

# Corpus-based Analysis of “V” in Structure “进行 [jin4xing2]+V” in Modern Chinese

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## Abstract

*This paper argues for the necessity of studying the structure of “V” in “进行[jin4xing2]+V” based on previous research, and gives a full description and analysis of the construction on the basis of the large-scale corpus. The distribution of “进行[jin4xing2]+V” construction differs in terms of registers because it is often used in formal contexts. In addition, in the choice of V of predicate-object structure, only double-syllable or tri-syllable autonomous verbs that have external object and continuous in semantics are allowed to enter the structure.*

## Keywords

*Dummy verb, [jin4xing2]+V, Syllable, Word formation, Semantic feature, Register*

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## 1. Introduction

Dummy verb is a special part of speech, Lv Shuxiang (1980) first proposed the name “dummy verb” in Chinese, which is also known as “colorless verb” (Song Yuke, 1982), “virtual of verbs”, “quasi predicate object verb” (Zhu Dexi, 1985) and “leading verb” (Fan Xiao et al 1987), “delexical verb” (Diao Yanbin, 2004), but most of the scholars use the name “dummy verb” in their studies, such as Zhou Gang (1987), Li Linding (1990), Hu Yushu, Fan Xiao (1995), Shao Jingmin (2003), Shen Jiaxuan, Zhang Jiangzhi (2013) and so on. In Zhao Yuanren's book *A Grammar of Spoken Chinese*, it is called dummy word, from which the names of all the Chinese translations are all derived. In English, dummy word

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refers to a kind of form that is introduced into the structure or analysis to ensure that a legal sentence is produced. while in Chinese, dummy word tends to have different performance in different situations. when collocated with a verb, it only has function in its form, but with nominal object, it's unable to deny its lexical meaning. Many scholars don't distinguish the differences when they discuss the dummy verb. Moreover, though the syntactic functions and pragmatic functions of this kind of verbs are analyzed, the analysis on its structure is still not clear enough. Scholars have realized that there are different syntactic and semantic features within these verbs, so they divide them into two categories: "加以[jia1yi3]" and "jin xing[进行]", and make a comparative study, such as Zhou Gang, Hu Yushu etc. Other scholars have studied their grammatical function and syntactic performance from different perspectives. Yuan Jie, Xia Yunyi(1984), Zhu Dexi(1985), Shen Jiaxuan, Zhang Jiangzhi(2013), Diao Yanbin (2004), Chen Yongli(2006), Li Guimei(2012), Du Qun'er(2013), Yu Lili(2008) all have made a lot of research on the usage and function of the large class of dummy verbs.

“进行[Jin4Xing2]” is a typical member of the dummy verb and many scholars take it out for separate analysis and discussion. For example, Song Yuke (1982) has studied the grammatical functions of “进行[Jin4Xing2]”. Diao Yanbin (2004) has analyzed the use and function of “进行[Jin4Xing2]” in his doctoral dissertation. Jiang Zixia, Ding Chongming (2011) and Qiu Wei (2013) have discussed the forming mechanism of the function of the “进行[Jin4Xing2]” sentences. Pang Jiaguang (2012) have conducted a study on “进行[Jin4Xing2]” from the perspective of cognitive grammar.

In previous studies, few of the "进行[Jin4Xing2]+V" structures have been directly discussed, scholars tended to discuss the case of noun object and verb object together and no one investigated the difference of the distribution of "进行[Jin4Xing2]+V" in different registers. This paper argues that the most significant feature of the dummy verb is that it's lexical meaning is weaken or even disappear when it is collocated with the verb object, and the action of the whole sentence is assumed by the verb object. Therefore, it is very necessary to focus on the "V" in the structure of "dummy verb +V". This paper will take the typical dummy verb “进行[Jin4Xing2]” as an example, and conduct analysis and researches on the distribution of "进行[Jin4Xing2]+V" structure and the structural and semantic features of "V" in the structure of "进行[Jin4Xing2]+V"<sup>2</sup>. At the same time, in view of the previous studies which lack a large number of corpus and data support, the study of this paper will give an objective description and analysis of the actual use of such

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<sup>2</sup> This study doesn't include other forms that other constituents appear between “进行[Jin4Xing2]” and “V”.

structure on the basis of retrieval, statistical and econometric analysis based on a large corpus of BCC (hereinafter called BCC)<sup>3</sup>.

## 2.The Distribution of “进行[jin4xing2]+V” in Different Registers

At first, through the online retrieval and artificial selection, we have filtered those unqualified data which may have errors on segmentation or for other reasons. At the same time, since the scale of different registers are different and they are counted by characters not by words, so we have proposed a method to make standardized data when calculating the proportion of words in different registers. As a result, we get the distribution of “进行[jin4xing2]+V” in different registers which are as follows.

registers	Word type	Word frequency	Standard proportion	First 78 words(count) <sup>4</sup>	First 78 words(proportion)
literature	3310	48894	8.31%	13634	27.88%
newspapers	3886	130078	33.17%	74675	57.41%
microblog	2423	40641	6.91%	12173	29.95%
Science and technology	5126	303557	51.61%	218130	71.86%
total	14746	523170		318612	60.90%
Common words	1625	508452		4.8%	62.66%

Table1: the distribution of “进行[jin4xing2]+V” in different registers

From table1 we can see that the average number of word types of the V in “进行[jin4xing2]+V” in each register is around three thousand. We also find that “进行[jin4xing2]+V” structure is used most frequently in the register of science and technology. There are nearly five thousand kinds of verb objects of “进行[jin4xing2]” in this register,

<sup>3</sup> In this paper, we use the BCC Chinese corpus of Beijing Language and Culture University. This corpus is the largest Chinese corpus in China at present, total number of characters are about 15 billion, including comprehensive(1 billion)、literature(3 billion)、microblog(3 billion)、newspapers(2 billion)、science (3 billion) and ancient Chinese). This paper uses the data from literature、newspapers、microblog and science and technology(about 11 billion characters in total) to conduct our studies.

