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A Corpus-Based Study on the Chinese Near-Synonymous Verbs of Running

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Adopting a corpus-based approach, this paper aims to explore the different meaning and usages between the two Chinese near-synonymous verbs of running: *Ben* and *Pao* following the model: Module-Attribute Representation of Verbal Semantics (MARVS) proposed by Huang at all in 2000. This study proposes that *Pao* has the event focus of the endpoint of the event, but *Ben* does not. Besides, *Ben* always emphasize the destination or target of the action, i.e the goal, and the goal can be abstract. But *Pao* cannot be followed by the abstract goal.

1. Introduction

Near-synonymous verbs in Chinese are always difficult to differentiate. Even native speakers cannot give explicit explanations as to the differences between them. The definition given by the dictionary is often circular and far from enough to help distinguish near-synonymous verbs. The lack of explicit explanations for the differences between near-synonymous verbs makes it difficult for language learners to use them correctly and also for computer programmers to develop sufficiently accurate cross-language translation tools that render the most appropriate verbs in given contexts.

In recent years, with the realization of the importance of this problem, many researchers have conducted studies on the Chinese near-synonymous verbs. The findings of these studies helped in understanding the nature of Chinese verbs and choosing the near-synonymous verbs in different contexts. But so far no study has been found in studying the difference between the two Chinese near-synonymous verbs of running: *Ben* and *Pao*. Adopting a corpus-based approach, this paper aims to explore the different meaning and usages of the two verbs. The observed distinctions will then be incorporated into the representational model called the Module-Attribute Representation of Verbal Semantics (MARVS) proposed by Huang and Ahrens in 2000 for differentiating the Mandarin near-synonyms. This model can help describe the different information denoted by the two verbs in a more linguistically sound way.

The findings of the distinction between the two near-synonymous verbs can help the non-native speakers of Chinese to learn how to choose these two verbs in different contexts. The semantic patterns can provide them with guidelines to use the words appropriately and also help them judge what collocations are most likely to be compatible and acceptable with a certain verb.

2. Literature Review

In Chinese, the two verbs used to refer to the meaning of running are very commonly used (their usage frequency rank: *pao*-827th and *ben*-1202nd among the 9252 words in the corpus which is developed by the Beijing University. Although the two verbs are used frequently, there has been no study found to talk about the clear difference between them. So it is important to give a clear explanation of the distinctions between the two verbs. This study will explore the differences between them based on the data collected from the corpus. The model of MARVS will be used in the study to describe the differences between the two verbs. Previous studies in this field also provide some important insights in analyzing the two verbs of running.

2.1 The Model Used: Module-Attribute Representation of Verbal Semantics

In order to capture the semantic difference between the two verbs in a more linguistically sound way, the model: Module-Attribute Representation of Verbal Semantics (MARVS) is adopted in this study. This model was proposed by Huang and Ahrens in 2000. The reasons for using this model in the study include: it is proposed on the basis of studying Chinese data and it has been supported by previous researches.

Huang and Ahrens (2000) proposed this model on the basis of the studies done by the research group: Academia Sinia in Taiwan. In studying the near-synonyms, some scholars (e.g., Liu, 1997) in the research group tried a pure-alternation based approach (Levin, 1993) that had been used to study English but found it was not adequate for studying Chinese verbs. So they decided that the way to study Chinese verbs should be somewhat different since Chinese is not the same as English. They started to make some modification of different models based on the previous studies on near-synonymous verbs (Levis, 1993) and tried to come up with a model that is adequate to analyze the information encoded in the Chinese verbs.

Based on the previous studies, Huang and Ahrens (2000) proposed the model Module-Attribute Representation of Verbal Semantics (MARVS). According to this model, the most important semantic features of the verbs are included in the composition of the four characters: Event Modules, Event Internal Attributes, Role Module and Role-Internal Attribute.

