Lexical Time Words in Balinese and Japanese Language: A Typological Approach

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Abstract—This research is a study of intralingual typology in the form of a contrastive study of temporal lexicon in Balinese and Japanese language. The main theory used in this study was the theory of canonical time periods proposed by Haspelmath (1997) and the classification of lexical time words proposed by Dixon (2010). The result of data analysis showed that both Balinese and Japanese have a rich variation in lexical items. Japanese is rich in vocabulary relating to qualitative time periods, especially the vocabulary that related to the seasons and day parts. Balinese is rich in vocabulary related to the name of calendar unit because Balinese uses not only the Christian year as the Japanese people, but also uses the Saka year which has a complex system and procedure for calculating the time

Keywords: *Balinese language, Japanese language, language typology, lexical time words*

1. Introduction

Balinese and Japanese people are the people who live in a society that strongly believe in the existence of Gods. They maintain a harmonious relationship between the human beings and human being as well s between the human beings and the nature. This similarity does not necessarily make the Balinese and Japanese people have the same way of thinking because after all this community group has a different culture. Tompenaars and Tunner (1998, 8-11) stated that attitudes toward time are one of the cultural dimensions that can distinguish one society from another.

In the history books of Japan, the time markers are not indicated by the clock as they are now, but by the names of animals and other natural signs, such as sunrise and sunset. This shows the closeness relationship between Japanese people and the nature. In addition, the imperial system in Japan is closely related to the year naming system. Year's name is changed according to the emperor's period in Japan.

It is similar to the Japanese, the Balinese people did not use the clock to determine the time; the time was indicated by nature's sign. Good days and bad days are determined based on wariga system and the calculation system is based on month's rotation, that is, the full moon and new moon. Both of these systems exist in the Saka calendar adopted from India.

There are several aspects which are very influential on the availability of lexical time words in Balinese and Japanese, such as geographical and cultural influences from outside the society. Based on the geographical location, Japan is a subtropical region with its four seasons, while Bali is a tropical region, which only has two seasons. Based on cultural influences from outside, Japan is heavily influenced by Chinese culture, while Bali is strongly influenced by Indian culture. Both of these aspects have a very important role in the development of lexical time words in both Japanese and Balinese societies.

The widespread influence of the west in the form of the use of the Christian calendar and the use of the clock with numbers with its center point in Greenwich, England, also gives an impact on the development of lexical time words in Balinese and Japanese. Maruyama (2006: 158) divides the time into three, i.e. clock time, nature's time, and event time. Clock time is the time objectively indicated by the clock and is not affected by the movement of nature. The nature's time is the time determined by the changes of nature on earth, such as sunrise time, sunset, and season's turning. The event time is the real time used by people in doing their daily activities.

In this study, the main problem discussed was the comparison of lexical time words in Balinese and Japanese. The comparison was performed using a lexical typology approach, based on the canonical time period classification proposed by Haspelmath (1997) and the classification of temporal words proposed by Dixon (2010). The canonical time period proposed by Haspelmath belongs to one of the classifications expressed by Dixon, namely the specific time span. Haspelmath provides a more detailed classification for one of the classifications put forward by Dixon.

2. Reseach Methods

This research is a qualitative descriptive research using functional typology approach, especially lexical typology. Based on the level of explanation, this research is a contrastive research, which is part of the intralingual typology research model.

The data was collected using observation method. There are two kinds of data used in this study, those are written data and intuition data. The written data was obtained from document, while the intuition data was obtained through elicitation technique. The data was classified based on the canonical time period classification proposed by Haspelmath (1997) and the lexical time words classification proposed by Dixon (2010).

