Standard and variation in the use of sentence-final particles: A case study based on speakers of Mandarin and Min varieties

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Sentence-final particles are widely used in spoken Chinese and have been analyzed from different theoretical perspectives. This study aims at investigating the influence of a speaker's dialectal background on their selection of SFPs in Mandarin Chinese. Two types of sentence completion questionnaires were submitted to 86 undergraduate and graduate students enrolled at Fuzhou University, roughly half of whom use – to varying degrees – one of the Chinese varieties spoken in Fujian Province. Data collected from the 72 valid questionnaires were analyzed with results showing that dialectal background is a significant factor in the close-ended item type questionnaire.

KEYWORDS: sentence-final particle, Standard Mandarin Chinese, Min varieties.

1. Introduction

While all languages display elements labelled particles, the peculiarity of Chinese lies in the diversity of these items both across different varieties and in how an individual particle is employed. Widely used in spoken language, Chinese sentence-final particles (henceforth SFPs) have been investigated from different perspectives and have been described in several works (among others Lü 1942, Chao 1979, Li & Thompson 1981, Chu 2009). While there is no lack of studies on SFPs in Cantonese, Taiwan Southern Min and some other varieties of Chinese (e.g. Fung 2000, Law 2002, Li 2006), less attention has been paid to the influence of regional varieties on the standard language in the selection of SFPs.[1] The present study aims to fill this gap by presenting and discussing the data collected from a sample of 72 participants, all native speakers of one or more varieties of Chinese. To investigate the differences between these varieties, a questionnaire was submitted to two groups: a close-ended item questionnaire type was given to one group, while the other group was asked to complete an open-ended item questionnaire type. The scenarios were the same for both types, and the target particles that were focused on are among the most frequently used in Standard Mandarin Chinese (henceforth SMC), i.e. 啊 *a,* 吧 *ba,* 吗 *ma* and 呢 *ne.* The decision to investigate these

particles and those exhibiting some of their functions in Min varieties, i.e. 不 *bu*, 啰 *luo*, 耶 *ye* and 嘛 *ma*, was based on two criteria: the first one is their high frequency, the second is related to the questionnaire on which we based our research being focused on the same items (Yang 2013).[2]

The paper is organized as follows. Section 2 presents SFPs by illustrating the general features and some of the classifications provided in the literature (2.1), and describes the particles used in SMC (2.2) and those employed in Min varieties (2.3). Section 3 illustrates the methodology adopted for the collection of data, while Section 4 illustrates the results obtained. Section 5 includes the discussion and the main findings, and Section 6 summarizes the conclusions.

2. Chinese sentence-final particles

2.1. General features

Traditionally included in the class of 助词 *zhùcí* 'auxiliary words', modern Chinese SFPs have been labelled by Chinese scholars in different ways as 语气词 *yǔqìcí* 'modal words', 语气助词 *yǔqì zhucí* 'modal auxiliary words' and 语末助词 *yǔwèi zhùcí* 'sentence-final auxiliary words'. Qi (2003) highlights this terminological inconsistency listing the various works where the topic is discussed and these labels appear. Qi also specifies that it is not uncommon for these authors to use different terms in different grammar books as in the case of Lü Shuxiang's works published in 1942, 1979, 1980. Again with regard to Chinese research, the authoritative monolingual dictionary of modern Chinese, *Xiandai hanyu cidian* (XHC), uses the term *yǔqì zhucí* for SFPs and includes them in the broad category of particles. These items are defined as "particular functional words with the lowest independence and the least concrete meaning" (XHC 2016: 1713).

The inclusion of particles within the broad class of *zhùcí* is justified by the properties these items and other particles share, i.e. the impossibility for them to occur independently in the sentence, their lack of lexical meaning, their position, attached to other elements, and their neutral tone. Nevertheless, according to Qi (2003), *yǔqìcí* should be distinguished from *zhùcí* because (i) the former occur at the end of the sentence, while auxiliary words may also occur after words or phrases within the sentence; (ii) although two or more auxiliary words cannot occur together, this is not the case with modal particles; (iii) some auxiliary words have lexical meanings, whereas modal particles do not.

Not only are the terms used to label Chinese SFPs different, but the perspectives from which these items have been investigated also evidence a variety of approaches, from pragmatic and syntactic analyses to semantic and

phonetic accounts. According to Chu (2016: 20), "Except for the 'change of state' *le* and the interrogative *ma*, the other Mandarin SFPs are less tangible in their 'meanings' or 'functions' and are thus treated in different analyses with radically different results".

Chu regards the approaches adopted in dealing with SFPs with a critical eye: according to him, listing the various meanings that these items can convey is of little help. It is more fruitful to start with their core functions, and derive all possible meanings from both linguistic and non-linguistic contexts, as a functional approach would suggest.

In general, these morphemes are 'phonologically small elements' that occur in sentence final position to express a variety of discourse functions and meanings that relate to the speaker's attitude and perspective. In summarizing SFP features, Simpson (2014) writes: (i) since they are speaker-oriented they can occur only in the matrix clause; (ii) more than one SFP can occur in a single sentence; (iii) SFPs tend to be prosodically integrated into the sentence they are part of.

According to another account (Huang & Shi 2016), two types of SFP exist: the first comprises the particles that can only appear at the end of a main clause, whereas particles of the second type can also occur at the end of subordinate clauses. The latter include particles such as 了 *le*, to be distinguished from aspectual, post-verbal *le*, and 来着 *laizhe*, which are not found in the first type of SFP. When such a particle is attached to a clause, whether main or subordinate, the proposition of the clause combines with the particle to create a new proposition (Huang & Shi 2016: 34). Most particles belong to the first type, including those investigated in this study.

2.2. Sentence-final particles in Standard Mandarin Chinese

Before presenting meanings and functions of this study's target particles it seems useful to spend a few words to briefly describe the complex linguistic situation existing in China. Standard Mandarin, established as official language in 1955, is used by the vast majority of the population across the country. Nonetheless, *pǔtōnghuà* 'common language' is but one variety of the Sinitic languages, a complex set of linguistic systems which belong to the Sino-Tibetan family and have been traditionally divided into 7 major groups (Chappell 2001). In addition to the standard language – genetically belonging to the Mandarin language supergroup – and to the several other 'dialects' being spoken throughout China – among which are the varieties of the Min supergroup – there is a third layer of regional varieties of the standard language which are highly influenced by and often retain elements directly reflecting the speakers' dialectal background. Despite the differences among all these linguistic varieties and the lack of mutual intelligibility

among speakers of distant dialects, they are somehow unified by the same logographic writing system.

As mentioned in Section 1, Standard Mandarin and dialects differ considerably in the inventory of SFPs. Those listed in one of the most influential grammars of Standard Chinese (Li & Thompson 1981) are *le, ne, ba,* 呕 *ou, a/*呀 *ya* and *ma*, whereas in Liu *et al.* (2001) we find *a, ba, ma, ne,* 的 *de, le,* 罢了 *bale* ／而已 *eryi , ma* and 呗 *bei*. Both works include and describe the four target particles investigated in this study, i.e. *a, ba, ma* and *ne,* which display a variety of functions and meanings and are frequently used in the spoken language. In particular, they are among the first 250 words in the *Frequency Dictionary of Mandarin Chinese* (Xiao *et al.* 2009) and the first 2,000 words in the *Xiandai hanyu changyong cibiao* [Modern Standard Chinese common word list] (2008) which is based on a much larger corpus and obviously includes a much higher number of words.[3] Whereas the functions and meanings of some particles can be clearly defined and identified, the task is less clear-cut for others. In this paper we analyze both types: the functions of *ba* and *ma* are rather unambiguous, but the same cannot be said for *a* and *ne*.

Two of the most prototypical uses of *ba* are (i) at the end of a sentence that envisages a positive reply, such as a request for confirmation (1) or to exhort somebody to do something (2), and (ii) at the end of a reply expressing agreement as in (3) (Liu *et al.* 2001: 424-426).

(1) 你　　的　　伤　　一定　　还　　很　　疼　　吧
    Nǐ　*de*　*shāng*　*yídìng*　*hái*　*hěn*　*téng ba*
    you　POSS　wound　surely　still　very　hurt　SFP
    'Your wound still hurts you, doesn't it?'[4]

(2) 这　个　　问题　　太　　难　　回答　我　请　　韩寒　　答　　吧
    Zhè　*gè*　*wèntí*　*tài*　*nán*　*huídá, wǒ*　*qǐng*　*Hán Hán*　*dá*　*ba!*
    this　CLF　question　too　hard　reply　I　ask　Han Han　reply　SFP
    'This question is too hard to answer, I ask Han Han to do it!'