The event module represents the main information about the event structure of the verbs. In this theory, five atomic event modules are distinguished:

boundary **.** punctuality / process /// state _____ stage ^^^^^^

The event module of some verbs can be represented simply by one of the five atomic modules. For example, the verb *da suan* (plan to) is a punctual verb, so its event module can be represented as /. Besides, some verbs can encode events that are bounded on either the event starting point or endpoint or both. For example, the inchoative process **.**/// refers to the process that is bounded at the event starting point. While the

bounded process **.///.** refers to the process that is bounded at both points of the event. So when we analyze the event module of a verb, we have to consider whether it has any boundary after the nuclear event of it being decided. Liu (2000) analyzed the set of Chinese near-synonymous verbs with the similar meaning of throwing and she found that only the verb *diu* can encode a bound process event while all the other three verbs do not have an event focus on the endpoint. Therefore, the bounded process event structure, illustrated in /// can be used to differentiate the verb *diu* from its near-synonymous counterparts.

The event attributes talks about "the semantics of the event itself, such as [control], [effect], etc." (Huang & Aherns, 2000, p.116). This is useful to discover more detailed differences between different verbs. Verbs that have the same event modules may differ in the internal attributes.

E.g., *gao xing* 高兴
kuai le 快乐 (to be happy)

Although the two verbs are both state verbs, they differ in the event attributes. After looking into the detailed information about the event, Tsai et al. 1998 found they differ in the attribute of [+Control], which means the event encoded by the first verb can be controlled but that of the second verb cannot be controlled.

The role modules refer to "the focused roles of the event" (Huang & Aherns, 2000, p.116), such as agent, theme, causer, manner, location, etc. Liu (2002) found that the two near-synonymous verbs of doubting in Chinese actually take different types of roles: the role module information for verb *cai* can be represented as <Experiencer, theme>; while for the second verb *huai yi*, the role module information can be represented as <Agent, Theme>.

The role-internal attribute refers to the internal semantics of a particularly focused role (of the event), such as sentience, volition, affectedness. For example, the two verbs: *fang* (put) and *bai* (set) in Chinese differ in the role internal attribute of Loc[design], which means the second verb can denote orientation while the first one can only denote location (Huang &Ahrens, 2000).

The model claims that since each verb has its unique composition of these characteristics, different verbs must differ from each other in at least one of these characteristics. So by studying these four characteristics of near-synonymous verbs, we can find the differences between them.

After the proposal of it, researchers started to analyze Chinese near-synonymous verbs following this model (Huang et al., 2000; Liu et al., 2000; Wang, 2004; Wu, 2003; Wu & Liu 2001). They mainly conducted corpus-based studies to find the different features of each set of verbs. Some important findings in differentiating the near-synonymous verbs have been discussed following this model. Certain semantic features, such as the [+control], [+location], have been proved to be effective in distinguishing

between the near-synonymous verbs. The event modules of the verbs have also been used a lot as the distinctive features. The previous findings in this field have indicated that this model is adequate in analyzing the Chinese near-synonymous verbs, which is the most important reason to choose this model in the present study.

2.2 The Two Verbs of Running in Chinese

There are two verbs in Chinese, which can be used to express the meaning of running:

A. *ben* 奔
Meanings: run; run quickly
B. *pao* 跑
Meanings: run, leave in hurry (definition by the Concise English-Chinese Chinese-English Dictionary, 2004).

As shown by the definitions, the two verbs share some common meaning, which indicates that they are near-synonymous verbs. But the English definition given by the dictionary helps little in differentiating the two verbs, especially to the learners who are not native speakers of Chinese. The Chinese definitions of the two verbs given by another prestigious dictionary: *xinhua* dictionary (10^{th} edition), even use the two words to explain each other. Since the definitions given by the dictionaries cannot help much in distinguishing the two verbs in both meaning and usage, it is necessary to conduct a study dealing with this problem.

One thing needs to be mentioned here is that the verb *ben* has two different pronunciations according to the *Xinhua* dictionary: *ben* with the first tone-*ben*1 and *ben* with the fourth tone-*ben* 4. The meaning of *ben* 1 has been listed above. As to *ben* 4, it refers more specifically to heading for or approaching something and its usage is very different from that of *ben*1. So in this study, only the semantics and usages of *ben* 1 will be discussed. The *ben* mentioned in the following discussion without any special explanation will only refer to *ben* 1.