<sup>4</sup> We find there are 78 verbs whose frequency is more than 1000, and the corpus data of those verbs account for more than 50%. So we only count the first 78 words because we need to count them one by one.

which is more than twice the number of that in microblog. And word types in literature and newspapers are much less than in science and technology. On the corpus data, the frequency of this collocation is much higher than in other three registers, which accounts for more than half of the total data.

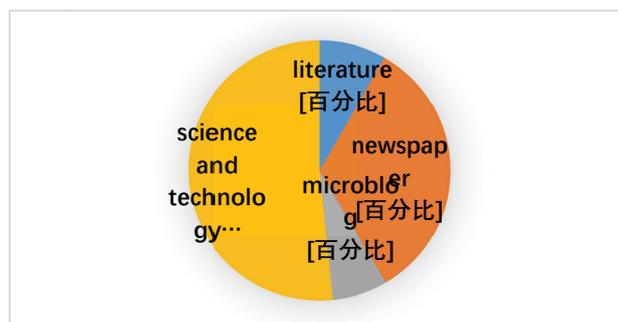


Figure1: the distribution of “进行[jin4xing2]+V”

From the style of these four registers, we can easily represent them according to the degree from written language and spoken language:

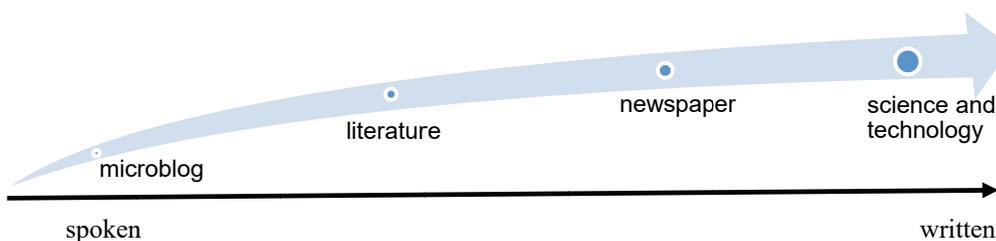


Figure2: the stylistic features of different registers

We can see from the figure above that the stronger the degree of written language, the higher the frequency of “进行[jin4xing2]+V” structure is and vice versa. That means “进行[jin4xing2]+V” structure is more used in formal context and less used in informal context. Yuan Jie and Xia Yunyi(1984) have proposed that “进行[jin4xing2]+V” structure is mostly used in official document. To present the difference of V among different registers, we have selected the first ten most frequent verbs for a direct display:

From the table2 above we can see obvious difference among the behavior in different registers. There are only four words that appear in all the registers. That's because they are common words that can usually be used in every aspect in our life. While the other words well present the characteristic of each register. For example, words like “决战[jue2zhan4](battle), 轰炸[hong1zha4](bomb), 反击[fan3ji1](counterattack)” always have

relations with literature (the corpus data in literature are mainly derived from novels); words like “学习[xue2xi2](study), 反对[fan3dui4](object), 访问[fang3wen4](visit)” always show in newspapers; words like “沟通[gou1tong1](communicate), 拍摄[pai1she4](take a photo), 投票[tou2piao4](vote)” are always used to describe our daily life; words like “统计[tong3ji4](count), 计算[ji4suan4](calculate), 评价[ping2jia4](evaluate), 治疗[zhi4liao2](treat)” are generally related to science and technology. That doesn't mean these words only appear in one register, it only means these words have closer relation to one of these registers. As a result, although the distribution of V in different registers is not even, they have their own character in the selection of verbs. In other words, we have got an intuitive understanding beyond the verbs in “进行[jin4xing2]+V” used in different registers.

literature	newspaper	microblog	Science and technology
调查(research)	调查(research)	调查(research)	分析(analyze)
研究(study)	讨论(choose)	分析(analyze)	研究(study)
反击(counterattack)	研究(study)	沟通(communicate)	调查(research)
分析(analyze)	分析(analyze)	治疗(treat)	统计(count)
讨论(choose)	处理(deal with)	选择(choose)	处理(deal with)
决战(battle)	破坏(destroy)	研究(study)	计算(choose)
轰炸(bomb)	清理(clean up)	拍摄(film)	评价(evaluate)
观察(observe)	学习(study)	处理(deal with)	探讨(choose)
打击(hit)	反对(against)	讨论(choose)	治疗(treat)
破坏(destroy)	访问(visit)	投票(vote)	讨论(choose)

Table2: the first 10 highest frequent verbs

### 3. Structural Characteristics of "V" in "进行[Jin4Xing2]+V"

Through the BCC query statistics and primarily screening, we get 1605 common verb objects of “进行[Jin4Xing2]”. These 1600 words are legitimate collocations which have appeared in the literature, newspapers, and science and technology works and microblog. We temporarily call them common words, and the data coverage of the more than 1600 common words has reached 95%. As a result, we will analyze the data in the context of common words. The data below is the coverage of common words.

The first N common	the quantity of language	word coverage	corpus
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words	data	rate	coverage
20	172627	1.25%	34.73%
50	231178	3.12%	46.51%
100	282729	6.23%	56.89%
200	345063	12.46%	69.43%
300	381141	18.69%	76.69%
400	406862	24.92%	81.86%
500	427161	31.15%	85.95%
1605	497010	100.00%	100.00%

Table3: Coverage of common words

We can see from Table 3 that in the "进行[Jin4Xing2]+V" structure, the top 400 high-frequency verbs account for 24.92% on the types of common words, while its corpus coverage rate has reached 81.86%. The distribution of the verbs which can be used as the object of "进行[Jin4Xing2]" is more concentrated and has a larger coverage area. Therefore, this section of the analysis of the structure of V in the structure of "进行[Jin4Xing2]+V" will focus on these 400 verbs.