3. Result and Discussion

3.1 Canonical Time Periods

The canonical time period is the lexical form of noun which is used to indicate a temporal-related situation. Haspelmath proposed three subtypes of canonical time period, namely 1) time units, such as 'clock', 'day', 'month', 'year'; 2) calendar unit names, such as 'January' and 'Sunday'; and 3) qualitative periods, such as 'spring' and 'morning' (Haspelmath, 1997: 26). These three subtypes are seen in phenomena that occur naturally by forming a certain cycle, for example earth's rotation on its axis that makes the phenomenon of suns pseudo-moving. It makes as if the sun rises and sinks, which causing a change of light and dark. It also makes the phenomenon of the moon shape changing and sun-earth distance changing.

This canonical time period is closely related to the calendar usage. Although Japanese and Balinese people are currently using a gregorian calendar whose calendars are based on the Christian year, but that does not mean that the previous systems and terms of time were not used anymore. Japanese society, for example, even today, still uses some of the terms contained in kyuureki 'old calendar', especially to beautify their literary works. This knowledge is also helpful for reading ancient texts and for learning Japanese culture. Similarly, the Balinese people are very strict in carrying out their customs and religious rituals. Good and bad days, as well as holy days are determined using the system available in the Saka year.

3.1.1 Time Units

Balinese and Japanese have several terms to denote time units, such as 'hour', 'day', 'month', and 'year'. The time units, from milliseconds to hours, either in Japanese or Balinese are the same. However, Balinese and Japanese have different rules for time units that fulfill the temporal adverbial function with temporal location and temporal extent semantic functions. The temporal adverbial with temporal extent semantic function requires the time unit that indicates duration, while the temporal location does not require time unit at all.

In English there is a term that denotes the time unit for *decade* 'ten years', *century* 'hundred years', *millennium* 'thousand years'. A similar term is found in Japanese, but only for a thousand years and a hundred years, namely *sennenki* 'thousand years' and *seiki* 'hundred years'. However, there is no specific term to denote a ten-year period, such as *decade* in English. Moreover, in Balinese, there is only one special term found, namely *abad* 'hundred years'.

The year in Japanese is written in kanji 年 which can be read as *toshi / doshi*, and *nen*. Different readings do not affect the meaning of the letters, but the usages are different. The word *toshi / doshi*, tends to show the year's name qualitatively, such as 申 年 *sarudoshi* 'monkey year', while *nen* is used to indicate the time quantitatively, for example 2017 is written 2017 年 *nisen juu nana nen*. In Balinese, there are two terms to indicate the year, namely *taun* and *warsa*. Both of these terms have the same meaning, but they have different speech levels. *Taun* 'year' is used in the regular speech level, whereas *warsa* is used for both polite and formal speech levels. There is no such distinction in Balinese to indicate a qualitative or quantitative year because basically in Balinese there is no qualitative year such as *sarudoshi* 'monkey year' in Japanese.

A temporal adverbial function, which shows the 'temporal extent' semantic function may be filled by words indicating duration. A numeral may be attached by word(s) to indicate the 'duration' meaning. In Japanese there is a term —*nenkan* '….years', whereas in Balinese there are two words, —*tiban* '…years' or —*taun* '….years'. For example, to show a period of ten years, we can find words *dasa tiban* in Balinese and *juunenkan* in Japanese. Words *dasa* in Balinese and *juu* in Japanese both have the meaning of 'ten'. The morpheme

{kan} in —*nenkan* indicates the 'duration' meaning. This morpheme can also be added when indicating the duration in others time unit, i.e. hours and days.

In Japanese, the duration words with the 'day' as the time unit have a complicated rules, because the day counting for the first day until the tenth day was different with the regular counting for numbers. Therefore, time units with 'day' as time unit can be created with the following rules. First, without any morpheme addition; this happens specifically for a period of one day, *ichinichi* 'for one day'. Second, the addition of morpheme to the word denoting the 2nd to the 10th day, *futsukakan* '2 days, *mikkakan* '3 days', *yokkakan* '4 days', *itsukakan* '5 days', *muikakan* '6 days', *nanokakan* '7 days', *youkakan* '8 days', *kokonokakan* '9 days', *tookakan* '10 days'. Third, the addition of morpheme {kan} to the word -*nichi* for the date other than date one to ten, for example *juuichi nichikan* 'eleven days'.