(3) 你　能　举　个　　例子　　吗？姑娘：好　　吧，我　的
    Nǐ　*néng jǔ*　*gè*　*lìzi*　*ma*　*gūniang hǎo*　*ba*　*wǒ de*
    you　can　cite　CLF　example　SFP　girl　okay　SFP　I　POSS
    男朋友　　　要　我　到　　你　这里　来。
    nánpéngyou　*yào*　*wǒ dào*　*nǐ*　*zhèlǐ*　*lái*
    boyfriend　want　me　arrive　you　here　come
    'Can you give an example?' Girl: 'All right, my boyfriend wanted me to come here to you'

The question particle *ma* signals a yes/no question, as in (4).

(4) 你　　对　　　这　　个　　问题　　有　　　兴趣　　　吗
    Nǐ　duì　zhè　gè　wèntí　yǒu　xìngqù　ma?
    you　towards　this　CLF　issue　have　interest　SFP
    'Are you interested in this issue?'

As exemplified in (4), the use of *ma* as a sentence type particle does not imply the expression of modality. Nevertheless, the same particle is also used in rhetorical questions to emphasize a point or to persuade the speaker. This has been noted by Liu (2001), and is illustrated in (5) and (6).

(5) 你　　的　　人生　　　要　　　浪费　　　在　　　那么　　无聊　　　的
    Nǐ　de　rénshēng　yào　làngfèi　zài　nàme　wúliáo　de
    you　POSS　life　want　waste　in　such　boring　ATTR
    事情　　上　　　吗
    shìqing　shàng　ma?
    matter　on　SFP
    'Do you want to waste your life on such a boring matter?'

(6) 可　　人人　　　做　　　生意　　　都　　　能　　　成功　　　吗
    Kě　rénrén　zuò　shēngyi　dōu　néng　chénggōng　ma?
    but　everybody　do　business　all　can　successful　SFP
    显然　　　不　　可能
    Xiǎnrán　bù　kěnéng
    obviously　not　possible
    'But everyone who does business can have success? It is obviously impossible'

It appears to be much more complex to describe, and to find unanimous accounts of, the SFPs *a* and *ne*. Liu *et al.* (2001: 412-415) list several usages of the first, and group the examples into four categories according to the sentence type in which the particle occurs, i.e. interrogative, imperative, exclamatory and declarative plus one category comprising cases where the particle is used in the middle of the sentence. Typically, we find *a*, and its allomorphs *ya* and *wa*, in utterances expressing astonishment (7), often with the adjective modified by 这么 *zhème* 'such' or 多 *duō* 'so' (8), and to soften a question (9).[5]

(7) 他　　说　　你　　有病　　　我　　看　　你　　不　　像　　有病　　　啊
    Tā　shuō　nǐ　yǒubìng,　wǒ　kàn　nǐ　bù　xiǎng　yǒubìng　a!
    he　say　you　sick　I　see　you　not　seem　sick　SFP
    'He said you are sick, but I see that you are not!'

(8) 要是　　山　　　上　　　有　　　水泉,　　该　　多　　好　　啊!
    Yàoshi　shān　shàng　yǒu　shuǐquán,　gài　duō　hǎo　a
    if　mountain　on　have　waterhole　must　so　good　SFP
    'If there was a waterhole on the mountain, it would be fine!'

(9) 这   位   好   朋友   是   谁   啊
    Zhè   *wèi*   *hǎo*   *péngyou*   *shì*   *shéi*   *a?*
    this   CLF   good   friend   be   who   SFP
    'Who is this good friend?'

Like the particle *ba*, *a* is also used to exhort somebody to do something (10).

(10) 不过   这   个   洋人   确实   厉害,   您   可
    Bùguò   *zhè*   *gè*   *yángrén*   *quèshí*   *lìhai*   *nín*   *kě*
    but   this   CLF   foreigner   indeed   impressive   you   absolutely
    要   当心   啊!
    yào   *dāngxīn*   *a*
    must   be.careful   SFP
    'But this foreigner is really impressive, you should absolutely be careful!'

Other meanings and functions have been analyzed to account for this particle, including the expression of confirmation, impatience and warning, although these instances cannot be explored here for reasons of space.

The various uses of the particle *ne* have also been the subject of a number of works. In Li & Thompson (1981)'s account, this particle has the main function of signaling information such as a speaker's reaction to a listener's claim or belief. As with *a*, Liu *et al.* (2001) distinguish the meaning of *ne* according to the sentence type, i.e. generally interrogative and declarative. Despite the differences that exist in interpreting this particle, "the common aspect generally recognized by the majority of scholars is the 'interactive' function of *ne*: the use of *ne* helps to draw the hearer's attention to the information that is being claimed" (Badan & Romagnoli 2018: 9).

The frequent use of *ne* in questions can be linked to the function performed by the particle in declarative sentences as well as to the conversational nature of this item. Unlike *ma*, *ne* can be added to a nominal phrase to turn it into a question (11) and it can also be added to a *wh*-question (12) and yes/no questions (13).

(11) 妈妈,   我   的   爸爸   呢
    Māma,   *wǒ*   *de*   *bàba*   *ne?*
    mum,   I   POSS   daddy   SFP
    'Mum, what about daddy?'

(12) 什么时候   城   里   的   菜   也   能   真正   便宜
    Shénmeshíhou   *chéng*   *li*   *de*   *cài*   *yě*   *néng*   *zhēngzhèng*   *piányi*
    when   town   in   ATTR   food   also   can   really   cheap
    下来   呢?
    xiàlai   *ne?*
    drop   SFP
    'When can food in town also get cheap?'

(13) 他们　　是　　不　　是　　会　　继续　　　担任
     Tāmen *shì* *bù* *shì* *huì* *jìxù*   *dānrèn*
     they   are   not   are   will   continue   play
     这样　　的　　角色　　呢
     zhèyàng *de*   *juésè* *ne*
     such   ATTR role   SFP
     'Will they continue to play such a role?'

As with *a*, the uses of *ne* are not limited to those provided here, which are purely given to illustrate the features described in the literature quoted above.

2.3. Particles in Min varieties

The subgrouping of Sinitic languages, as well as the use of the word *dialect* to label them, have been widely discussed in sociolinguistics (Chen 1999). Among the seven major groups, Min is the most internally diversified but at the same time it has been described as "a very well-defined grouping, exhibiting unmistakable characteristics in phonology, grammar and lexicon" (Norman 1991: 189).

Spoken in Fujian, Guangdong, Zhejiang, Hainan and Taiwan, Min varieties are also frequently found in Southeast Asia and the USA. The total number of speakers amounts to over 75 million.[6] Min varieties have been divided into five groups, which, in decreasing order according to the number of speakers, are Southern Min (e.g. Quanzhou), Northern Min (e.g. Jian'ou), Eastern Min (e.g. Fuzhou), Central Min (e.g. Yong'an) and Puxian (e.g. Puxian). Like Cantonese, Min varieties show a rich inventory of SFPs, although only a few studies have been published on this topic. One of those referenced in this paper is Lin (2007), which describes SFPs in the Southern Min variety and examines the origin of the particles, their syntactic features and sentence types. From a diachronic perspective, only a few items derive from Old Chinese and the usages that have developed over time are different from the original ones. The particles included in this group are 尔 *liɑ̃²¹*, 乎 *hɔ̃⁴⁴*, 不 *m²¹*, 耶 *e²⁴*, 未 *bə²¹*, 无 *bo²⁴* and two of them, *m²¹* and *e²⁴*, will be explained in detail below.[7]

As for the position of particles, Lin proposes differentiating between those which can occur at the beginning of the sentence, as in Old Chinese, and those which can occur in medial and final position. The latter, which are more numerous, are mostly monosyllabic.

As with Standard Mandarin, these items can also be used to mark sentence type in the Southern Min variety. According to this criterion, we can have declarative, interrogative, imperative and exclamatory particles. The classification proposed by Lin (2007) is illustrated in Table 1.