### 3.1. Investigation of Word Formation

Yuan Chunfa and Huang Changning (1998) have conducted statistical research on the compound word formation of Chinese parts of speech. The distribution of the five main types of verbs in the conclusion of the thesis is shown in Table 4.

combined structure	adverbial-centered structure	predicate-object Structure	predicate-complement structure	subject-predicate structure
4257	3647	7134	927	243
27.17%	23.3%	39.7%	5.92%	1.55%

Table4: the word formation of Chinese verb from the statistic of Yuan & Huang<sup>5</sup>

From Table4 we find the word formation of Chinese verb are mainly predicate-object structure, combined structure and adverbial-centered structure and they account for 90% of the total amount of the double-syllable verb. Generally speaking, the word formation of Chinese compound word is mainly predicate-object structure. The number of verbs in predicate-object structure is almost two times that of the adverbial-centered structure, followed by combined structure and adverbial-centered structure. And verbs in the

<sup>5</sup> We only choose five word formations in Yuan & Huang's article which are the same as that of high frequency verb, so it's sum of proportion is not equal to 1.

predicate-complement structure and subject-predicate structure are much less.

We analyze the structure of the first 400 high frequency verb object. The result are as follows.

combined structure	adverbial-centered structure	predicate-object structure	predicate-complement structure	subject-predicate structure
151	137	51	52	8
37.75%	34.25%	12.75%	13.00%	2.00%

Table5: Analysis of the structure of the top 400 high frequency words

From Table5 we find that the distribution of the word structure of Chinese verb collocated with “进行[Jin4Xing2]” is not the same to the distribution of word structure of Chinese general verbs. In the first 400 high frequency verbs, combined structure and adverbial-centered structure are the main structure of verbs, such as “分析[fen1xi1](analyze)/计算[ji4suan4](calculate)/控制[kong4zhi4](control)/学习[xue2xi2](study)/处理[chu4li3](deal with)” in combined structure and 统计[tong3ji4](count)/总结[zong2jie2](summarize)/反击[fan3ji1](counterattack)/座谈[zuo4tan2](symposium)” in adverbial-centered structure. Predicate-object structure and predicate-complement structure also occupy a certain proportion while subject-predicate structure is at least which only contains eight words in the first 400 high frequency words. Except for the predicate-object structure, Table 5 is consistent with the basic word formation rules of verbs in Table 4.

As for the predicate-object structure which accounts for nearly 40% in the original word formation of Chinese verbs, the number of verbs in “进行[jin4xing2]+V” only accounts for about one eighth. We roughly analyze the statistics of one thousand and six hundred common words and find some of the verbs in predicate-object that can be used as the verb object of “进行 [Jin4Xing2]”, such as “评价[ping2jia4](evaluate), 规范[gui1fan4](regularize), 动员[dong4yuan2](mobilize), 采样[cai3yang4](sampling), 抽样[chou1yang4](sampling), 分流[fen1liu2](divert), 立案[li4an4](place a case on file), 合资[he2zi1](joint venture), 充电[chong1dian4](charge), 投票[tou2piao4](vote), 排队[pai2dui4](wait in a line), 定位[ding4wei4](locate), 减压[jian3ya1](decompression), 消毒[xiao1du2](disinfect), 罚款[fa2kuan3](fine), 投标[tou2biao1](bid), 融资[rong2zi1](finance), 反腐[fan2fu3](anti-corruption), 立法[li4fa3](legislation), 备案[bei4an4](filing), 筹资[chou2zi1](finance), 排名[pai2ming2](rank), 征税[zheng1shui4](taxation), 联网[lian2wang3](connect with the internet), 立项[li4xiang4](project establishment), 备课[bei4ke4](prepare lesson), 排序[pai2xu4](sort), 敛财[lian3cai2](accumulate wealth), 分类[fen1lei4](classify)”, etc. The number of words in this kind of structure is no more

than one hundred which only account 6% in the whole of more than one thousand words. Let's take a look at some example sentences:

- (1) 不应根据在其他人眼中的属性,而应基于某个人能干什么来对其进行评价。

*We should evaluate one person based on what he is capable to rather than his personal attribution in other's eyes.*

- (2) 活动受到来自全国数千万玩家朋友的关注,百万玩家通过网络投票方式进行投票。

*The activity has attracted attention from tens of millions game players around the country, and millions of game players can vote by internet voting.*

- (3) 因此,检察机关根据报案,控告和举报途径获取立案材料进行立案,无法获取犯罪嫌疑人的口供。

*Therefore, the procuratorial organ filing a case according to the report of the prosecution, the prosecution and the way to obtain filing materials.*

- (4) 在机械表表面涂有黑色吸光条,当表盘转动光电管对其进行采样。

*The mechanical watch is coated with a black light absorbing strip, and when the dial is rotated, the photoelectric tube is sampled.*

From the examples above, we can see in addition to its inner patient "value", the word"评价[ping2jia4](evaluate)" also has its object in semantic, namely "people". In addition to its inner patient " ballot", the word"投票[tou2piao4](vote)" also has its object in semantic, namely "internet game". In addition to its inner patient " case", the word"立案[li4an4](put a case on file )" has its object in semantic, namely "event". In addition to its inner patient " sample", the word"采样[cai3yang4](sampling)" has its object in semantic, namely "population". But structures like “进行吃饭[jin4xing2 chi1fan4]/进行喝水[jin4xing2 he1shui3]/进行唱歌[jin4xing2 chang4ge1].....” are all grammatically wrong for the fact that “吃饭[chi1fan4](have a meal), 喝水[he1shui3](drink), 唱歌[chang4ge1](sing)” only have their inner patient without any external object. “吃饭[chi1fan4](have a meal)” only has one inner patient “rice”. “喝水[he1shui3](drink)” only has one inner patient “water”.“唱歌[chang4ge1](sing)” only has one inner patient “songs”. That's why those words are not allowed to enter “进行[jin4xing2]+V”.