The time unit for 'hour' in Japanese is called *ji* 'hour'. To show the duration with 'hour' as the time unit, the morpheme {ji} and {kan} are added to the numeral words. The terms for 'one hour' and 'two hours' for example, become *ichi jikan* 'one hour' and *ni jikan* 'two hours'.

The addition of morphemes does not occur in smaller time units such as *fun*/*pun* 'minute' and *byou* 'seconds'. This addition does not occur in time unit *getsu* 'month' as well. To indicate the duration with 'month' as time unit, the numerals words must be attached with -*kagetsu* 'for months'.

In Balinese language, the time unit is placed after the numeral words. The term for time units in Balinese mostly taken from the Indonesian language, such as *jam* 'hours', *minggu* 'weeks', *bulan* 'months'. But there are also several terms for time unit, which are originally from Balinese language, such as *dina* 'day', *rahina* 'day', *sasih* 'month', *tiban* 'year', *warsa* 'year'. In some situations, the *term* 'year' can also be indicated by the word *taun* 'year', which is borrowed from Indonesian language and has undergone a sound change by deleting the consonant [h].

To indicate time units, there are numbers from one to ten that are different with number for indicating punctual time. This can be seen in the following table.

Table 1
The comparison of numbers for punctual and duration of reference time in Balinese

Number	Punctual Reference Time	Duration Reference Time
1 (satu)	*besik/sik/siki/sa*	*a*
2 (dua)	*dua/kalih*	*duang / kalih*
3 (tiga)	*telu/tiga*	*tigang*
4 (empat)	*pat/papat*	*petang*
5 (lima)	*lima*	*limang*
6 (enam)	*nem/nenem*	*nem*
7 (tujuh)	*pitu*	*pitung*
8 (delapan)	*kutus*	*kutus*
9 (sembilan)	*sia*	*sia*
10 (sepuluh)	*dasa*	*dasa*

Thus, to denote the punctual time 'two o'clock' and the time unit 'two hour' in Balinese, the number two in the two noun phrases are represented by different terms. The term 'two o'clock' is denoted by *jam dua*, while the term 'two hours' is denoted by the *duang jam*. However, if it was spoken in high speech level, then the number two, both for punctual and time unit is denoted by the word *kalih*, so the terms that appears are *jam kalih* 'two o'clock' and *kalih jam* 'two hours'

Hence, Balinese tends to have different expression for the same number with different functions. The numbers, which denote reference time as temporal adverbial for temporal extent semantic function almost always different with the numbers, which functioned as reference time for temporal location semantic function.

3.1.2 Calendar Unit Names

Both Bali and Japan use the Gregorian calculation system in AD, so the system is the same. Differences arise because in addition to the year of AD, the *wewaran* system in Saka years, which adopted from India, is still used for determining holy days and festivals in Bali.

In general, the names of calendar units can be divided into day names, month names, and year names. The names of the days in week in Balinese are the terms in the sapta wara[1]

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[1] *Sapta wara* is a group which consists of seven days. This group of days is parallel to the days in a week of AD.

group which belong to the classification of the wewaran[2]. Those names are *Redite* 'Sunday', *Soma* 'Monday', *Anggara* 'Tuesday', *Budha* 'Wednesday', *Wraspati* 'kamis', *Sukra* 'Friday', and *Saniscara* 'Saturday'. In Japanese, the names of the days are represented by the elements of nature[3]. These can be seen when the names of the days are written in kanji. The seven names of the days in Japanese are 日曜日 *Nichiyoubi* 'Sunday', 月曜日 *Getsuyoubi* 'Monday', 火曜日 *Kayoubi* 'Tuesday', 水曜日 *Suiyoubi* 'Wednesday', 木曜日 *Mokuyoubi* 'Thursday', 金曜日 *Kin'youbi* 'Friday', 土曜日 *Doyoubi* 'Saturday'.