2.3 Insights from Previous Researches Done on the Two Verbs of Running

Although no systematic study has been found in the studying of the difference between the two verbs of running, previous studies can provide some implications in understanding them and also can provide some information in how to do the analysis following the MARVS model.

When they proposed the MARVS model in 2000, Huang and Ahrens talked about the verb *pao* as an example of verbs that have the event module of process: ///. They explained that *pao* has the event module of process because it can be used with duration of time, for example:

ta pao le sa ge xiaoshi
他 跑了 三个小时
He run-le three hours
He has been running for three hours. (Huang & Ahrens, 2000, p. 114)

The durational phrase works well for distinguishing the process events from the complete events, such as the event encoded in the verb *si* (to die). But Huang and Ahrens didn't explain whether this still work for differentiating the process event with other kinds of event. So although we can say *pao* does not encode a complete event, it is not convincingly enough to say it is a process verb. Some other proof of its usage is needed to imply whether the verb *pao* is process verb or not.

One way to do this is to look at the different aspectual markers that can be used together with the verb. In studying the differences between the four verbs of thinking in Chinese, Wu and Liu (2001) found that only the progress verb *xiang* can be used together with the progressive aspect but all the other state verbs cannot be used in this aspect. In Chinese, the aspect is not shown by the inflectional changes of verbs in the sentence, but by some aspectual markers. Wu and Liu used the progressive marker *zai* and durational marker *zhe* in their study and found that only *xiang* can be used together with them and other state verbs with the similar meaning cannot.

With *zai*:
Zai xiang **zai jue de* **zai yiwei*
在想 *在觉得 *在以为 in the process of thinking

With *zhe*:
xiang zhe **jue de zhe* **yi wei zhe*
想着 * 觉得着 *以为着 thinking

Their study implies that the co-occurrence with progressive markers *zai* and *zhe* is the characteristic of progress event. The present study will combine the above studies and both the co-occurrence with the durational phrase and the progressive markers will be looked at to find out the event module of the two verbs.

Another point needs to consider is that the event encoded by a verb may be bounded at one event point. For example, the verb *xia yu* (to rain) can encode the inchoative process event which is bounded at the starting point of the event and the verb *gai* (to build) has the event bounded at both the starting and end point of the event (Huang & Ahrens, 2000). Some other studies also imply that the focus on one point of event can distinguish the near-synonymous verbs (Liu, 2000; Wu, 2001). In studying the two verbs of doubting in Chinese, Liu (2002) found that with the marking of an endpoint, "the verb *cai* can be followed by the adverbial *wan* ‘finish’, denoting the completion of an event, but *Huai yi* cannot" (p.49).

With *wan*:
*Ni daodi cai/*huaiyi wan le mei*
你 到底 猜/*怀疑 完 了 沒?
you to bottom guess finish *LE* no
Have you on earth finished guessing?

This shows that the adverbial *wan* can be used as the result compliment to distinguish between the events with event endpoint from those that don't have the endpoint. In Liu's study, she also mentioned the two inchoative-marking devices, preverbal *kai shi* 'start' and the post verbal *qi lai* 'up' which can be used to show whether a verb have an event starting point.

With *kaishi*:
*Ta kaishi huaiyi/*cai guozhi daodi shibushi chunde*
她 开始 怀疑/*猜 果汁 到底 是不是 純的.
she start huaiyi / * cai juice to bottom be not be pure DE
She started wondering if the juice was pure (Liu 2002, p.48)

In the present study, the boundary of the event will also be considered to find out whether one verb has a certain event focus while the other has a different event focus. In order to do this, the correlation of the verbs with different marking devices, which have been discussed before, will be analyzed.

As to the role modules and attributes, no study has been found in talking about the roles of the two verbs. But there are some studies that have discussed the different noun phrases used after the verb *p*ao. Xing (1997) in his study talked about the various meaning of the collocations of *pao* with different noun phrases. The objects related with the verb *pao* can have different relations with it and can be assigned different roles. If his finding is correct, it can indicate that the verb *pao* can take different types of roles. So in the present study special attention will be given to the different collocations of the verb *pao*.

Although no previous study has been found focusing on analyzing the difference between the two verbs, we can still find some useful information and method from the studies done in this field. In the present study, the event modules of the two verbs will be analyzed based on the approaches talked about above and the roles of each verb will also be discussed.

