖြင့် /phyint/ and နှင့် /hnint/ 'by', 'with' in Myanmar transitivity structure is illustrated by Examples (36) and (37).

- (36) သက်သက်သည် ချဉ်နဲ့နဲ့အသံကလေးဖြင့် ပြောနေသည်။

thetthet-the chinnetnet-athan-galaye:-phyint pyaw-nay-the.

Thet.Thet-SBJMARK weak-voice-DIM-INS speak-PROG-DECL.SENTSUF

| | | |
|--------------|----------------------|--------------------------------|
| Communicator | Cir: means | Pro: auto communicative mental |
| Subject | Adjunct | Finite/Predicator |
| Proper noun | Prepositional phrase | Verbal group |

'Thet Thet is speaking in a weak voice.'

- (37) လှသည် မျက်ရည်များကို လက်နှင့် ပွတ်သုတ်လိုက်သည်။

hla-the myetyay-myarr-go let-hnint putthoke-laikthe.

Hla-SBJMARK tear-PLMARK-OBJMARK hand-INS wipe-PFV.DECL.SENTSUF

| | | | |
|-------------|---------------|----------------------|-------------------|
| Agent | Affected | Cir: means | Pro: action |
| Subject | Complement | Adjunct | Finite/Predicator |
| Proper noun | Nominal group | Prepositional phrase | Verbal group |

'Hla wiped tears with hand.'

- (38) ဥဩသံသည်လည်း ဆိုးဆိုးဝါးဝါး အတောမသတ် အူနေဆဲပင်။

okeawthan-the-le soesoewarrwarr atawmathat ue-nayze-bin.

alert.sound-SBJMARK-ADDCONN badly continuously ring-PROG-DECL.SENTSUF

| | | | |
|---------------|-----------------|-----------------|----------------------------|
| Affected | Cir: quality | Cir: quality | Pro: auto happening action |
| Subject | Adjunct | Adjunct | Finite/Predicator |
| Nominal group | Adverbial group | Adverbial group | Verbal group |

'The alert sound is ringing badly and continuously.'

- (38) ဥဩသံမှာ နားထဲမှ ရင်ထဲပေါက်အောင်ပင် စူးရှသည်။

okeawthan-hmar narr-htehma yinhte-pauk-aun- sue:sha-the.

bin
alert.sound-SBJMARK ear-ABLMARK chest-burst-INF- be.loud-PRS.DECL.SENTSUF
EMPMARK

| | | |
|---------|--------------|---------------------|
| Carrier | Cir: quality | Pro: auto attri rel |
| Subject | Adjunct | Finite/Predicator |

Circumstance of Quality shows the same potential of realization by an adverbial group or an adverbial clause in English and Myanmar transitivity structures. Consider the following examples.

- (39) သူ့မျက်လုံးများမှာ ခြင်္သေ့မ၏ မျက်လုံးများပမာ အေးစက်မာကျောလှ၏။
 thu-myetlonn-myarr-hmar chinthaytma- myetlonn-myarr- aye:setmarkyawhla-i.
 i pamar
 3SG.GEN-eye-PLMARK- lioness-GEN eye-PLMARK-CMPR cold-
 SBJMARK PRS.DECL.SENTSUF

| | | |
|---------------|----------------------|---------------------|
| Carrier | Cir: comparison | Pro: auto attri rel |
| Subject | Adjunct | Finite/Predicator |
| Nominal group | Prepositional phrase | Verbal group |