CLASSIFICATION CRITERION		PARTICLES
Origin	Old Chinese	尔 *liã²¹*, 乎 *hɔ̃⁴⁴*, 不 *m²¹*, 耶 *e²⁴*, 未 *bə²¹*, 无 *bo²⁴*
	Same as Putonghua	啊 *a⁴⁴*, 呢 *lĩ⁵⁵*, 啦 *a⁴⁴*, 嘛 *bã⁴⁴*, 咧 *le²²*, 啰 *lo²²*, 噢 *ɔ²¹*, 喽 *lɔ²²*
	Southern Min	哼 *hãi⁴⁴*, 嘟 *dɔ⁴⁴*, 嚇 *hẽ²¹*, 嚃 *ko²¹*, 呋 *hə²²*, 烩 *bue⁴¹*, 嘿 *lə²²*, 啦乎 *la⁴⁴hɔ̃⁴⁴*, 尔尔 *liã²¹liã²¹*, 咧啦 *le²²la⁴⁴*, 喽啦 *lɔ²²la⁴⁴*, 咧噢 *le²²ɔ²¹*, 啊无 *a⁴⁴bo²⁴*, 呋无 *hə⁵⁴bo²⁴*, 啊嘟 *a⁴⁴dɔ⁴⁴*, 哼无 *hãi⁴⁴bo²⁴*, 无嘟 *bo²⁴dɔ⁴⁴*
Position	Initial	啊 *a⁴⁴*, 呋 *hə²²*, 哼 *hãi⁴⁴*, 无 *bo²⁴*, 嘟 *dɔ⁴⁴*, 呋无 *hə⁵⁵bo²⁴*, 啊无 *a⁴⁴bo²⁴*, 哼无 *hãi⁴⁴bo²⁴*, 啊嘟 *a⁴⁴dɔ⁴⁴*, 无嘟 *bo²⁴dɔ⁴⁴*
	Final and medial	尔 *liã²¹*, 呢 *lĩ⁵⁵*, 乎 *hɔ̃⁴⁴*, 不 *m²¹*, 耶 *e²⁴*, 未 *bə²¹*, 咧 *le²²*, 啰 *lo²²*, 喽 *lɔ²²*, 嚃 *ko²¹*, 烩 *bue⁴¹*, 嚇 *hẽ²²*, 嘿 *lə²²*, 噢 *ɔ²¹*, 啦 *la⁴⁴*, 啊 *a⁴⁴*, 嘛 *bã⁴⁴*, 尔尔 *liã²¹liã²¹*, 咧啦 *le²²la⁴⁴*, 喽啦 *lɔ²²la⁴⁴*, 啦乎 *la⁴⁴hɔ̃⁴⁴*, 咧噢 *le²²ɔ²¹*
Sentence type	Declarative	尔 *liã²¹*, 啰 *lo²²*, 喽 *lɔ²²*, 啦 *la⁴⁴*, 嘿 *lə²²*, 耶 *e²⁴*, 啊 *a⁴⁴*, 嘛 *bã⁴⁴*, 呢 *lĩ⁵⁵*, 尔尔 *liã²¹liã²¹*, 咧噢 *le²²ɔ²¹*
	Interrogative	乎 *hɔ̃⁴⁴*, 不 *m²¹*, 耶 *e²⁴*, 未 *bə²¹*, 无 *bo²⁴*, 嘛 *bã⁴⁴*, 呢 *lĩ⁵⁵*, 啰 *lo²²*, 嚇 *hẽ²¹*, 啊 *a⁴⁴*, 烩 *bue⁴¹*, 嚃 *ko²¹*, 喽啦 *lɔ²²la⁴⁴*, 啦乎 *la⁴⁴hɔ̃⁴⁴*, 咧啦 *le²²la⁴⁴*
	Imperative	咧 *le²²*, 噢 *ɔ²¹*, 啊 *a⁴⁴*, 嚃 *ko²¹*, 啰 *lo²²*, 啦 *la⁴⁴*, 嘛 *bã⁴⁴*, 咧啦 *le²²la⁴⁴*, 咧噢 *le²²ɔ²¹*
	Exclamative	啊 *a⁴⁴*, 嚃 *ko²¹*

Table 1. Southern Min particles

For reasons of space, we cannot provide a full account of these items. We will limit ourselves to describing those included in the questionnaire used for this study, and with reference to the data and descriptions provided by Lin (2007). These SFPs are 不 *m²¹*, 啰 *lo²²*, 嘛 *bã⁴⁴* and 耶 *e²⁴*. Starting with the particles that originated from Old Chinese, *m²¹* is now used in interrogative sentences (14) and also to plead somebody do to something. In the first usage it corresponds to the particle 吗 *ma*.[8]

(14) 汝　　　卜　　　去　　上海　　　　　不
　　 Lu⁵⁴⁴　*me⁴*　*ku³¹*　*Siong²²Hai⁵⁴⁴*　*m³¹*
　　 you　　want　　go　　Shanghai　　　SFP
　　 'Do you want to go to Shanghai?'

The particle e^{24} can also be found in interrogative sentences, as in (15), where it corresponds to *a*, and also in declarative sentences to confirm a statement with the same usage as with *a* or *de*.

(15) 谁　　　敲　　　门　　　耶
　　　Sui²⁴　kao³³　bbun²⁴　ia²⁴?
　　　who　knock　door　SFP
　　　'Who is knocking at the door?'

The particle lo^{22} can be used in different sentence types in final position to state a fact (16) and also to guess something (17).

(16) 饭　　　煮　　　热　　　啰
　　　Huan³¹　zu⁵⁴⁴　liat²³　lo²⁴
　　　food　cook　hot　SFP
　　　'Food is ready'

(17) 伊　敢　　　　　　　獪　　　来　　　啰
　　　Yi³³　gam⁵⁴⁴　　　bbue³¹　lai²⁴　lo²⁴
　　　she　is.it.possible.that　not　come　SFP
　　　'Is it possible that she is not coming?'

According to Lin (2007), lo^{22} corresponds to *le* in most cases, but sometimes also to *ba* when conveying a dubitative sense.

The last particle taken into account is $b\tilde{a}^{44}$, which conveys a variety of functions. In Mandarin, these include the expression of obviousness and disagreement, as already noted by Chappell (1991) and Chu (1998), but also the mitigation of speech acts in which face threat is implicit (Lepadat 2017). According to Lin (2007), it is used in Quanzhou Southern Min in interrogative sentences as well as in declarative and exhortative sentences to fulfill the functions generally covered by the particles 吗 *ma* and *ba* in SMC.

(18) 汝　　以前　　　　　八　　　伊　　　嘛
　　　Lu⁵⁴⁴　yi⁵⁴⁴zing²⁴　bat³³　yi³³　bbna
　　　you　before　know　him　SFP
　　　'Did you know him before?'

3. Methodology

3.1. Aim of the study and research questions

This study is the first attempt to investigate the influence of dialectal background in the selection of SFPs by Chinese native speakers, highlighting both the influence of the instrument design and the speakers' regional varieties. Data were collected in the field in 2016 through the use of questionnaires with

the aim of receiving the responses to two research questions, each influenced by the composition and size of the sample:

1) How much variability is there in the usage of the SFPs under examination due to the design of the questionnaire?
2) How much variability is there in the usage of the SFPs under examination due to the speaker's dialectal background?

3.2. Questionnaire design

Since our first research question is directly linked to the means employed to collect data, it is useful to look briefly at the issue of questionnaire design. Starting with terminology, Brown, who has devoted much attention to this topic, defines a questionnaire as "any written instrument that presents respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers" (Brown 2001: 6).

Applied linguistics research frequently relies on questionnaires. These need to be distinguished from tests: while the former aims at eliciting information without the purpose of evaluation, a test "takes a sample of the respondent's behavior/knowledge for the purpose of evaluating the individual's more general underlying competence/abilities/skills" (Dörnyei 2007: 103).

In the present study, the actual origin of the participants, all native speakers of one or more than one variety of Chinese, conditioned the choice of means for collecting data: since a test could not be used to evaluate speakers' answers, a questionnaire was used to elicit and compare the differences between their responses. The instrument, described in detail below, includes items from those types categorized by Dörnyei (2007) as 'factual questions' (demographic features) and 'behavioural questions'. Two versions of the questionnaire were designed, each comprising two parts: the first part, to elicit demographic information, was identical in both versions, whereas the second part was designed with close-ended items in one version and open-ended items in the other.

The choice between open-ended and close-ended questions in research interviews has been largely discussed in the literature as both types have their advantages and disadvantages: while the first allows researchers to obtain spontaneous answers, to measure salience and to avoid biases deriving from the interviewers' suggestions, the second is less demanding in terms of response coding and item non-response rate (Dohrenwend 1965; Reja *et al.* 2003).