3. Research Questions

In order to find the differences of the two verbs and provide guidelines to use them appropriately in different contexts, the following questions were examined and discussed in the study:

(1) Can the two near-synonymous verbs of running in Chinese be used alternatively in all the contexts?

(2) If not, what are their distribution differences?
(3) How to account for these differences in terms for the four characters in MARVS?

4. Method

4.1 The Corpus

The corpus used in this study is developed by the Center for Chinese Linguistics of Beijing University. Both modern Chinese and classical Chinese data are included in this corpus. For the modern Chinese data, there are both spoken and written data. But the spoken data only accounts0 for about 0.04% (259800/632428846) of the corpus. Only 20 instances of *pao* are found in the spoken data and no instance of *ben* at all. Since the number is very limited, the findings of the study are based on the written data in the corpus.

4.2 Procedures

In this study, the differences between the two verbs of running will be determined through the following steps: First, all instances of each of the two verbs were searched for in the corpus. Second, these instances of each verb were classified into different type of syntactic pattern. Third, the aspectual type that is associated with each verb was examined. After that the collocation patterns of the two verbs with different roles were discussed. And then the MARVS framework was used to account for the differences between the verbs. At last, the 20 instances of *pao* in the spoken data will also be analyzed to find whether the semantic patterns based on the written data also apply to the use of the verb in spoken language.

5. Results and Discussion

In the corpus, there are altogether 43833 occurrences of *pao* and 13820 of *ben.* After looking through the data in the corpus, the study found that the two verbs couldn't be used interchangeably in all contexts. For the event module, their differences mainly rely on the event endpoint. For the role module, the two verbs have different collated structure with prepositional phrase and direct argument.

5.1 Similarities between the Two Verbs

First of all, the two verbs have some similar syntactic behaviors and can be used interchangeably in some contexts since they are near-synonymous verbs. At first glance, they share certain meaning components and can both occur in the following contexts with the similar meaning of running:

Both the two verbs can be used alone with the meaning of running:

(1) *Zai lu shang fei ben/pao*
在 路 上 飞 奔/跑
on road above quickly run
Running quickly on the road
They both can also be followed by a prepositional phrase indicating direction:

(2) *ben/pao xiang nali*
奔/跑 向 那里
run to that place

Table 1. The distribution of the two verbs in the corpus

	Without any following argument	With a prepositional phrase
Ben 奔	75.1%	24.9%
Pao 跑	61.3%	19%

Since the two verbs can be used in these conditions to deliver similar meaning, they can be considered as the near-synonymous verbs.

5.2. Collocation with Aspectual Markers and the Difference in Event Modules:

Since Huang and Ahrens' (2000) study has indicated that the verb *pao* is a progress verb and argued that process encodes a time course, this study starts with looking at whether the two verbs can be used together with duration of time. The data in the corpus shows that the two verbs can co-occur with duration of time:

(3) *ben le ban ge duo shi chen*
奔了 半个 多 时辰
Run-le half more two hours
run for more than an hour
(4) *pao le liang ge duo xiao shi*
跑了 两个 多 小时
Run-le two more hours
run for more than two hours

In the above two examples, the durational phrase can be interpreted as a time course of a process. The process of running has lasted for a certain time.

As talked about in the literature review, the collocation with certain aspectual markers can also indicate the characteristic of process verbs. After looking up the corpus,

I find that both *ben* and *pao* can be used with the progressive marker *zai* and durational *zhe*:

(5) With *zai*
ta zai ben/pao xiang zhe li
他 在 奔/跑 向 这里
He *zai* run to here
He is running here

(6) With *zhe*
Ta fei ben/ pao zhe
他 飞 奔 / 跑 着
He quickly run *zhe*
He is running quickly

The examples shown above indicate that not only the verb *pao*, but also *ben* can be used in the progressive aspect and can be interpreted as the action lasting for a period of time. Since only progress verbs can be used in this context, the collocation with these markers can indicate that the two verbs are progress verbs. These two features together can have a strong indication that the events encoded by the two verbs are process.