Although Bali and Japan have been using the Gregorian calendar system in AD, but the terms in the Japanese old calendar and the terms in the Saka calendar in Bali are still in use. Only, the purpose of using these terms is different. The terms in the old calendar of Japan mainly used in the writing of literary works. This is different from the term in Saka's calendar year. All the terms in Saka's calendar year are still used today. The system is mainly used to determine the good and bad days of doing an activity and to mark the holy days of Hindus.

3.1.3 Qualitative Periods

The terms indicating the qualitative time period belong to the day part and the season classification. The qualitative time periods for both the day parts and the seasons in Japanese have a greater number if it is compared to those in Balinese.

In Balinese, the day parts only show the general times that indicate the pseudo-movement of the sun. Those terms are das lemah 'dawn', semengan 'morning'、tengai 'noon'、tengai tepet '12 o'clock in the noon', sanja 'afternoon'、sandikala 'dusk', peteng 'night', tengah lemeng 'middle of the night'. In Japanese, the term denoting the day part in general are 朝 asa 'morning', 昼 hiru 'daytime', 夕方 yuugata 'evening', 夜 yoru 'night'. In addition to these four terms, Japanese also still has other terms to denote a very detailed part of the day. The terms indicating that part of the day are divided into four classifications,

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[2] *Wewaran* is the term for days grouping in Saka Calendar. *Wewaran* is divided into ten groups. The first group named *eka wara* consist of only one day, the second group named *dwi wara* consist of two days, the last group named *dasa wara* consist of ten days.

[3] The meaning of the days based on its kanji character are 日 '*day/sun* (Sunday)、月 'moon' (Monday)、火 'fire' (Tuesday)、水 'water' (Wednesday)、木 'tree' (Thursday)、金 'gold' (Friday)、土 'earth/soil' (Saturday).

namely the qualitative time period relating to the morning, relating to the afternoon, relating to the evening, and relating to the night.

Japan's geographical location in the subtropical region caused Japan to have four seasons, namely *haru* 'spring', *natsu* 'summer', *aki* 'fall', and *fuyu* 'winter'. The four seasons can be divided further based on natural phenomena that occur in each season. Each season is divided into six time divisions; therefore there are twenty-four names for the seasons on the Japanese old calendar.

Bali, which is located in the tropical region only have two seasons, namely *masan ujan* 'rainy season' and *masan tuh* 'dry season'. However, fruit plants that only bear fruits at certain times are often used as a timepiece. For example, *masan duren* 'durian season', *masan mangis* '*mangosteen season*', *masan poh* '*mango season*' which shows a certain time when certain fruit trees bear many fruits. It is also often used as a reference time.

3.2 Lexical Time Words

In the clause level, the lingual unit of temporal adverbial can be word(s) or phrase. Based on its meaning, the word(s) or phrase can be divided into five classifications, namely (1) temporal shifter; (2) specific time spans; (3) frequency; (4) duration; and (5) expectation (Dixon, 2010: 121; 2012: 20). The explanation of each classification is as follows.

3.2.1 Temporal Shifter

The term temporal shifters can be paralleled with the term of temporal deixis. Dixon (2010) explains the definition of this term as follows.

> Temporal shifters—words referring to time intervals with respect to the present. What is 'today' today becomes 'yesterday' 'tomorrow'.
> (Dixon, 2010: 114)

The definition clearly shows the same meaning as the commonly used term temporal deixis. Dixon also explains that this category involves grammatical indicators of the tense as well as certain temporal adverbs (Dixon, 2012: 10).

In English, the words that can be included in this category are words like *today*, *yesterday*, and *this morning*. The words in this category can be divided into past, present, and future. Table 5.6 shows the Japanese vocabulary that belongs to this category.