‘Her eyes are cold just like the eyes of a lioness.’ (Htin Lin 1999: 24)

| | | | | | | | | | |
|------|-----------------|----------------------|---------------|----------------------------------|--------------------|----------------------|-----------|--------------|------------------------|
| (40) | ဟွာနာ သည် | ကြောက်လန့်ခြင်း | မရှိသော | မျက်လုံးပြူးပြွန်းပြီးများဖြင့် | သိုးငယ်က | သားသတ်သမားကို | ကြည့်သလို | ကီနိုအား | ကြည့်နေလေသည်။ |
| | hwar nar-the | kyaukla nt-chinn | ma-shi=t haw | myetlonn-pyue:-gyee-myarr-phyint | thoe-nge-ga | tharrthatth amarr-go | kyi-thalo | keno-arr | kyi-naylaythe. |
| | Juana - SBJMARK | fear-NMLZ | NEG-have =REL | eye-wide.MOD-AUG-PLMARK-INS | shee p-DIM-SBJMARK | butcher-OBJMARK | look-CMPR | Kino-OBJMARK | look-PROG.DECL.SENTSUF |
| | Behr | Cir: means | | | Cir: comparison | | | Ph | Pro: auto |
| | | | | | | | | | behaving action |
| | Subject | Adjunct | | | Adjunct | | | Complement | Finite/Predicator |
| | Proper noun | Prepositional phrase | | | Adverbial clause | | | Proper noun | Verbal group |

‘Juana stared at Kino with wide unfrightened eyes as if a sheep looked at the butcher.’ (Htin Lin 1999: 115)

Circumstance of Comparison shows the same potential of realization by a prepositional phrase with prepositions such as ပြာ /pamar/, ကဲ့စို့ /ketthot/, ဖြစ်ပုံ /thaphwe/, ဖြစ်ပုံ /thalo/ 'just like' or an adverbial clause with ဖြစ်ပုံ /thalo/ 'as if' in English and Myanmar transitivity structures. Consider the following examples.

- (41) ပုလဲကြီးက တော်တော် ကြီးတယ်။
pale-gyee-ga tortor kyee-de.
pearl-AUG-SBJMARK considerably big-PRS.DECL.SENTSUF

| | | |
|---------------|-----------------|---------------------|
| Carrier | Cir: degree | Pro: auto attri rel |
| Subject | Adjunct | Finite/Predicator |
| Nominal group | Adverbial group | Verbal group |

'The pearl is considerably big.'

Cause has three subcategories: Reason, Purpose and Behalf. Circumstance of Reason shows the same potential of realization by a prepositional phrase with prepositions such as *because of, as a result of, thanks to, due to, for want of, for, of, out of* and *through* or an adverbial clause with *because* in English and Myanmar transitivity structures. Consider the following examples.

- (42) အဲဒီငွေကြောင့် အားလုံး ဒုက္ခရောက်နေတာပေါ့။
ede-ngway-gyaunt arrlonn dokekhayauk-naydarport.
DEM-money-because.of all be.in.trouble-PRS.DECL.SENTSUF

| | | |
|----------------------|---------------|----------------------------|
| Cir: reason | Affected | Pro: auto happening action |
| Adjunct | Subject | Finite/Predicator |
| Prepositional phrase | Nominal group | Verbal group |

'Everyone is in trouble because of money.' (<http://sealang.net/burmese/bitext.htm>)

- (43) သူ နေမကောင်းသောကြောင့် ဆေးခန်းသို့ သွားခဲ့သည်။
thue nay<ma>kaunn=thawgyaunt saye:khann-thot thwarr-khet-the.
3SG well<NEG>=because.CONJ clinic-ALL go-PST-DECL.SENTSUF

| | | | |
|---------|------------------|----------------------|------------------------------------|
| Ag | Cir: reason | Dir: Des | Pro: auto doing action and dir rel |
| Subject | Adjunct | Complement | Finite/Predicator |
| Pronoun | Adverbial clause | Prepositional phrase | Verbal group |

'He went to the clinic because he was sick.' (<http://sealang.net/burmese/bitext.htm>)

Circumstance of Purpose shows the same potential of realization by a prepositional phrase with prepositions such as *or*, *for the purpose of*, *for the sake of* and *in the hope of* or an adverbial clause with infinitive in English and Myanmar transitivity structures.

Circumstance of Behalf in English transitivity structures is realized by a prepositional phrase (e.g. *on behalf of all students* in *He gave a speech at the ceremony on behalf of all students*). On the other hand, circumstance of Behalf in Myanmar transitivity structures is realized by a nominal group or a prepositional phrase.