With the event starting-point marking devices, both the preverbal *kai shi* 'start' and the post verbal *qi lai* 'up' have been found used together with the two verbs:

(7) *kaishi* 开始 start
kaishi ben/pao xiang...
开始 奔/跑 向...
Kaishi run to/toward start to run toward ...

(8) *qilai* **起来** up
Fei ben/pao qilai
飞 奔/跑 起来
Quickly run *qilai* start to run quickly

This distribution shows that both of the two verbs allow a starting point at the beginning of the event. The above discussion shows that the two verbs of running are both process verbs and can have a starting point of the event. However, with the event endpoint, difference was found between the two verbs: only the verb *pao* can denote the endpoint of the event.

As discussed above, the adverbial *wan* 'finish' can be used to indicate the completion of an event. So verbs used together with it should have an event focus on the endpoint. The data in the corpus shows that *pao* can be used together with this adverbial

but *ben* cannot:

(9) *pao wan* 跑完 (finish running)
*Liu Changsheng pao wan/ *ben wan le*.
刘常胜 跑完 / *奔完 了
Liu Changsheng run *wan* (finish) *le*
Liu Changsheng has finished running

The above example shows that the event structure of *pao* involves a process, which can be bounded by an "endpoint". When the endpoint is profiled, it predicates the result of "running". In other words, the verb *pao* has an event end-point, i.e. the event of *pao* can be bounded at the end point. But *ben* cannot be used in this way, which indicates that the verb *ben* cannot be bounded at the end point.
Below is the distributional frequency of the verbs with different marking devices in the corpus:

Table 2 The collocation frequency of the two verbs with different marking devices

	Zai 在 Progressive	*Zhe* 着 Durational	*kaishi* 开始 start	*qilai* 起来 start	*wan* 完 finish
Ben 奔	151 (1.1%)	132 (0.9%)	48 (0.35%)	37 (0.27%)	NA
Pao 跑	357 (0.8%)	846 (1.8%)	68 (0.1%)	420 (0.9%)	208 (0.4%)

From the above table and the previous examples about the distributional similarities and differences between the two verbs in the corpus, we can find their distinctions regarding aspectual composition: the verb *ben* may co-occur with the progressive markers and a durational phrase of time and it allows a predicative focus on the starting point of the process; but it cannot be used together with the adverbial *wan* which indicates that it cannot focus on the event endpoint. On the other hand, *pao* may be used with a progressive marker or a durative phrase. The event of *pao* is a potentially on-going process that may have both a starting and a final point.

Based on the previous discussion, the difference between the two verbs in their event module can be represented as bellow:

Event module of *ben* and *pao*:
ben 奔 is inchoative process **.**///
pao 跑 is bounded process **.///.**

5.3 Different Roles taken by the Two Verbs

Another important distinction between the two verbs has to do with their role module information, which in this case refers to the types of prepositional phrases and direct arguments that can co-occur with them.

When followed by a location or other noun phrase, the verb *ben* normally requires a preposition between the verb and the other part. The combinations of the verb *ben* and the following prepositional phrases were looked up in the corpus and the top ten phrases used together with the verb *ben* are listed in the following table:

Table 3 The top ten collocated prepositional phrases with *ben*

	+ (followed by) Preposition	+ 1. *zhong guo* 中国 China 2. *xiao kang mu biao* 小康目标 the good life purpose 3. *na li* 那里 there 4. y*u zhou* 宇宙 the universe 5. *21 shi ji* 21 世纪 21 century 6. *ou zhou da lu* 欧洲大陆 Europe 7. *wo mian qian* 我面前 in front of me 8. *ma ke si zhu yi* 马克思主义 maxism 9. *jie tou* 街头 on the street 10. *wen wai* 门外 out of the door
Ben 奔	*Xiang, dao, wang* 向， 到， 往 Toward/ to	

As shown in table 3, the role after the verb *ben* is always a place, a person, a future time and one's dream or belief. Although all these items seem to vary a lot from each other, we can still find one common feature of all these different items: they all refer to the goal or the destination of the action. In order to get to the object, the agent has to "run/go a distance to reach the goal". Sometimes the goal of the action can be really far away from the starting point and not easy to reach it:

(10) *ben xiang youzhou*
奔 向 宇宙
Run to the universe

(11) *ben wang meiguo*
奔 往 美国
run toward the U.S.