Diao Yanbin (2004) has put forward an idea that the "进行[jin4xing2]" sentence is a kind of stress. It emphasizes the content of the relevant actions through the focus shift. According to the analysis above we find that the idea that the verbs allowed to enter “进行[jin4xing2]+V” must have external object in semantic is in accordance with Diao's study.

Because only when the verb has external object, “进行[jin4xing2]” sentence has object to shift when shifting the focus of this sentence, although sometimes the external object does not necessarily appear in the original sentence, but we can find out it based on the context. Accordingly, we believe that the main reason why verbs in predicate-object structure have access to “进行[jin4xing2]+V” is because the structure emphasize the external object and usually the external object can be brought to the front of “进行[jin4xing2]+V” using prepositions like “对[dui4], 将[jiang1], 向[xiang4], 把[ba3]”. Taking a few sentences as examples:

- (5) 目前一些企业在进行赞助时, 存在误区。

*At present, some enterprises have misunderstanding in the sponsorship.*

- (5') 目前一些企业在**对平台**进行赞助时, 存在误区。

*At present, some enterprises have misunderstanding in the sponsorship.*

(6) 高尔夫模拟器采用电脑软件进行控制, 可自动调节各种打法和击球距离, 并能真实模拟高尔夫球的运动轨迹。

*The golf simulator is controlled by computer software, can automatically adjust a variety of play and hitting distance and can truly simulate the trajectory of golf.*

(6') 高尔夫模拟器采用电脑软件**对高尔夫球**进行控制, 可自动调节各种打法和击球距离, 并能真实模拟高尔夫球的运动轨迹。

*The golf simulator is controlled by computer software, can automatically adjust a variety of play and hitting distance and can truly simulate the trajectory of golf.*

- (7) 一些村民害怕侵犯中国领土, 不愿意去, 公安人员就进行训斥和威胁。

*Some villagers fear the invasion of Chinese territory and do not want to go, the public security personnel rebuked and threatened them.*

- (7') 一些村民害怕侵犯中国领土, 不愿意去, 公安人员就**对村民**进行训斥和威胁。

*Some villagers fear the invasion of Chinese territory and do not want to go, the public security personnel rebuked and threatened them.*

(8) 对这些商品的价格, 国家物价局和各级地方政府要按管理权限, 分别进行整顿, 严格管理。

*The State Price Bureau and local governments at all levels shall shake up and tightly regulate the price of those commodities in accordance with the administrative authority.*

(8') 对这些商品的价格, 国家物价局和各级地方政府要按管理权限, 分别**对商品价格**进行整顿, 严格管理。

*The State Price Bureau and local governments at all levels shall shake up and tightly regulate the price of those commodities in accordance with the administrative authority.*

The examples above show that we can usually to highlight the external object by advancing it using prepositions. While most of verbs in predicate-object structure only have their inner patient which cannot be separated , only a few verbs in predicate-object structure have external object in semantic and only those words will be allowed to enter “进行[jin4xing2]+V” structure. So the verb in “进行[jin4xing2]+V” is selective in structure. When directly collocated with "进行[jin4xing2]",the verb object preferred verbs in combined structure and adverbial-centered structure. while in the selection of verbs in predicate-object structure, only words which have external object can be the verb object of "进行[jin4xing2]". It is this kind of restriction that greatly reduces the proportion of verbs in predicate-object structure in the“进行[jin4xing2]+V” structure.

### 3.2. Syllable

Through the statistics of syllables features of V, we find that there are certain rules in the syllable, as shown in the table below:

Single syllable	Double-syllable	Tri-syllable
0	1588	17

Table 6: statistics of syllable of common words

According to the corpus retrieval and statistical results, we find that there’s no single syllable verb in “进行[jin4xing2]+V” structure and double-syllable words account for most proportions and there also are a few tri-syllable verbs. For why there is no single syllable verb in this structure, many scholars have given their views. A typical view is what early Zhu Dexi (1985) put forward, "the object of the request of the virtual verb is the nominal composition of the action. In line with the requirements of the syntax, there are only two categories: pure noun that represents an action and denominatives with the dual nature of the noun and verb. These two kinds of words are almost all produced in a short history of the written word double-syllable words. In the spoken language, there is no denominatives in the single syllable or no pure noun that represents an action. This is the real reason why the object of virtual verb can only be double-syllable word.”<sup>6</sup> Diao Yanbin (2004) also has proposed that from the perspective of syllable, all of the single verb objects are double-syllables, and most of the people have interpreted it as the requirement of "2+2"

<sup>6</sup> Zhu Dexi, a virtual verb and noun-verb in modern written Chinese, for the first International Conference on Chinese language teaching and learning, Journal of Peking University (Humanities and Social Sciences), 1985 (5).