Although experimental studies have shown that the way questionnaires are designed may strongly influence respondents' answers (Dohrenwend

1965), as far as we know no specific study has addressed the influence of regional varieties (henceforth RV) on the use of SFPs. Consequently, the authors of this study decided to employ both types with the intention of discovering whether the formulation of the item produced a significant effect on the respondents' choices and what the best instrument to account for such a complex phenomenon might be. Aware of the fact that item wording differences can also have a substantial impact on responses, we also decided to maintain the same formulation of items in the two versions. In turn, this necessitated having two separate groups tested instead of one.[9]

For the aforementioned reasons, the questionnaires employed in this study were designed *ad hoc* by the authors in the following way:[10]

a) Background section. This part was adapted from Saillard (2016) and contained 11 background questions in order to gain information regarding the participants' linguistic background and other support information (see Appendix). Data concerning the participants' age, gender, provenance and spoken dialects were quantified, while the remaining information was used for qualitative analysis as needed.

b) Standard-related section. This part was based on Yang (2013) and was composed of 9 scenarios, each containing a short dialogue of two or three lines, and involving the selection of 9 items in total (questions 1 to 9). The aim of this section was to investigate the use of four SFPs in SMC – *a, ba, ma* and *ne* – in different sentence types (see Section 2.2).

c) Variety-related section. This part was based on data from Lin (2007) concerning SFPs in the Southern Min variety spoken in Quanzhou. It was composed of 9 single-line scenarios involving the selection of 9 items (questions 10 to 18)[11] and aimed at testing whether specific SFPs, which seem to have (slightly) different functions and a wider distribution frequency in the aforementioned RV than in SMC, are used differently by Min and Mandarin speakers. The SFPs in question were 嘛 *ma,* 啰 *luo,* 不 *bù* and 耶 *yé* (see Section 2.3).[12]

As mentioned above, the standard-related and the variety-related sections were prepared in two versions, the first with two pre-established SFPs marked at the end of each scenario, and the second allowing respondents to simply use the SFP that first came to mind. Both types of questionnaires were entirely in Mandarin Chinese.

3.3. Data collection

Before receiving the questionnaires, the participants were randomly divided into two groups. Interaction between them was kept to a minimum during the procedure, which lasted approximately 15 minutes. One group (group A) received the questionnaire in the close-ended format, while the other group (group B) received the open-ended format. Participants were asked to complete the first part with their personal information – which did not include their name and was intended exclusively for the present study – and to complete the sentences of the remaining part with the SFPs that they believed appropriate for each context. The respondents were reassured that the test did not involve any kind of evaluation. In order not to influence their selection of SFPs, no further indication about the specific purpose of the study was given and all instructions were given in Mandarin Chinese.

3.4. Participants

The participants involved in the study were Chinese undergraduate students, master's degree students or students who had recently obtained their master's degree, i.e. they were all in, or had been in, further education and had received a Mandarin-based education. Their majors were in various fields of study.

Out of a total of 86 respondents, there were a total of 72 valid questionnaires (36 in group A and 36 in group B). Five were excluded from the study because of incomplete data and four were excluded because they indicated a non-Chinese language (Uighur) as their first language. Furthermore, due to the very low representativeness of some varieties of Chinese, all respondents with a linguistic background other than Mandarin or Min were also excluded from the sample.

Around 69% of the respondents gave a clear indication of their spoken variety or varieties, but there was also a number of cases with absent or incomplete answers (31% in each group). In most of these cases the variety could be inferred based on other data in the questionnaire – namely place of birth and acquisition environment.[13] The few cases where no alternative information was available to trace the variety were, as mentioned earlier, excluded from the study.

Based on the varieties indicated in the background section, the participants in each group were divided into two sub-groups according to the dialectal macro-categories described in Kurpaska (2010)'s translation of the *Language Atlas of China*: a group of Mandarin speakers serving as a control group and a macro group of Min speakers, the experimental group of the study.

The control groups included all the monolingual participants who indicated SMC as the only language they spoke, regardless of their provenance, and also a small number of bilingual participants (3 in group A and 7 in group B) who, in addition to SMC, stated that they spoke another variety of the Mandarin supergroup. Although not all the participants included in the control groups were monolingual SMC, they were considered homogeneous based on a number of features in common: (i) they all indicated SMC as their mother tongue; (ii) although a limited number of them had an advanced knowledge of other linguistic varieties which might define them as bilingual speakers, these varieties belonged to the same dialectal supergroup as SMC, i.e. the Mandarin supergroup; (iii) the statistical tests conducted on each item did not demonstrate any significant difference in item selection on the part of the monolingual and bilingual Mandarin speakers in either group;[14] (iv) even though the similarity in behavior did not necessarily mean that they represented a single sample of the population in terms of linguistic background – which may also be due to a coincidental function of the items in SMC and the other Mandarin RVs involved – we believe that this did not influence the final outcome of the study. In fact, it further supports the hypothesis that significant distinctions can be observed at a higher level of dialect classification, i.e. that of linguistic supergroups or even with regard to the differences between Southern and Northern Chinese varieties (Hashimoto 1976; 1986).

The experimental groups were composed of participants from Fujian Province who explicitly stated that they could speak a Min variety. For these groups too, the participants were considered a unitary sample of the population based on the following criteria: they all stated that SMC was their first language and they also spoke another variety of the Min supergroup; despite the heterogeneity of the specific Min varieties and the level of proficiency of the participants, the statistical tests conducted for each item did not reveal any significant difference in the responses of the monolingual and bilingual Min speakers in each group.

Approximately half of the participants in each group came from Fujian province, whereas the other half had more varied origins, as shown in Table 2. About 56% of the respondents in group A and 53% of those in group B stated that they used, to varying degrees, one of the Min varieties spoken in Fujian province, while the remaining participants spoke one, or more than one, of the varieties in the Mandarin supergroup (44% of group A and 47% of group B), as illustrated in Figure 1.

GROUP A					GROUP B				
Province of Provenance	Spoken Varieties				Provenance	Spoken Varieties			
	Mandarin		Min			Mandarin		Min	
Anhui	2	5.6%			Fujian	4	11.1%	18	50.0%
Fujian	3	8.3%	19	52.8%	Gansu	1	2.8%		
Guizhou	1	2.8%	1	2.8%	Guizhou	1	5.6%		
Hebei	1	2.8%			Heilongjiang	1	2.8%		
Heilongjiang	2	5.6%			Henan	3	8.3%		
Henan	1	2.8%			Hubei	2	5.6%		
Hubei	1	2.8%			Hunan	1	2.8%		
Liaoning	1	2.8%			Inner Mong.	1	2.8%		
NS	2	5.6%			Jilin	1	2.8%	1	2.8%
Shanxi	2	5.6%			Ningxia	1	2.8%		
Total	16	44.4%	20	55,6%	Total	17	47%	19	52.8%

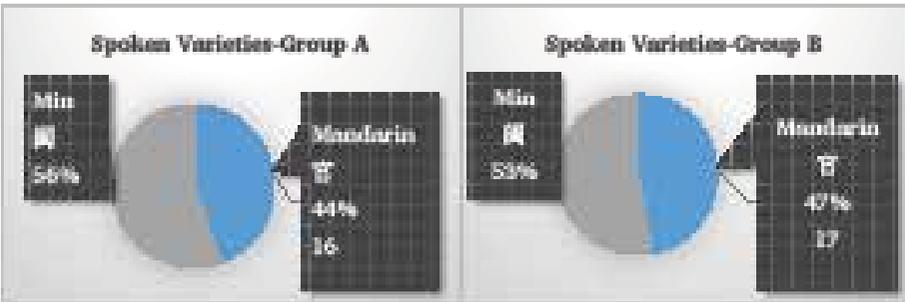**Table 2.** Provenance and Varieties Spoken by the Participants

Figure 1. Varieties of Chinese Spoken by the Participants

The participants' ages ranged from 18 to 27 years old, with a mean of 21 years of age in group A and 20 years of age in group B. In both groups there was a slightly greater presence of female to male respondents, as shown in Figure 2.
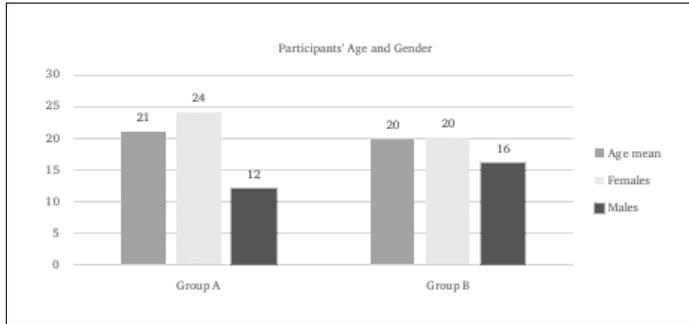
Figure 2. Age and Gender Distribution of the Participants

3.5. Data analysis

Data collected through the questionnaires were analyzed using the open-source software for statistical analysis R.