Table 2
Lingual Units for Temporal Shifter in Japanese

Time	Japanese letters	Roman letters	Meaning
past	昔	*mukashi*	'formerly'
	昨日	*kinou*	'yesterday'
	一昨日	*ototoi*	'the day before yesterday'
	先週	*senshuu*	'last week'
	先月	*sengetsu*	'last month'
	先年	*sennen*	'last year'
present	今	*ima*	'now'
	今日	*kyou*	'today'
	今週	*konshuu*	'this week'
	今月	*kongetsu*	'this month'
	今年	*kotoshi*	'this year'
future	将来	*shourai*	'future'
	明日、明日	*ashita, asu*	'tomorrow'
	明後日	*asatte*	'the day after tomorrow'
	来週	*raishuu*	'next week'
	来月	*raigetsu*	'next month'
	来年	*rainen*	'next year'

In Table 2, several words in Japanese show a particular pattern for marking the past, the present, and the future times. The words that denote days, weeks, months and years in the past, are marked with the presence of kanji 昨 *saku* · 先 *saki* which shows the meaning of 'has passed'. The words that explicate the present time are marked by the presence of kanji 今 *ima* which means 'now'. And, the words that indicates the future time are marked by the presence of kanji 明 which means *akarui* 'light' or kanji 来 which means *kuru* 'come'. Each kanji has more than one way of reading, but the meaning remains the same.

The group of words, which is used to indicate the past, present, and future times are also found in Balinese. However, some terms cannot be expressed in a single lexicon, rather, they must be expressed with some words in a phrase form.

The lexical variation in the Balinese occurs due to the difference in vocabulary for low and high speech levels. Balinese has several particular strategies for marking the past and future time. The past time is morphological marking, while the future time is syntactical marking. The words, which indicate the past time tend to be marked by prefix *i-*, such as *ipidan* 'formerly', *ipuan* 'two

days ago', dan *ituni* 'a little time ago', while for the future time the word is marked by a word *buin* (low) 'more' or *malih* (high) 'more', such as *buin mani* 'tomorrow', *buin puan* 'two days later', dan *malih kalih rahina* 'two days later'. The lingual units for temporal shifter in Balinese are provided in the following table 3.

Tabel 3
Lingual Units for Temporal Shifter in Balinese

Time	Low	High	Meaning
past	*ituni,*	*inuni*	'a while ago'
	ipidan, imaluan	*dumun, riin*	'formerly'
	ibi	*dibi*	'yesterday'
	ibian	-	'the days before today'
	ipuan	*i kalih rahina*	'two day before yesterday'
	bulanné ane suba liwat	*sasihé sane sampun lintang*	'last month'
	taunne ané suba liwat	*warsané sané sampun lintang*	'last year'
sekarang	*jani*	*mangkin*	'now'
	dinané jani	*rahinané mangkin*	'today'
	--	*sasihé mangkin*	'this month'
	--	*warsané mangkin*	'this year'
akan datang	*nyanan*	*malih jebos*	'a short while later'
	mani puan	*benjang pungkur*	'someday in the future'
	mani/buin mani	*bénjang*	'tomorrow'
	manian	*bénjangan*	'the days after today'
	buin puan	*malih kalih rahina*	'the day after tomorrow'
	bulanné ané lakar teka	*sasihé sané jagi rauh*	'next month'
	taunne ané lakar teka	*warsané sané jagi rauh*	'next year'

3.2.2   Specific Time Spans

The lexical word that belong to specific time spans category are the words which belong to the calendar unit names and the qualitative time period of canonical time periods as well as the words which mention the 'festival' names. This category has the most number of words compared to another category.

In English, the specific time span can be represented by forms such as *morning, night, Sunday, winter, March, year's end, 1939* (Dixon, 2010). In Japanese, this category can

be shown with examples like *asa* 'morning', *yoru* 'night', *Getsuyoubi* 'Monday', *Nigatsu* 'Ferbruary', *shuumatsu* 'weekend' *tanabata* 'tanabata festival', while in Balinese, it can be shown with examples such as *semengan* 'morning', *tengai* 'noon', *Redité* 'Sunday', *Sasih Kadasa* 'the Tenth Month', *Galungan* 'Galungan festival'.