Contingency has three subcategories: Condition, Concession and Default. Circumstance of Condition shows the same potential of realization by an adverbial clause with လျှင် /hlyin/, ရင် /yin/ ‘if’ in English and Myanmar transitivity structures; for example, *if it rains* in *We’ll stay at home if it rains*.

Circumstance of Concession in English transitivity structures is realized by a prepositional phrase with complex prepositions such as *in spite of* and *despite* (e.g. *in spite of his efforts* in *He failed the exam in spite of his efforts*). On the other hand, there is no realization of the circumstance of Concession as a prepositional phrase in Myanmar transitivity structures. We can see the same potential of realization of this circumstance as an adverbial clause with သော်လည်း /thorle/ ‘although’ in both languages.

Circumstance of Default in English transitivity structures is realized by a prepositional phrase with the preposition *without* or complex prepositions such as *in the lack of*, *in the absence of* and *in default of*. On the other hand, the circumstance of Default in Myanmar transitivity structures is realized as an adverbial clause with မ...ဘဲ /ma...be/ ‘without’ as in (44a) and (44b).

(44) a. Kino could see these things without looking at them.

| | | | |
|-------------|--------------------|---------------|----------------------|
| Perc | Pro: auto perc men | Ph | Cir: Default |
| Subject | Predicator | Complement | Adjunct |
| Proper noun | Verbal group | Nominal group | Prepositional phrase |

(John Steinbeck 1945: 4)

b. ထိုအခြင်းအရာအားလုံးကို ကီနိုသည် မကြည့်ဘဲနှင့် မြင်နေရသည်။
 hto-achinnayar-arrronn-go keno-the ma<kyi>behnint myin-nayyathe.
 DEM-thing-all-OBJMARK Kino-SBJMARK without<look> see-PRS.DECL.SENTSUF

| | | | |
|---------------|-------------|------------------|--------------------|
| Ph | Perc | Cir: Default | Pro: auto perc men |
| Complement | Subject | Adjunct | Finite/Predicator |
| Nominal group | Proper noun | Adverbial clause | Verbal group |

‘Kino could see these things without looking at them.’ (Htin Lin 1999: 16)

Accompaniment has two subcategories: Comitative and Additive. Circumstance of Comitative shows the same potential of realization by a prepositional phrase with prepositions such as နှင့် /hnint/ or ခုဲ /net/ ‘with’ and နှင့်အတူ /hnintatue/ ‘together with’ in English and Myanmar transitivity structures; for example, *with you* in *I will go with you*.

Circumstance of Additive shows the same potential of realization by a prepositional phrase with prepositions such as အဖ၀် /apyin/ ‘besides’ and အစ၀် /asarr/ ‘instead of’ in English and Myanmar transitivity structures, for example, *besides Nyi Nyi in Many boys besides Nyi Nyi were late* and *instead of ham in Could I have tuna instead of ham?* Moreover, the circumstantial of additive is also realized by an adverbial clause with အစ၀် /asarr/ ‘instead of’ in Myanmar transitivity structures as in (45).

- | | | | | | |
|------|----------|------------|------------------------|-------------|--------------|
| (45) | သူသည် | ဤနေရာတွင် | ထိုင်ရမည့်အစား | ထိုနေရာ၌ | ထိုင်သည်။ |
| | thue-the | e-nayyar- | htain-ya-myi-asarr | hto-nayyar- | htain-the. |
| | | twin | | hnaik | |
| | 3SG- | DEM-place- | sit-OBLG-DECL.SENTSUF- | DEM-place- | sit-PRS. |
| | SBJMARK | LOC | instead.of | LOC | DECL.SENTSUF |

| | | | |
|---------|------------------|----------------------|-------------------|
| Agent | Cir: additive | Cir: place | Pro: action |
| Subject | Adjunct | Adjunct | Finite/Predicator |
| Pronoun | Adverbial clause | Prepositional phrase | Verbal group |