syllable. It's true that according to the viewpoint of prosody, the combination of two standard foot are the most basic and most natural on the combination of Chinese phrases. And in predicate-object structure, "2+2" structure and "1+2" structure are acceptable while "2+1" structure is not acceptable. So it is reasonable that there is no single syllable verb object in our statistics. But many scholars have ignored the tri-syllable verbs in the "+V" structure, the total number of which is about 1300 and most of them are those with "化[hua4]" as their suffixes, such as "系统化[xi4tong3hua4] (*systematization*), 格式化[ge2shi4hua4] (*formatting*), 专业化[zhuān1yē4hua4] (*specialize*), 数字化[shu4zi4hua4] (*digitalize*), 精细化[jing1xi4hua4] (*refine*), 立体化[li4ti3hua4] (*three-dimensional*), 形象化[xing2xiang4hua4] (*visualize*), 个人化[ge4ren2hua4] (*personalize*), 全球化[quan2qiu2hua4] (*globalize*), 公式化[gong1shi4hua4] (*formulate*), 理论化[li3lun4hua4] (*theorize*), 理想化[li3xiang3hua4] (*idealize*), 形式化[xing2shi4hua4] (*formalize*), 规模化[gui1mo2hua4] (*large-scale*), 程序化[li3xiang3hua4] (*programming*), 产业化[chan3ye4hua4] (*industrialize*), 本土化[ben3tu3hua4] (*localize*), 国际化[guo2ji4hua4] (*internationalize*), 抽象化[chou1xiang4hua4] (*abstract*), 多元化[duo1yuan2hua4] (*diversify*), 指数化[zhi3shu4hua4] (*indexing*), 私有化[sil1you3hua4] (*privatize*), 拟人化[ni3ren2hua4] (*personify*)", etc.

According to Zhu Dexi's view that the verb objects of "进行[jin4xing2]" are those denominatives with the dual nature of both noun and verb, we are going to discuss if the properties of noun of those three syllable words mentioned above like "系统化[xi4tong3hua4] (*systematization*), 格式化[ge2shi4hua4] (*formatting*), 全球化[quan2qiu2hua4] (*globalize*), 抽象化[chou1xiang4hua4] (*abstract*)" whose predicative nature is indisputable are evident.

The nominal features of the double-syllable denominatives in "进行[jin4xing2]+V" displayed in the previous studies are as follows:

- a. Can be directly affected by the noun modifier to form a modification-center structure

(数据) 分析	(社会) 调查	(科学) 研究
Shu4ju4 fen1xi1	she4hui4 diao4cha2	ke1xue2 yan2jiu1
<i>data analysis</i>	<i>social survey</i>	<i>science research</i>
(课堂) 讨论	(人口) 统计	(结构) 优化
Ke4tang2 tao3lun4	ren2kou3 tong3ji4	jie2gou4 you1hua4
<i>class discussion</i>	<i>demographic</i>	<i>structural optimum</i>

- b. Some words can be modified by some quantitative words

一些 [yi4xie1] (*some*) : 进行 [jin4xing2]~ 调查 [diao4cha2] (*research*) / 分析

[fen1xi1](*analysis*)/ 研究 [yan2jiu1](*study*)/ 统计 [tong3ji4](*count*)/ 评价 [ping2jia4](*evaluate*)  
 不少 [bu4shao3](*not a few*): 进行 [jin4xing2]~ 修改 [xiu1gai3](*revise*)/ 解释 [jie3shi4](*explain*)/改进[gai3jin4](*improve*)

From the analysis of double-syllable verb object, we have confirmed their nominal features. Then let's have a look at those tri-syllable verbs whether they also have those nominal features<sup>7</sup>:

系统化:	<u>(规则) 系统化</u>	<u>(知识) 系统化</u>
Xi4tong3hua4	gui1ze2 xi4tong3hua4	zhi1shi2 xi4tong3hua4
<i>Systematization</i>	<i>Rule systematization</i>	<i>Knowledge systematization</i>
	*一些系统化	*不少系统化
	Yi4xie1 xi4tong3hua4	bu4shao3 xi4tong3hua4
	<i>Some systematization</i>	<i>not a few systematization</i>
全球化:	<u>(资本) 全球化</u>	<u>(经济) 全球化</u>
Quan2qiu2hua4	zi1ben3 quan2qiu2hua4	jing1ji4 quan2qiu2hua4
<i>Globalization</i>	<i>Capital globalization</i>	<i>economic globalization</i>
	*一些全球化	*不少全球化
	Yi4xie1 quan2qiu2hua4	bu4shao3quan2qiu2hua4
	<i>Some globalization</i>	<i>not a few globalization</i>
抽象化:	<u>(概念) 抽象化</u>	<u>(问题) 抽象化</u>
Chou1xiang4hua4	gai4nian4chou1xiang4hua4	wen4ti2 chou1xiang4hua4
<i>Abstract</i>	<i>concepts abstraction</i>	<i>problem abstraction</i>
	*一些抽象化	*不少抽象化
	Yi4xie1 chou1xiang4hua4	bu4shao3 chou1xiang4hua4
	<i>Some abstraction</i>	<i>not a few abstraction</i>
格式化:	<u>(数据) 格式化</u>	<u>(电脑) 格式化</u>
Ge2shi4hua4	shu4ju4 ge2shi4hua4	dian4nao3 ge2shi4hua4
<i>Formatting</i>	<i>data formatting</i>	<i>computer formatting</i>
	*一些格式化	*不少格式化
	Yi4xie1 ge2shi4hua4	bu4shao3 ge2shi4hua4
	<i>Some formatting</i>	<i>not a few formatting</i>

From the analysis above, we can easily notice that tri-syllable verbs with “化[hua4]” as their suffix tend to be constituted in combined structure rather than in modification-center

<sup>7</sup> Here “\*” means it is ungrammatical.

structure when collocated with a noun. Also they doesn't show strong nominal feature, instead, its predicative nature is more obvious. In other words, the point of Zhu Dexi seems to be not too strict. In the discussion on this issue, Shen Jiaxuan (2012) has pointed out that once we accept the idea that denominatives are verbs when modified by adverbs or take an object and are nouns when modified by attributes or quantitative words, we would find that almost every verb in Chinese can be analyzed like this, including single syllable verbs. Let's take some single syllable verbs as examples<sup>8</sup>:

(9) 去 是 有 道理 的 。

Qu4 shi4 you3 dao4li3 de.