Since the questionnaires involved a sentence-completion task carried out by native speakers which was not measured continuously, i.e. using a continuous scale, the resulting variables are exclusively qualitative. Qualitative or categorical variables, unlike quantitative or continuous ones, cannot be analyzed through mean-based test statistics, but require frequency-based tests such as Pearson's Chi-squared test. This non-parametric test – particularly suited to data that are not normally-distributed – is generally used to find out whether there is a relation between two categorical variables by comparing the frequencies observed in certain categories with the frequencies we might expect to find there by chance (Field *et al.* 2012). Since group B produced many categories (SFPs) for each of the given items, in our case, when the expected frequencies in each category were lower than 5, we also needed to use Fisher's exact test method in order to ensure correct approximations (for a detailed description of the tests and relative equations, see Field *et al.* 2012).

In the following section, a general overview of the data distribution will be given along with the results of the Pearson's Chi-squared tests regarding the associations between the selected SFPs and the format of the questionnaire completed by the speakers on the one hand, and the associations between specific SFPs and the participants' RV on the other. A detailed discussion of each group of items will follow.

4. Results

The participants' responses to the questionnaires are summarized in Table 3: items 1-9 regard the standard-variety section of the questionnaires, while items 10-18 refer to the variety-related section. While only two possible choices were

available for group A, no such restriction applied to the speakers of group B, who produced a higher number of SFPs for each item. Thus, for ease of comparison, only the two most frequently used particles for each item have been reported. Since less frequent SFPs and double choices have been omitted from the table, item totals do not always correspond to 100%. For the reader's convenience, the answers for each item are listed in decreasing order of frequency .

A general overview of the participants' responses reveals an interesting pattern. In the standard-related section (items 1-9), groups A and B make similar choices in terms of which particles to use, although differences are found in the frequency rates. The most frequently used particle has a higher occurrence rate in group A, whereas group B's responses are less compact, as might be expected since there were no constraints on their choices. The exceptions are items 2 and 9, where the speakers of both groups choose *ne* almost unanimously, and item 7, where the two groups use *ma* and *ba* with almost similar frequency. On the contrary, for item 1, most of the group B speakers use *de*, a SFP which was not available to the speakers of group A. As for the variety-related section (items 10-18), speakers in the two groups only make similar choices in terms of the most frequently used SFP, with some discrepancies in the number of occurrences, whereas the second most frequently used SFP evidences significant differences. As can be observed from Table 3, group B speakers, unlike those in group A, hardly ever use the target variety-related SFPs, *ma, luo, yé* and *bù*, which were available to group A. The only exception is *bù* in item 18, which also occurs in a small percentage of group B's responses.

STANDARD-RELATED SECTION								
Item	Group A				Group B			
[*1*]	啊	*a*	29	78%	的	*de*	26	72%
	吧	*ba*	8	22%	啊/呀	*a/ya*	9	25%
[*2*]	呢	*ne*	33	92%	呢	*ne*	34	94%
	啊	*a*	2	6%	吗	*ma*	2	6%
[*3*]	呢	*ne*	33	92%	呢	*ne*	16	44%
	啊	*a*	2	6%	啊/呀	*a/ya*	11	31%
[*4*]	啊	*a*	33	92%	啊/呀	*a/ya*	28	78%
	啊/吧	*a/ba*	3	8%	的	*de*	5	14%
[*5*]	吗	*ma*	27	75%	吗/么	*ma/me*	19	53%
	啊	*a*	7	19%	吧	*ba*	16	44%

[6]	吧	*ba*	26	72%	吧	*ba*	13	36%
	啊	*a*	7	19%	啊/呀	*a/ya*	12	33%
[7]	吗	*ma*	18	50%	吗/么	*ma/me*	18	50%
	吧	*ba*	16	44%	吧	*ba*	14	39%
[8]	呢	*ne*	29	81%	呢	*ne*	14	39%
	吗	*ma*	7	19%	吗	*ma*	19	53%
[9]	呢	*ne*	35	97%	呢	*ne*	36	100%
	呢/吗	*ne/ma*	1	3%				
			VARIETY-RELATED SECTION					
Item	Group A				Group B			
[10]	吗	*ma*	31	86.%	吗/么	*ma/me*	31	86%
	嘛	*ma*	3	8%	啊	*a*	2	6%
[11]	吧	*ba*	22	61%	吧	*ba*	24	67%
	嘛	*ma*	9	25%	啊/呀	*a/ya*	11	31%
[12]	吗	*ma*	33	92%	吗/么	*ma/me*	32	89%
	嘛	*ma*	1	3%	吧	*ba*	3	8%
[13]	了	*le*	26	72%	了	*le*	24	67%
	啰	*luo*	6	17%	啦	*la*	6	17%
[14]	吧	*ba*	34	94%	吧	*ba*	26	72%
	啰	*luo*	1	3%	吗	*ma*	7	19%
[15]	啊	*a*	35	97%	啊/呀	*a/ya*	24	67%
	啊/耶	*a/ye*	1	3%	呢	*ne*	10	28%
[16]	吗	*ma*	24	67%	吗	*ma*	31	86%
	不	*bu*	7	19%	啦	*la*	2	6%
[17]	的	*de*	35	97%	的	*de*	23	64%
	的/耶	*de/ye*	1	3%	啊/呀	*a/ya*	8	22%
[18]	吗	*ma*	18	50%	吗/么	*ma/me*	32	89%
	不	*bu*	12	33%	不	*bu*	2	6%

Table 3. Summary of selected SFPs

The variability between the two groups which took part in the study was tested by means of a Pearson's Chi-squared test with the two groups as the independent variable and the chosen SFPs as the dependent variable. A separate test was run for each item. As can be seen from Table 4, the

results show that for the majority of the items tested, there is an association with the group to which the participants belong, therefore with the type of questionnaire they have received, and the SFPs they use to complete the given expressions (*p-value* < .05).[15] Since the pattern of responses in the two groups is different for 72% of the items (13 items out of the total 18 in Table 4), we can assume that the type of questionnaire submitted significantly influenced the speakers' choice of SFPs.

Items 2, 7 and 9, which evidence no significant results, are the cases in which there was more uniformity between the respondents in their use of the particle(s), i.e. the large majority of respondents in both groups opted for the same SFP or opted for two SFPs in very similar proportions. These are the SFP *ne* in items 2 and 9 and the SFPs *ba* and *ma* in item 7. Items 10 and 12 are also characterized by rather homogeneous responses across the two groups, with a marked preference for the SFP 吗 *ma*.

Item	SFPs	χ^2	d.f.	P	Item	SFPs	χ^2	d.f.	P
[1]	吧 *ba*/啊 *a*	46.0	3	.000	[10]	嘛 *ma*/吗 *ma*	11.0	7	.138
[2]	啊 *a*/呢 *ne*	5.0	3	.171	[11]	嘛 *ma*/吧 *ba*	22.5	4	.000
[3]	啊 *a*/呢 *ne*	22.2	7	.002	[12]	嘛 *ma*/吗 *ma*	8.1	5	.153
[4]	啊 *a*/吧 *ba*	27.1	5	.000	[13]	啰 *luo*/了 *le*	22.1	7	.002
[5]	吗 *ma*/啊 *a*	28.8	5	.000	[14]	啰 *luo*/吧 *ba*	13.1	6	.042
[6]	吧 *ba*/啊 *a*	22.7	7	.002	[15]	耶 *ye*/啊 *a*	22.7	6	.000
[7]	吧 *ba*/吗 *ma*	7.2	5	.209	[16]	不 *bu*/吗 *ma*	17.9	6	.007
[8]	呢 *ne*/吗 *ma*	13.8	3	.003	[17]	耶 *ye*/的 *de*	16.5	7	.021
[9]	呢 *ne*/吗 *ma*	1.0	1	.314	[18]	不 *bu*/吗 *ma*	19.6	2	.001

Table 4. Variability between groups A and B

The variability within the two groups with regard to the speakers' dialectal background was also tested by means of the Pearson's Chi-squared test, with the two dialectal supergroups – Min and Mandarin – as the independent variable and the chosen SFPs as the dependent variable. The test was again run for each individual group and item. Results show that there is no association between the RV and the SFPs used by the participants for group B.[16] As far as group A is concerned, Table 5 shows that the test was statistically significant only for items 11, 13, 16 and 18, which belong to the variety-related section. The responses to the remaining items in group A and

to all 9 items in group B, which received the free-choice questionnaire, do not show any significant influence of the speakers' dialectal backgrounds on the particles they used (*p-value* ≥ .05). In fact, in all these cases the target variety-related particles were either not attested or did not evidence any difference in frequency between Mandarin and Min speakers. This could also be considered an indicator of the influence that the questionnaire format had on the speakers' choices.