‘He sat there, instead of here.’ (<http://sealang.net/burmese/bitext.htm>)

Role has two subcategories: Guise and Product. Circumstance of Guise shows the same potential of realization by a prepositional phrase with prepositions such as *as*, *by way of* and *in the role/shape/guise/form of* in English and Myanmar transitivity structures; for example, *in the form of TV advertising* in *People are bombarded with information in the form of TV advertising*. The realization of the circumstance of guise as a prepositional phrase with the preposition အဖြစ် /aphyit/ ‘as’ in Myanmar transitivity structure can be seen as in (46).

- | | | | | |
|------|-------------------------|-------------------------|---------------------|--|
| (46) | သူတို့ကိုလည်း | မြန်မာ့သမိုင်းတွင် | သူရဲကောင်းများအဖြစ် | ကမ္ဘာလုံးတစ်ဝန်းခံကြပါသည်။ |
| | thuedot-go-le | myanma- | thueyegaunn-myarr- | gabyeetinh-tarr-khet-gya-bar- |
| | | thamainn-twin | aphyit | the. |
| | 3PL-OBJMARK- ADDCONN | Myanmar- history-LOC | hero-PLMARK-ESS | inscribe-PST-PLMARK- POLMARK-DECL.SENTSUF |

| | | | |
|------------|-------------------------|----------------------|-------------------|
| Affected | Cir: place | Cir: guise | Pro: action |
| Complement | Adjunct | Adjunct | Finite/Predicator |
| Pronoun | Prepositional phrase | Prepositional phrase | Verbal group |

Circumstance of Product shows the same potential of realization by a prepositional phrase with the preposition *into* in English transitivity structures; for example, *into logs* in *Father uses a saw to cut the tree trunk into logs*, whereas this circumstance is realized by a nominal group or an adverbial clause with infinitive in Myanmar transitivity structures as in (47) and (48).

- (47) သူသည် ကိတ်မုန့်ကို လေးစိပ် စိပ်ခဲ့သည်။
 thue-the keikmont-go laye:-zeik seik-khet-the.
 3SG-SBJMARK cake-OBJMARK four-piece divide-PST-DECL.SENTSUF

| | | | |
|---------|---------------|---------------|-------------------|
| Agent | Affected | Cir: product | Pro: action |
| Subject | Complement | Adjunct | Finite/Predicator |
| Pronoun | Nominal group | Nominal group | Verbal group |

‘She divided the cake into four pieces.’

- (48) ချည်ခင်ကို အလုံး ဖြစ်အောင် ကျွန်ုပ် လုံးမည်။
 chekhin-go alonn phyit-aun kyanoke lonn-mye.
 yarn-OBJMARK ball become-INF 1SG.NOM wind-IRR.ASS

| | | | |
|---------------|-------------------------------|---------|-------------------|
| Affected | Cir: product | Agent | Pro: action |
| Complement | Adjunct | Subject | Finite/Predicator |
| Nominal group | Adverbial clause: infinitival | | Verbal group |

‘I’ll wind the yarn into a ball.’ (<http://sealang.net/burmese/bitext.htm>)

According to He (forthcoming), circumstance of matter is classified into a participant role of Communicated in autonomous communicative mental process. For example, in the communicative process clause *We generally talk of Africa*, *We* is taken as the Communicator, *Communicatee* and *Africa* is taken as the Communicated. This study follows He’s (forthcoming) new model of the transitivity system of Chinese, we will not discuss the

circumstance of matter in this thesis because it plays a participant function, not a circumstantial role in our discussion.

Circumstance of Angle shows the same potential of realization as a prepositional phrase with the preposition အရ /aya/ or အလိုက် /alaik/ ‘according to’ in English and Myanmar transitivity structures. See the following example.