3.2.3 Frequency

The frequency words denote the frequency of a situation or event. The form of the frequency words can be differentiated into two classifications: general and specific. In English, the examples for general frequency are *often, generally, usually,* whereas the specific frequencies are *monthly* and *weekly*.

Table 4 shows the lingual units frequency in Japanese and Balinese, which are divided into general and specific terms.

Tabel 4
Lingual Units for Frequency in Japanese and Balinese

Classification	Japanese	Balinese	Meaning
General	*itsumo*	*setata*	'always'
	yoku	*sesai*	'often'
	nando mo	*ping kuda-kuda*	'many times'
	shiba-shiba *tabi-tabi*	*busan-busan*	'often'
	amari	*kapah*	'toki doki'
	tama ni		
	metta ni		
	mare ni		
Specific	*mainichi*	*sawai, ngawai, nglemeng*	'everyday'
	maishuu	*ngaminggu,*	'every week'
	maitsuki	*ngabulan,*	'every month'
	maitoshi	*ngataun,*	'every year'

3.2.4   Duration

The lexical forms, which denote the durational meaning indicates a particular time period expressed by a word or phrase, e.g. in English are *a long time*, *just a minute*. In Japanese and Balinese, the examples can be seen in table 5.

Table 5
Lingual Units for Durational in Japanese and Balinese

Japanese	Balinese		Meaning
	low	**high**	
mijikai aida	*kejep, akesep*	*jebos, ajebos*	'a while'
isshun	*apakpakan base*	*apanginangan*	'very short time'
nagai aida	*makelo*	*lami*	'long time'
hitobanjuu	*apetengan*	*awengian*	'all night'

3.2.5   Expectation

The lexical forms associated with expectation are the words, which show the reference time of a situation or an event in accordance with the speaker's expectation. In English, the words that fall into this category for example are *already* and *too soon*.

Some examples for this classification in Japanese and Balinese are provided in the following tables.

Table 6
Lingual Units for Expectation in Japanese and Balinese

Bahasa Jepang	Bahasa Bali		Arti
	biasa	**sopan**	
tama tama	*jeg sagét*	--	'by chance, unexpectedly'
sassoku	*prajani*	*pramangkin*	'soon, immediately'
sakki	*mara*	*wawu*	'just now'
mou	*suba*	*sampun*	'already'
mada-Vnai	*tondén*	*durung*	'not yet'
ima kara	*lakar*	*jagi*	'will'
sugu	*énggal lakar*	*énggal jagi*	'soon'
sakini	*malunan*	*dumunan*	'former'
no ato	*belakangan*	*pungkuran*	'latter'

4. Novelties

This is a new way in classifying the lexicons, which related to the temporal expressions. Previous research on Balinese has never made the classification of the lexicons in detail. The lexicons are provided just as the temporal lexicon in general, they never been classified into several groups based on their meaning. If the Balinese temporal lexicons were contrasted with those in Japanese, we can clearly see that the Balinese has lack temporal lexicons for temporal shifter and specific time spans. The temporal shifter meaning mostly is provided in a phrase form, while the specific time spans, which refer to calendar time unit, tend to be provided in Indonesian language. Evidence also showed that Balinese temporal lexicon has two different word forms for the same meaning, because they have to be differentiated based on the speech levels. This evidence cannot be found in Japanese.

5. Conclusion

Based on the discussion above, we can conclude that the lexical variations in Balinese is influenced by the speech levels, while in Japanese it deals with the accuracy of particular time period. However, the number of temporal lexicons in Japanese are more than those in Balinese.

Japanese is rich in vocabulary relating to qualitative time periods, especially the words that related to the seasons and parts of the day. Balinese is rich in vocabulary related to the name of calendar unit since the Balinese people use not only the Christian year as it is used by the Japanese community, but also the Saka year which has a complex system and a complex procedure for calculating the time.

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