Item	SFPs	χ^2	d.f.	P	Item	SFPs	χ^2	d.f.	p
[*1*]	吧 *ba*/啊 *a*	.002	1	.964	[*10*]	嘛 *ma*/吗 *ma*	3.51	2	.173
[2]	啊 *a*/呢 *ne*	1.33	2	.514	[*11*]	嘛 *ma*/吧 *ba*	10.31	2	.006
[3]	啊*a* /呢 *ne*	2.86	2	.239	[*12*]	嘛 *ma*/吗 *ma*	4.09	2	.129
[4]	啊 *a*/吧 *ba*	2.00	1	.157	[*13*]	啰 *luo*/了 *le*	6.92	2	.031
[5]	吗 *ma*/啊 *a*	3.21	2	.200	[*14*]	啰 *luo*/吧 *ba*	2.65	2	.266
[6]	吧 *ba*/啊 *a*	4.13	2	.127	[*15*]	耶 *ye*/啊 *a*	.01	1	.910
[7]	吧 *ba*/吗 *ma*	2.81	2	.245	[*16*]	不 *bu*/吗 *ma*	11.87	2	.003
[8]	呢 *ne*/吗 *ma*	.00	1	1	[*17*]	耶 *ye*/的 *de*	.01	1	.910
[9]	呢 *ne*/吗 *ma*	.01	1	.910	[*18*]	不 *bu*/吗 *ma*	11.25	2	.004

Table 5. Variability between Min and Mandarin speakers

5. Discussion

5.1. Standard-related section

This section contains items which were specifically selected by the authors to assess how much the questionnaire format influenced the speakers' use of the particles, and therefore only the SFPs in the SMC repertoire have been accepted as answers. In fact, even though tests were run to check for associations between the speakers' RVs and their answers, no significant results were found in this section. The variability in the use of SFPs found in items 1-9 must therefore be partly due to the multifarious nature of the SFPs themselves, as well as to the constraints imposed by the format of the questions: only in a few cases – such as items 2, 7 and 9 – are speakers from both groups fairly unanimous in their choice of one or two SFPs, while in many other cases there is less uniformity in the speakers' choices, especially

regarding group B.[17] In the following sections, the quoted examples follow the numeration originally adopted in the questionnaire.

5.1.1. SFPs a/ba *in assertive sentences*

Items 1 and 4 include a question asked by the first speaker that is meant to persuade the other to grant permission and agree to do something. According to Yang (2013), the favored particle should be *ba* in both cases, but this is rarely used by group A and never by group B. The first group prefers the particle *a* for both items (item 1: 78%; item 4: 92%), whereas the second group prefers *de* for item 1 (72%) and *a* or *ya* for item 4 (78%).[18]

[*1*] A: 我　　用　　一下　　你　　的　　书，　　好　　吗?
        Wǒ　*yòng*　*yīxià*　*nǐ*　*de*　*shū*　*hǎo*　*ma*
        I　　use　a.while　you　POSS　book　good　SFP
        'Can I use your book for a while?'
    B: 好___。(吧，啊)
        Hǎo
        Good
        'Okay.'

[*4*] A: 去　　吃　　中国　　菜　　怎么样?
        Qù　*chī*　*Zhōngguó*　*cài*　*zěnmeyàng*
        go　eat　Chinese　food　how.about
        'How about going to eat Chinese food?'
    B: 好___。(啊，吧)
        Hǎo
        good
        'Okay.'

5.1.2. SFPs a/ba *in exhortative sentences*

Item 6 contains a reply to the interlocutor's exclamation of appreciation of something and is an exhortative statement supposedly expressing a tone of agreement. Even though both *ba* and *a* can be used to express an exhortation according to Liu (2001: 413, 26), results show that there is a preference for the particle *ba* in group A with 72% of the speakers choosing it, while 19% choose *a* and the remaining 9% think that both particles are suitable. However, the situation is again less homogeneous in group B with only 36% of the speakers choosing *ba*, 33% choosing *a/ya* and the remaining speakers generally choosing 呗 *bei* (14%) or 咯 *luo* (8%).

[*6*] A: 这　　条　　裤子　　多么　　酷　　啊!
        Zhè　*tiáo*　*kùzi*　*duōme*　*kù*　*a*
        these　SFP　pants　so　cool　SFP
        'These pants are so cool!'

B: 那　　你　　买＿＿。(吧，啊)
　　Nà　nǐ　mǎi
　　then　you　buy
　　'Then buy them.'

5.1.3. SFPs a/ba/ma *in interrogative sentences*

Items 5 and 7 include the phrase 你怎么知道 *nǐ zěnme zhīdao* 'how do you know', so they imply a positive reply from the second speaker. Surprisingly, even though *ba* should be the particle expected for this type of question (Liu 2001: 424), not only group A – which was given *ma* and *a* as alternatives – chooses mainly *ma* (75%) in item 5, but also group B – which had no such limitations – uses *ma* in 53% of cases, i.e. more than for *ba* (44%). The same thing occurs with item 7, where both groups show a slight preference for the particle *ma* (group A: 50%; group B: 50%) rather than the particle *ba* (group A: 44%; group B: 39%).[19]

[*5*] A: 你　　是　　王　　老师＿＿。(吗，啊)
　　　　Nǐ　shì　Wáng　lǎoshī
　　　　you　are　Wang　professor
　　　　'Are you Professor Wang?'

　　B: 我　　就　　是，　你　　怎么　　知道？
　　　　Wǒ　jiù　shì　nǐ　zěnme　zhīdao
　　　　I　EMP　are　you　how　know
　　　　'I am. How do you know?'

[*7*] A: 你　　来　　过　　这里＿＿? (吧，吗)
　　　　Nǐ　lái　guo　zhèlǐ
　　　　you　come　PRT　here
　　　　'Have you been here before?'
　　B: 你　　怎么　　知道？
　　　　Nǐ　zěnme　zhīdao
　　　　you　how　know
　　　　'How do you know?'

5.1.4. SFPs a/ma/ne *in thematic questions*

Items 2, 8 and 9 illustrate the typical usage of the SFP *ne* at the end of a thematic question (Liu 2001: 420). In 2 and 9 the speakers' responses are quite uniform: in item 2, as many as 92% of the speakers in group A and 94% of those in group B use the particle *ne*; the same holds true for item 9, with 97% of the speakers in group A and 100% of those in group B choosing the particle *ne*.

[*2*] A: 这　　本　　书　　你　　已经　　看　　了；那　　本　　书＿＿? (啊，呢)
　　　　Zhè　běn　shū　nǐ　yǐjīng　kàn　le　nà　běn　shū
　　　　this　CLF　book　you　already　read　PRT　that　CLF　book
　　　　'You already read this book. What about that one?'

B: 我　　还　　没　　看。
    Wǒ　hái　méi　kàn
    I　 still　not　read
    'I still haven't read it.'

[*9*] A: 你　　爸爸　在　　办公室　　　吗?
    Nǐ　bàba　zài　bàngōngshì　ma
    your　dad　be.at　office　 SFP
    'Is your dad in the office?'
  B: 我　　不　　知道。
    Wǒ　bù　zhīdao
    I　 not　know
    'I don't know.'
  A: 你　　妈妈___? (呢，吗)
    Nǐ　māma
    your　mum
    'What about your mum?'

However, in item 8 only 81% of the speakers in the A group choose *ne*, while 19% choose *ma* 吗; in group B there is only a 39% preference for *ne*, while the remaining speakers use either *ma* (53%) or other SFPs such *ba* (6%). In contrast to items 2 and 9, the thematic question in item 8 was not characterized by the presence of a parallel topic in the preceding context, but was uttered at the beginning of the exchange. This induced a large number of respondents to interpret it as an elliptical yes/no question, i.e. a choice between using *ma* or *ba*. However, it is important to note that the yes/no interpretation was far more salient for speakers with the open-ended questionnaires than for those with the close-ended ones.