What's more, the goal of the action can be abstract (e.g. the future, good life, one's dream or belief).

(12) *ben xiang meihao de meilai*
奔 向 美好的未来
Run toward the beautiful future

(13) *ben xiang makesizhuyi*
奔 向 马克思主义
Run for Marxism

So the verb *ben* can be used to express the meaning of running after or toward both abstract and not abstract goals.

Table 4 The distribution frequency of collocated goals with *ben*

	Abstract goals	None abstract goals
Ben 奔	18.7%	81.3%

When *ben* is followed directly by a noun phrase, the meaning of it will change to head for or approach a location/goal and the pronunciation will change to the forth tone and that will be a different verb. For the verb *pao*, it can also take a preposition and the goal as its role.

(14) *pao xiang da men*
跑 向 大门
run to the door

The following are the top ten collocated prepositional phrases with the verb *pao*:

Table 5 The top ten collocated prepositional phrases with *pao*

pao 跑	+ Preposition *xiang, dao, wang* 向，到，往 toward /to	+ 1.qian 前 front 2.*ta* 他 him 3. *men kou* 门口 out the door 4. *he bian* 河边 besides the river 5. t*a men* 他们 them 6. *yi yuan* 医院 Hospital 7. *zhe er* 这儿 herer 8. *Bei jing* 北京 beijing 9. *ta shen bian* 她身边 besides her 10. *wo mian qian* 我面前 in front of me

When *pao* is used in this way to indicate running to a goal, the goal of the action is usually concrete and reachable and the goal always refers to a place or a person (as shown in Table 5). There is only one abstract goal used together with the verb *pao* in the corpus: *bao xiang 21 shiji*, 跑向 21 世纪 (run to the 21st century).

As Table 4 shows, 18.7% of the collocated prepositional phrases with the verb *ben* indicate an abstract goal. But with *pao*, only one abstract goal is found. Based on the data, this study proposes that when the abstract goal is to be expressed, the verb *ben* is much more likely to be chosen while *pao* tends to occur with more concrete and reachable goals.

What is more, *pao* can take some arguments directly, which is different from the use of *ben*. The following table shows the top ten collocated arguments with *pao* without any preposition in between:

Table 6 The top ten direct collocations with *pao*

Pao 跑	+ (Followed directly by) 1. *beijing* 北京 beijing 2. *tu shu guan* 图书馆 library 3. *xiang gang* 张家口 zhangjiakou 4. *xiang gang* 香港 Hongkong 5. *quan guo* 全国 China
	Move around for the sake of something **6. *mai mai*** **买卖 business** **7.*lin shi gong*** **临时工 temporary job** **8. *guan*** **官 official position**
	Leak **9. *dian*** **电 electricity** **10 . *qi*** **气 gas**

As shown by the data, the collocated arguments of *pao* include a place, a kind of business and a kind of facility (electricity, gas). But the meaning can be different with these different collocations. As shown in Table 6, the verb *pao* can mean to move around for the sake of or it can mean to leak. These two kinds of meaning are very different from running. Since the study is focusing on analyzing the difference between the two synonymous verbs *ben* and *pao*, only the similar meaning of the two verbs, i.e. the meaning of running will be discussed here.

With the first five collocations shown in Table 6, all the arguments are noun phrases indicating a place. But the roles of them in the verbal phrase can be different. First of all, some of them can be the goal of an event, just like prepositional phrases do. For example:

(15) *Ta... xia guangzhou, pao beijing, qu shanghai.*
他... 下 广州， 跑 北京，去 上海
They... down Guangzhou, run Beijing, go Baoding
They... run/go to Guangzhou, Beijing and Shanghai

In this example, the argument Beijing is the goal of the action *pao*, which can be substituted by *pao xiang* (run to) and the goal should not be abstract. But in other cases, the place name does not indicate the goal of the action; instead, it is the location where the action takes place. For example,

(16) *pao le da ban ge zhong guo*
跑了 大 半 个 中国
Run-*le* more half China
Run/move around in most part of China.