*It makes sense to go.*

(10) 不 去 是 有 道理 的 。

Bu2 qu4 shi4 you3 dao4li3 de.

*It makes sense not to go.*

(11) 跳 很 重要 。

Tiao4 hen3 zhong4yao4.

*It is important to jump.*

Therefore, Shen Jiaxuan has put forward the theory that nouns contain verbs and has proposed the regularity of the change between nouns and verbs. He holds the view that Chinese verbs are part of nouns and the only difference between them is the degree of their nominal feature and the predicative nature, and nominal feature of the dummy verb and its verb object change synchronously. Since dummy verb is strongest in predicative nature, although its lexical meaning is empty, the verb object of it always presents strong nominal feature. Shen Jiaxuan's theory has solved the deficiency of Zhu Dexi's theory. But we still have problems when we use it to explain the tri-syllable verbs. As we analyzed above, the tri-syllable verbs present strong predicative nature, which means “N+XX 化” tends to be a subject-predicate structure and this kind of structure can't be modified by quantitative words. As a result, we think it's not very strict to explain the collocation with tri-syllable verbs using Shen Jiaxuan's theory.

In fact, through the observation of the double-syllable word we find there are some verbs with suffix “[化 hua4]” such as “虚化[xu1hua4](*virtual*), 简化[jian3hua4](*simplify*), 深化[shen1hua4](*deepen*), 同化[tong2hua4](*assimilate*)” etc. Those tri-syllable verbs with suffix “[化 hua4]” have the same properties as these double-syllable verbs with suffix “[化 hua4]”. They all represent a change in behavior and have strong predicative nature.

<sup>8</sup> The examples here are derived from the article “talk about the function of dummy verbs” written by Shen Jiaxuan and Zhang Jiangzhi. Other examples in this paper are derived from BCC Chinese Corpus.

Tri-syllable verbs like “热处理 [re4chu3li3] (*heat treating*), 再加工 [zai4jia1gong1] (*reprocessing*)” also have access to “进行[jin4xing2]+V”. The main characteristics are that they all consist of a double-syllable compound verb and an affix. So they are much similar to the double-syllable compound verb in many respects. However, the biggest difference between those tri-syllable verbs and traditional tri-syllable verbs is that those tri-syllable verbs are constituted in additional way. We hold the view that with the development of Chinese language and the contact with other languages, the length of Chinese word is getting longer and the collocation between Chinese phrase are not limited to “2+2” on syllable any more. “2+3” structure has appeared and developed and more tri-syllable verbs will be allowed to enter “进行[jin4xing2]+V” structure.

Verb object of “进行 [jin4xing2]”	【+autonomy】	【+continuity】 <sup>9</sup>	Verb that can't be the object of “进行 [jin4xing2]”	【+autonomy】	【+continuity】
分析 ( <i>analyze</i> )	√	√	打扰 ( <i>disturb</i> )	√	√
研究 ( <i>study</i> )	√	√	打断 ( <i>interrupt</i> )	√	—
调查 ( <i>investigate</i> )	√	√	羡慕 ( <i>admire</i> )	—	√
处理 ( <i>deal with</i> )	√	√	喜欢 ( <i>like</i> )	—	√
系统化 ( <i>systematize</i> )	√	√	知道 ( <i>know</i> )	—	—

Table7: the analysis of semantic features of V in “进行[jin4xing2]+V”

#### 4. The Semantic Features of V in “进行[jin4xing2]+V”

Diao Yanbin(2004) has divided the verb object of “进行[jin4xing2]” into transitive verb and intransitive verb and proposed that although most of the verb objects are transitive verbs, they don't take an object. There are two primary reasons: one is that the object doesn't appear at all; the second reason is that the object on ideation appears in the other

<sup>9</sup> The judgement of the continuity of verb is based on Ma Qingzhu(1980) *Timing Quantifier Object and Verb Class*. In this article, Ma judges whether a verb is continuous according to whether can be followed by “Zhe”. If can be followed by “zhe”, then it is continuous, otherwise it is not continuous.

position of the sentence. Through our analysis of those verbs that we have got from the BCC corpus, from the perspective of its semantic features, the verb object of “进行[jin4xing2]” are those who indicate the action of it. And usually this kind of action has complexity and continuity. Generally speaking, they are volitional verbs. In addition, verbs that indicate the action associated with a mental activity or mental activity can't be the object of “进行[jin4xing2]”. From the analysis of the words we have collected, we find those words have something in common on semantic. We choose a few words as examples for comparing, and let's look at some the comparison below:

In the table above, we find that some words have the access to the “进行[jin4xing2]+V” structure like “分析[fen1xi1](analyze), 研究[yan2jiu1](study), 调查[diao4cha2](investigate), 处理[chu3li3](deal with), 系统化[xi4tong3hua4](systematize)” while the others don't, like “打扰[da3rao3](disturb), 打断[da3duan4](interrupt), 羡慕[xian4mu4](admire), 喜欢[xi3huan1](like), 知道[zhi1dao4](know)” etc. From the table above we can know that only verbs that both have autonomy and continuity can be collocated with “进行[jin4xing2]”. Ma Qingzhu(1988) has listed 65 double-syllable autonomous verbs in his article. We listed them in appendix. From analysis of those words, we find that not all those words can be the verb object of “进行[jin4xing2]”. There are three words that cannot collocate with “进行[jin4xing2]”, that is “告诉[gao4su4](tell), 嘱咐[zhu3fu4](tell), 代表[dai4biao3](represent)”. Although those words have autonomy, they still can't be the object of “进行[jin4xing2]”, and we hold the view that it is because they lack continuity. Then we analyze the first 400 high-frequency words we have got, and the result exactly fit in with our previous idea. As a result, we conclude that the verbs collocated with “进行[jin4xing2]” all have autonomy and continuity in semantic. Not a single one of these conditions can be dispensed with, just like the example words above.