- (49) အရည်အချင်းအလိုက် ထောက်ပံ့ကြေးတွေ ပေးတယ်။
 ayeachinn-alaik htaukpantkyaye:- paye:-de.
 qualification- dway
 according.to.ABLMARK stipend-PLMARK give-
 PRS.DECL.SENTSUF

| | | | |
|------|----------------------|---------------|-------------------|
| (Ag) | Cir: Angle | Af-Posd | Pro: action |
| | Adjunct | Complement | Finite/Predicator |
| | Prepositional phrase | Nominal group | Verbal group |

‘They give stipend according to qualification.’ (<http://sealang.net/burmese/bitext.htm>)

Abbreviations

Special abbreviations

Af Affected
 Af-Ca Affected-Carrier
 Af-Posd Affected-Possessed
 Af-Posr Affected-Possessor
 Ag Agent
 Ag-Ca Agent-Carrier
 Ag-Cog Agent-Cognizant
 At Attribute
 Behr Behaver
 Ca Carrier
 Cir Circumstance
 Cir: Pl Circumstance: Place
 Cir: TP Circumstance: Time position
 Cog Cognizant
 Comd Communicated
 Comee Communiquee
 Comr Communicator
 Cor1 Correlator1
 Cor2 Correlator2
 Cre Created
 Des Destination
 Desr Desiderator
 Dir Direction
 Em Emoter
 Ext Existent
 Loc Location
 Perc Perceiver
 Ph Phenomenon
 Posr Possessor
 Posd Possessed
 PR Participant Role
 Pro Process
 Ra Range
 So Source
 Tk Token
 VI Value

Abbreviations also found in the Leipzig Glossing Rules

3PL third person plural
 1SG first person singular
 2SG second person singular

3SG third person singular
 ABLMARK ablative marker
 ACC accusative
 ADDCONN additive connective
 AFFMARK affectionate marker
 ALL allative
 ANA anaphoric
 APPEL appellative
 ASSOC associative
 CAPAMOD capability modality
 CAUS causative
 CLF classifier
 CMPR comparative
 COM comitative
 COMP complementizer
 COMPA compassion
 CONJ conjunction
 CONN connective
 COP copula
 DAT dative
 DECL.SENTSUF declarative sentence suffix
 DET determiner
 DIM diminutive
 DU dual
 EMPMARK emphatic marker
 EXCL exclusive
 EXPER experiential
 F female
 FUT future
 GEN genitive
 INCL inclusive
 INF infinitive
 INS instrumental
 INT.SENTSUF interrogative sentence suffix
 LOC locative
 M male
 MOD modifier
 NEG negative
 NEGDECL.SENTSUF negative declarative sentence suffix
 NOM nominative
 OBJMARK object marker
 OBLG obligation
 OPT optative

PFV perfective
 PLMARK plural marker
 POLMARK polite marker
 POSTDECL.SENTSUF positive declarative sentence suffix
 PROG progressive
 PRS present

PST past
 PURP purposive
 REFL reflexive
 REL relative
 SBJMARK subject marker
 SUP superlative

IV. CONCLUSION

The study contrasts the realizations of elements in English and Myanmar transitivity configurations under the light of Systemic Functional Grammar introduced by Halliday (1985). This study investigates the similarities and differences in the English and Myanmar realizations of participants as SFPCA elements that represent the functions and positions of Subject (S), Finite (F), Predicator (P), Complement (C), and Adjunct (A). Typically, in the English and Myanmar transitivity configurations, the participant is realized by a nominal group; the process by a verbal group, and the circumstance by a prepositional phrase or an adverbial group. English and Myanmar exhibit similarities in how they express processes through verbal groups, participant roles through nominal groups, nominalization, adverbial groups, prepositional phrases, embedded clauses, and circumstances through nominal groups, adverbial groups, or prepositional phrases. However, they differ in that English uses copulas for expressing processes and adjective/adjective groups for participant roles, whereas Myanmar employs compound verbs, reduplicated verbs, or attributive verbs for processes and qualifying reduplicated adverbs or embedded clauses for circumstances. The results of this research add valuable insights to future investigations that compare how elements are expressed in the transitivity configurations of Myanmar with those in other languages.

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