This can also explain why *pao* can be used with *bian* (over):
(17) *pao bian xianggang*
跑 遍 香港
Run/move all over Hongkong.
Since the verb *pao* can take location as its collocated argument, it is possible to say running over the place.

Table 7. The distribution frequency of direct arguments collocated with *pao*

	Location	Goal
Pao 跑	90.8%	9.2%

In summary, the differences discussed in this part can be put under the category of role modules:

ben 奔
Role module: V+ preposition + < goal >
pao 跑
Role module: V+ preposition +<goal, -abstract>,
V+ <goal, -abstract>,
V+<location>

5.4. MARVS Representation of *Ben* and *Pao*

To sum up what has been discussed so far, the differences of the two verbs are put in the model MARVS as below:

Table 8 The MARVS representation of the two verbs: *ben* and *pao*

	Ben 奔	Pao 跑
Event module	Inchoative process **.///**	Bounded process **.///.**
Role module Role attributes	V+ preposition + < goal >, Can be a long distance to achieve and the goal can be abstract	V+ preposition + <goal, -abstract>, V+ <goal, -abstract>, V+ <location>

5.5. The Spoken Data of *Pao*

The 20 instances of *pao* in the spoken data were also analyzed at the end of the study. The result shows that 9 (45%) of them are used without a role, 8 (40%) are used with prepositional phrases and 3 (15%) are used with direct arguments. All the prepositional phrases following the verb *pao* indicate concrete goals of the action. As to the 3 direct arguments, 2 of them are used as the location of the action and one indicates the goal of the action.

Since no aspect markers were found used together with *pao* in the spoken data, the event module information based on the written data cannot be tested with the spoken data. But with the role modules, the result from the spoken data show a similar pattern with that based on the written data. Both the written data and the spoken data indicate that the verb *pao* tend to be followed by the prepositional phrase as the non- abstract goal and it can also take the direct arguments as either location or goal.

As mentioned before, there was no instance of the verb *ben* found in the spoken data in the corpus. This fact indicates that in the spoken language, the verb *pao* is used more frequently and it is often chosen as the cover term in the situations where the two verbs can be used interchangeably.

6. Conclusion

The two verbs of running in Chinese share many aspects in common in both their meaning and their usage. They can be used in some contexts to deliver similar meanings. But after analyzing the data in the corpus, there are still some differences found between these two verbs, so they cannot be used interchangeably in all the contexts.

The different collocations with the aspectual markers and some other marking devices indicate the verb *pao* has an event end-point while *ben* does not focus on the endpoint. Moreover, the two verbs also take different roles and require different semantic information about the roles. Based on the data from the corpus, I find that the verb *ben* can take both abstract and not abstract goals and there must be a preposition between the verb and the goal. On the other hand, *pao* tends to only take not abstract goals. Besides, *pao* can also take goals and locations directly without any prepositions in between.

These differences of the two verbs in their semantic event structure can be used to explain their different syntactic behaviors and why they can be used interchangeably in some contexts but not in some other contexts. So these semantic patterns can provide some guideline for the language users to have a clear idea of the differences between the two verbs. This can be especially helpful to non-native Chinese speakers so that they won't get confused by in which contexts the two verbs can be used interchangeably.

One problem with this study is about the data: although the amount of data in the corpus is already very large, some usages actually used may also be left out in the corpus. Besides, as mentioned before, this study is based on the written data. Only the 20 instances of *pao* in the spoken data were looked at in the study. Although the analyses of the 20 instances show that the semantic patterns of *pao* based on both spoken and written data are similar, there might be some different findings if the whole study was based on spoken data since in spoken language people tend to use the language more flexibly. So the patterns found in this study actually show the general trend of the usage of each verb. They can tell us which verb is more frequently used in certain contexts and thus can be more appropriate to choose.

Another point worth mentioning here is that the pragmatic features of the two verbs were not discussed in this study. Not only the pure semantic features and the context of the sentence but also the discourse context and the style of the writing can affect the use of the verbs. The fact that no instances of the verb *ben* found in the spoken data can suggest it is not used in the spoken language very often. So study based on spoken data and with a more pragmatic viewpoint should be conducted in the future to complement the present one.

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