### 5. The Analysis of Typical Syntactic Structure

Through the corpus data of “进行[jin4xing2]+V”, we have noticed that “进行[jin4xing2]+V” always appear together with prepositions like “对[dui4], 向[xiang4], 将[jiang1], 把[ba3]” etc, and they account for a large proportion in the “进行[jin4xing2]+V” structure. As a result we search the corpus data of the first thirty verbs with preposition before “进行[jin4xing2]”. The statistical data is as follows:

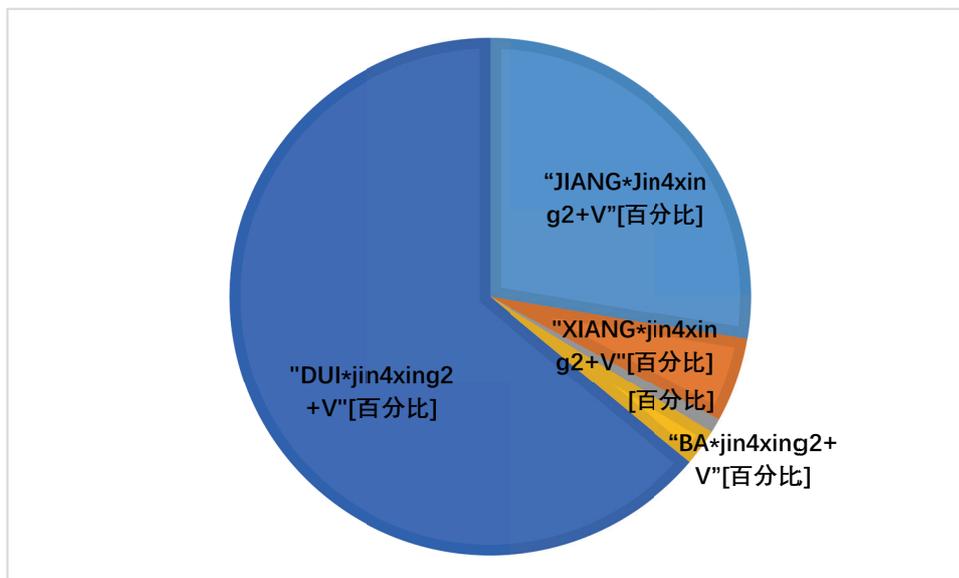


Figure3: the distribution of different prepositions in “进行[jin4xing2]+V” sentences

The figure above tells us that “对[dui4]\*进行[jin4xing2]+V” structures account for a large proportion in “进行[jin4xing2]+V” structure, which is even more than 60%. That means, “进行[jin4xing2]+V” structure is usually together with “对” or other few prepositions in modern Chinese, unless no object(in semantic) is needed to be exposed to readers. And even the sentence doesn’t have a preposition in it, we also can transfer it into a corresponding sentence with a preposition. Let’s look at some examples:

(12) 另据印度报业托拉斯报道，印度南部卡纳塔克邦莫加地区一座钢铁厂当天凌晨也发生爆炸，造成7人死亡，6人受伤，厂方正在**对事故进行调查**。

*According to the press trust of India, an iron and steel plant in MOGA area in southern state of Kama-taka of India also exploded, cause 7 people to die and 6 people were injured.*

(12’) 另据印度报业托拉斯报道，印度南部卡纳塔克邦莫加地区一座钢铁厂当天凌晨也发生爆炸，造成7人死亡，6人受伤，厂方正在**调查事故**。

*According to the press trust of India, an iron and steel plant in MOGA area in southern state of Kama-taka of India also exploded, cause 7 people to die and 6 people were injured.*

(13)各乡镇一把手向县委,县政府签订了林木责任状，**把目标进行细化**，分解，落实到村组农户，并与群众签订了包栽包活责任状。

*The township leaders and the county government signed a responsibility about forest to refine and decompose the target and carry out to the village of farmers, and signed an*

*agreement of ensuring the survival rate with the masses*

(13') 各乡镇一把手向县委,县政府签订了林木责任状, **细化和分解目标**, 落实到村组农户, 并与群众签订了包栽包活责任状。

*The township leaders and the county government signed a responsibility about forest to refine and decompose the target and carry out to the village of farmers, and signed an agreement of ensuring the survival rate with the masses*

(14) 由于淬火工件表面存有大量残油, 因此为清洁环保, 在清洗机内设置有油层撇油装置, **将油水进行分离**。

*Because there is a large amount of residual oil on the surface of the quenching work-piece, the oil layer is arranged in the cleaning machine to separate the oil layer, and the oil and water are separated for clean and environment protection.*

(14') 由于淬火工件表面存有大量残油, 因此为清洁环保, 在清洗机内设置有油层撇油装置, **来分离油水**。

*Because there is a large amount of residual oil on the surface of the quenching work-piece, the oil layer is arranged in the cleaning machine to separate the oil layer, and the oil and water are separated for clean and environment protection.*

(15) 每当演奏一首乐曲, 他就事先将作品的曲意和产生的时代背景等, **向观众进行讲述**, 讲到形象生动风趣时, 每每博得全场观众的热烈掌声。

*Whenever he plays a piece of music, he will describe the meaning and the background of this piece of work and when talking about vivid and interesting, he often wins the audience's warm applause.*

Through the examples above, we find that these sentences have one feature in common, which is that they all tend to emphasize the object of the preposition. There is one situation in which the object of V in “进行[jin4xing2]+V” is not patient but other object, we must use a preposition when we need to show the object. And we find that even for those sentences without preposition, we can transfer them into sentences with preposition by advancing the semantic object of V in “进行[jin4xing2]+V”. That means the “进行[jin4xing2]+V” structure are usually used to stress the object of V and when it appears in the above, it can be omitted and the reader can complete it in his mind. As a result, prepositions play a very important role in “进行[jin4xing2]+V” sentences.