[*8*] A: 你　的　　书___? (呢，吗)
    Nǐ　de　shū
    you　POSS　book
    'What about your book?'
  B: 这　本　书　　就　　是　我　的。
    Zhè　běn　shū　jiù　shì　wǒ　de
    this　CLF　book　EMP　be　I　POSS
    'This book is mine.'

5.1.5. SFPs a/ne *in exclamative sentences*

In item 3, B replies to A's exclamation with two sentences, the first of which is marked by the speaker's irritated tone, and conveyed lexically by means of the verb 烦 *fán* 'bother'. The second sentence provides the reason why A should not bother B. According to Liu (2001: 413, 421-422), both *a* and *ne* can be used in such sentences to mitigate the tone of the exclamation. In this case too, the speakers in group A give rather homogeneous answers with a 92% preference for the particle *ne*. On the contrary, the speakers in group

B are less consistent with less than half of them filling in the blank with the particle *ne* (44 %) and the rest preferring either *a* (31%) or other SFPs such as 啦 *la* (11%) and 的 *de* (8%). In addition to the reduced prominence of the particle *ne* in group B's responses, it should also be pointed out that although the Chi-squared test did not provide a significant result, all the speakers in group B who use *la* are Min speakers.[20, 21]

[*3*]. A: 那　　个　　女人　　这么　　漂亮！　看一看　　吧！
　　　　Nà　ge　nǚrén　zhème　piàoliang　kànyīkàn　ba
　　　　that　CLF　woman　so　　beautiful　have.a.look　SFP
　　　　'That woman is so beautiful! Have a look!'
　　B: 不　　要　　烦　　我。我　有事__。(啊，呢)
　　　　Bù　yào　fàn　wǒ　wǒ　yǒushì
　　　　not　must　bother　I　I　be.busy
　　　　'Don't bother me. I am busy.'

5.2. Variety-related section

Much variability across and within the groups was also found in this section as to which SFP to use in a specific situation: while some of the items seem to evidence an association between the speakers' RV and the chosen particles, this only happens in group A. Indeed, speakers in group B do not produce the target variety-related SFPs, and their choices are not statistically related to their RVs.[21] Since the focus of this section is variety-related SFPs, only group A's responses will be discussed. Nevertheless, it is particularly interesting to notice that when not explicitly given, the variety-related SFPs included in this study are not salient enough to be found in the speakers' answers, or at least not to any significant degree. A second possible explanation might be connected with the written and standard-oriented nature of the questionnaires and with the formal environment of data collection, possibly suggesting that the participants were only supposed to use the standard language, unless otherwise specified, as in the case of group A being provided with non-standard options.

5.2.1. The SFP 嘛 ma

Items 10, 11 and 12 targeted the use of the SFP 嘛 *ma* in contexts where either *ba* or 吗 *ma* are the favored SFPs in SMC (see Section 2.3).

[*10*] 你们　　知道　　这　　件　　事情__? (吗，嘛)
　　　 Nǐmen　zhīdao　zhè　jiàn　shìqing
　　　 you.PL　know　this　CLF　thing
　　　 'Do you know this thing?'

[*11*] 你　好好　　想　　一下__! (嘛，吧)
　　　 Nǐ　hǎohǎo　xiǎng　yīxià
　　　 you　carefully　think　a.while
　　　 'Think it over carefully!'

[*12*] 你　以前　　认识　他___？(嘛，吗)
　　　Nǐ　*yǐqián*　*rènshi*　*tā*
　　　you　before　know　him
　　　'Did you know him before?'

Of the three items, only in item 11 is there an association between the varieties spoken by the participants and the SFP they use $\chi^2(2) = 10.30$, $p <$ .01. Looking at the simplified version of the contingency table produced by R for this item (Table 6), even though there is no standardized residual (*SE*) outside the value of ± 1.96,[22] we can see that the largest number of speakers in both the control and the experimental group choose the SFP *ba* to complete the sentence (Mandarin speakers: 63%; Min speakers: 60%). However, while 31% of Mandarin speakers indicate that both SFPs can be used in the given context, more than one third of the Min speakers (40%) choose the SFP 嘛 *ma* as the only option. With all due caution, we can deduce that while Mandarin speakers seem to acknowledge the possibility of using both particles at the end of a certain sentence, they hardly ever choose the non-standard particle as the only option. On the contrary, Min speakers seem more likely to choose just the variety-related particle.

Variety		吧 *ba*	嘛 *ma*	Both	Row Total
Min	N	12	8	0	20
	%	60%	40%	0%	56%
	SE	-0.06	1.34	-1.67	
Mandarin	N	10	1	5	16
	%	63%	6%	31%	44%
	SE	-0.07	-1.50	1.86	
Total	N	22	9	5	36
	%	61%	25%	14%	100%

Table 6. Contingency table, Item 11, Group A

5.2.2. The SFP luo

Items 13 and 14 targeted the particle *luo* in contexts where normally *le* or *ba* are used (Lin 2007).

[*13*] 酒　　喝　　这么　　多，　脸　　越来越　　　　红___。(了，啰)
　　　Jiǔ　*hē*　*zhème*　*duō*　*liǎn*　*yuèláiyuè*　　*hóng*
　　　wine　drink　so　　much　face　more.and.more　red
　　　'I drank so much that I am blushing more and more.'

[*14*] 他　可能　没　来＿＿? (啰，吧)
　　　Tā　kěnéng　méi　lái
　　　he　maybe　not　come
　　　'Is it possible that he didn't come?'

Of the two items, only the one requiring *le* or *luo* (item 13) evidenced a significant association between the speakers' dialectal background and the chosen SFPs $\chi^2(2) = 6.92$, $p < .05$. Also in this case, as can be seen from Table 7, the majority of Mandarin speakers chose *le* 了 (69%) or indicated that both SFPs are possible (25%). On the other hand, the Min speakers were more likely to use only the non-standard SFP, since they either chose *luo* (25%) or *le* (75%) and none of them gave both alternatives as valid.

Variety		了 *le*	啰 *luo*	Both	Row Total
Min	N	15	5	0	20
	%	75%	25%	0%	56%
	SE	0.15	0.91	-1.49	
Mandarin	N	11	1	4	16
	%	69%	6%	25%	44%
	SE	-0.16	-1.02	1.67	
Total	N	26	6	4	36
	%	72%	17%	11%	100%

Table 7. Contingency table, Item 13, Group A

5.2.3. The SFP yé

Items 15 and 17 targeted the use of the variety-related SFP *yé* rather than the standard SFPs *a* and *de* (Lin 2007).

[*15*] 谁　敲　门＿＿? (啊，耶)
　　　Shéi　qiāo　mén
　　　Who　knock　door
　　　'Who is knocking at the door?'

[*17*] 大家　都　会　记得　你＿＿。(耶，的)
　　　Dàjiā　dōu　huì　jìdé　nǐ
　　　Everybody　all　will　remember　you
　　　'Everybody will remember you.'

For these items, the Chi-squared statistics did not reveal any association between the SFPs chosen and speakers' dialects. In fact, the use of this SFP was hardly found in our study, with only one Mandarin speaker in group A using it at the end of item 15, while another speaker indicated that it was possible at the end of the same item, together with the SFP *a*.

5.2.4. The SFP bù

Items 16 and 18 were characterized by the use of *bù* rather than the standard *ma* in interrogative sentences (Lin 2007).

[*16*] 你　要　去　上海＿＿? (不，吗)
　　Nǐ　yào　qù　Shànghǎi
　　you　will　go　Shanghai
　　'Are you going to go to Shanghai?'

[*18*] 这　粒　球　你　暂且　　收藏　　一下　　行＿＿? (不，吗)
　　Zhè　lì　qiú　nǐ　zànqiě　　shōucáng　yīxià　xíng
　　this　CLF　ball　you　temporarily　hide　　a.while　okay
　　'Would you like to collect this ball for the moment?'

In both cases, the results of the Chi-squared test evidence an association between the favored SFP and the speaker's dialect (item 16: $\chi^2(2) = 11.87$, $p <$ .01; item 18: $\chi^2(2) = 11.25$, $p < .01$). As with items 11 and 13, Mandarin speakers hardly ever choose only the variety-related SFP, whereas Min speakers do (30% for item 16; 50% for item 18). This is further supported by the value of the standard residual in the contingency table for item 18 ($SE > 1.96$), indicating that more Mandarin speakers than expected (38%) choose both SFPs (Table 9).