## 6. Conclusion

“进行[jin4xing2]+V” is an important structure in the use of dummy verb. Its function is closely related to its structure and all its extended forms are derived from the basic form “进行[jin4xing2]+V”. As a result, in this paper we argue for the necessity of studying the

structure of “V” in “进行[jin4xing2] +V” based on previous research , and give a full description and analysis of the construction on the basis of the large-scale corpus. The distribution of “进行[jin4xing2] +V” construction differs in terms of registers because it is often used in formal contexts. In addition, in the choice of V of predicate-object structure, only double-syllable or tri-syllable autonomous verbs that have external object and continuous in semantics are allowed to enter the structure.

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**Appendix one:** The 78 verbs whose frequency is beyond 1000

分析( <i>analyze</i> )	处理( <i>deal with</i> )	治疗( <i>treat</i> )	探讨( <i>discuss</i> )
研究( <i>study</i> )	讨论( <i>discuss</i> )	计算( <i>calculate</i> )	学习( <i>study</i> )
调查( <i>investigate</i> )	统计( <i>count</i> )	评价( <i>evaluate</i> )	控制( <i>control</i> )
修改( <i>revise</i> )	观察( <i>observe</i> )	规范( <i>regulate</i> )	检验( <i>test</i> )
选择( <i>choose</i> )	考察( <i>explore</i> )	清理( <i>clean up</i> )	测定( <i>measure</i> )
总结( <i>summarize</i> )	预测( <i>predict</i> )	探索( <i>explore</i> )	沟通( <i>communicate</i> )
优化( <i>optimize</i> )	解释( <i>explain</i> )	破坏( <i>destroy</i> )	整理( <i>clear up</i> )
改进( <i>improve</i> )	协商( <i>negotiate</i> )	修正( <i>revise</i> )	检查( <i>check</i> )
判断( <i>judge</i> )	访问( <i>visit</i> )	对照( <i>according</i> )	整顿( <i>clean up</i> )
反思( <i>reflect</i> )	审核( <i>review</i> )	反对( <i>object to</i> )	筛选( <i>select</i> )
培养( <i>develop</i> )	座谈( <i>symposia</i> )	抢救( <i>rescue</i> )	查处( <i>deal with</i> )
反击( <i>counterattack</i> )	跟踪( <i>track</i> )	评定( <i>assess</i> )	协调( <i>coordinate</i> )
批判( <i>critic</i> )	改革( <i>reform</i> )	交换( <i>exchange</i> )	调整( <i>adjust</i> )

归纳( <i>sum up</i> )	采访( <i>interview</i> )	阅读( <i>read</i> )	整治( <i>punish</i> )
描述( <i>describe</i> )	验证( <i>verify</i> )	动员( <i>mobile</i> )	更新( <i>renew</i> )
分离( <i>separate</i> )	说明( <i>illustrate</i> )	预防( <i>prevent</i> )	投资( <i>investment</i> )
推广( <i>promote</i> )	慰问( <i>salute</i> )	治理( <i>govern</i> )	轰炸( <i>bomb</i> )
分解( <i>decompose</i> )	接触( <i>contact</i> )	投票( <i>vote</i> )	划分( <i>divide</i> )
查询( <i>query</i> )	宣传( <i>propagate</i> )	修复( <i>repair</i> )	
论证( <i>demonstrate</i> )	引导( <i>guide</i> )	拍卖( <i>auction</i> )	

**Appendix Two:** the 65 double-syllable autonomous verbs in Ma's article

安装( <i>install</i> )	纪念( <i>commemorate</i> )	组织( <i>organize</i> )	维持( <i>maintain</i> )
学习( <i>study</i> )	领导( <i>lead</i> )	劳动( <i>labor</i> )	编辑( <i>edit</i> )
讨论( <i>discuss</i> )	指挥( <i>command</i> )	休息( <i>rest</i> )	照顾( <i>take care of</i> )
调查( <i>investigate</i> )	动员( <i>mobilize</i> )	锻炼( <i>exercise</i> )	招待( <i>treat</i> )
研究( <i>research</i> )	催促( <i>urge</i> )	代表( <i>represent</i> )	要求( <i>require</i> )
分析( <i>analyze</i> )	鼓励( <i>encourage</i> )	修理( <i>repair</i> )	表演( <i>perform</i> )
考虑( <i>consider</i> )	支援( <i>support</i> )	利用( <i>take advantage</i> )	打扮( <i>dress up</i> )
商量( <i>consult</i> )	准备( <i>prepare</i> )	改造( <i>reform</i> )	装饰( <i>decorate</i> )
比较( <i>compare</i> )	承认( <i>admit</i> )	宣传( <i>propagate</i> )	解剖( <i>dissect</i> )
处理( <i>deal with</i> )	克服( <i>conquer</i> )	推荐( <i>recommend</i> )	记录( <i>record</i> )
参观( <i>visit</i> )	教育( <i>educate</i> )	保护( <i>protect</i> )	模仿( <i>imitate</i> )
访问( <i>visit</i> )	批评( <i>criticize</i> )	斟酌( <i>consider</i> )帮助	翻译( <i>translate</i> )
介绍( <i>introduce</i> )	表扬( <i>praise</i> )	( <i>help</i> )	建设( <i>build</i> )
统计( <i>count</i> )	反驳( <i>refute</i> )	训练( <i>train</i> )	驱逐( <i>expel</i> )
试验( <i>experiment</i> )	告诉( <i>tell</i> )	压缩( <i>compress</i> )	收集( <i>collect</i> )
安排( <i>arrange</i> )	嘱咐( <i>tell</i> )	创造( <i>create</i> )	选举( <i>election</i> )
按摩( <i>massage</i> )			