Variety		吗 *ma*	不 *bu*	Both	Row Total
Min	N	13	7	0	20
	%	70%	30%	0%	56%
	SE	-0.09	1.58	-1.67	
Mandarin	N	11	0	5	16
	%	54%	0%	46%	44%
	SE	0.10	-1.76	1.86	
Total	N	24	7	5	36
	%	67%	19%	14%	100%

Table 8. Contingency table, Item 16, Group A

Variety		吗 *ma*	不 *bu*	Both	Row Total
Min	N	10	10	0	20
	%	50%	50%	0%	56%
	SE	0.00	1.29	-1.82	
Mandarin	N	8	2	6	16
	%	50%	12%	38%	44%
	SE	0.00	-1.43	2.04	
Total	N	17	12	7	36
	%	47%	33%	20%	100%

Table 9. Contingency table, Item 18, Group A

5.3. Main findings of the study

To sum up the findings discussed so far, a quantitative and qualitative analysis of the two groups' responses reveals a high impact of the questionnaire format on the speakers' use of SFPs. Even though the two groups of participants received questionnaires which had exactly the same content, the outcomes are strikingly different for almost all the particles involved in the study.

The lowest variability among speakers of the two groups was attested for the particle *ne* at the end of a thematic question with a parallel topic structure: regardless of the question format and their dialectal background, the speakers show a clear-cut tendency to select this SFP (items 2, 9). However, when there is no parallel topic structure, 吗 *ma*, and less frequently *ba*, are also used (item 8). The highest variability, as expected, involves the particle *a*. In assertive sentences expressing agreement, *a* is generally preferred to the particle *ba* especially when it is available as an option (items 1, 4), whereas particle *de* is frequent when no option is given (item 1). In addition, *a* is also attested in exhortatives (item 6) and instead of *ba* in interrogatives with an expected affirmative answer (items 5, 7). Surprisingly, the frequency of *ba* at the end of this specific type of interrogative is lower than expected, and a strong presence of *ma* is evidenced regardless of the question format. Finally, *a* is also used to complete exclamatives with an open-ended format (item 3). This confirms the versatility of the particle *a* that has been observed in the literature.

The particle 吗 *ma* is used rather consistently across groups and regional varieties, since it is generally preferred to 嘛 *ma* (items 10, 12). On the contrary, the use of the particle 嘛 *ma* seems to be influenced by the speaker's dialect when alternating with *ba* in exhortatives (item 11). The use of the particle *luo* is associated with Min rather than Mandarin varieties, when this SFP is given as an alternative to *le* (item 13), although it is seldom chosen when it is given together with *ba* (item 14). When not given explicitly in the question, *la* and *ma* are attested together with *le* and *ba* respectively. The particle *yé* is almost absent from speakers' answers, regardless of the group to which they belong or the dialect they speak. The particle *bù*, on the other hand, appears not only when it is given as an alternative, but also when it is not. Its presence, however, is more strongly associated with Min rather than with Mandarin varieties.

6. Conclusions

This article deals with the issue of standard and variation in the use of SFPs in Chinese. As illustrated in Section 2, not only do the studies found in the literature provide different definitions of SFPs, but the functions and

meanings conveyed by these items are rather complex and they overlap, both within a variety and across different linguistic forms. Although a large amount of research has been carried out with regard to SFPs in Mandarin Chinese, as well as in a few other varieties, such as Taiwanese Southern Min and Cantonese, the influence of the speakers' dialectal background on their use of SFPs in Standard Mandarin Chinese has not yet been addressed.

In this paper, some selected SFPs have been examined with the intention of exploring for the very first time the variability that characterizes the use of these SFPs by speakers of Mandarin and Min varieties. It has done so in a twofold manner through the use of open-ended *vs* close-ended types of questionnaires. The formulation of the research questions of this study puts great emphasis on the word *variability*, which is an important factor to be taken into consideration when describing linguistic phenomena in order, it is hoped, to predict regularity or usage constraints.

The application of statistical analysis to measure variability in the participants has allowed us to draw some preliminary conclusions. The first concerns research methodology, and more specifically the instruments used to collect data: the results we obtained reveal a correlation between the type of questionnaire and the selection of SFPs. This effect, we believe, can be explained by two independent yet interrelated factors. The first factor to be taken into account is SFP salience: the participants in our study used variety-related SFPs when provided to them or else they simply resorted to the standard inventory. In fact, although part of the sample was not limited in terms of selection, and the Min variety was known to them, they only occasionally opted for non-standard particles. The second factor affecting the discrepancy between group A and group B is related to the written and standard-oriented nature of the questionnaires employed in this study: since probably both questionnaires were understood by the participants as a task to be carried out in SMC, they only felt 'authorized' to use variety-related particles when explicitly provided to them.

Another finding obtained from our data is the overall low correlation between the speakers' dialectal backgrounds and their choice of particles. However, it should be pointed out that this result is hardly generalizable from our sample to the entire population for two at least two reasons: (i) as explained above, the instrument used to collect data impacted on the participants' choices both in terms of open-ended *vs* close-ended questionnaire and in terms of the written and standard-oriented nature of both types; (ii) the composition and features of the sample itself are very likely to have conditioned the outcomes of the study. As discussed in Section 3.4, the participants were young highly-educated speakers with a long training in and a high degree of exposure to SMC – thus fairly homogeneous in terms of linguistic background, age and proficiency in Mandarin –, hence probably not inclined to use regional varieties in formal

contexts such as the classroom and the taking of a test. Things might have been rather different if a larger number of participants with more diversified features would have been involved in the study. Indeed, it is likely to believe that if the samples were large enough, significant uses of variety-related SFPs might as well be found in open-ended questionnaires. While it seems clear that the results of the study are tightly bound to the specific sample of reference, it should also be pointed out that for the same exact reason these results should be considered as crucially indicative of the degree to which dialectal repertoires can be said to influence the use of the standard language. The fact that some traces of the dialectal background of these specific participants has been detected suggests that, possibly, different speakers with lower levels of proficiency in Mandarin and higher degrees of dialect competence could show higher levels of influence of the latter on the use of the former. Moreover, this type of influence would be even more likely to emerge if a natural method of data collection was employed.

To conclude, despite its various limitations, largely stemming from the composition of the sample and the data collection strategy, it is hoped that this paper will foster further research into the area of SFPs, especially considering the impact that the dialectal variety may have on the speakers' usage of Mandarin Chinese.

Abbreviations

ATTR = attributive marker; CLF = classifier; EMP = emphasizer; PL = plural; POSS = possessive marker; PRT = particle; RV = regional variety; SFP = sentence-final particle; SMC = Standard Mandarin Chinese.

Acknowledgements

Notes

[1]   Standard Chinese is the official language in mainland China, where it is also called 普通话 *pǔtōnghuà*, and in Taiwan, where it is referred to as 国语 *guóyǔ*. Another term, used in this paper, is *Standard Mandarin Chinese*, which is distinct from other varieties of Chinese.

2   Chinese characters are provided in the text on the first occurrence of each term as well as in the examples provided. The names of Chinese authors and the titles of works are followed by the appropriate characters in the reference section.

3   The rank of *a, ba, ma* and *ne* are 1,175, 1,938, 642 and 1,712 respectively in *Xiandai hanyu changyong cibiao* and 222, 119, 116 and 89 in the *Frequency Dictionary of Mandarin Chinese*.

4   Examples in this section are selected from the Chinese Web 2011 corpus available from Sketch Engine, <www.sketchengine.eu>. The glosses adopted largely follow Li & Thompson (1981).

5   It should however be pointed out that the particles' functions and meanings may vary according to the sentence intonation, as in the case of (9) (Li 2006).

6   Data on speakers and distribution are available at <www.ethnologue.com>.

7   The transcription for Min particles used here and in Table 1 follows Lin (2007), whereas the transcription for examples (14-18) is based on the dictionary edited by Lin (2007), which employs the 闽南方言拼音方案 Bbánlám Hōng'ggián Pìngyīm Hōng'àn transcription system. The reason why we used two sources – resulting in partly inconsistent annotation – is that the dictionary does not include all the particles described, while the article does not provide a transcription of the examples nor does it give indications about the system used for the particle transcription.

8   However, it has to be noticed that, as kindly pointed out by an anonymous reviewer, the usage of *bù* in sentence-final position is also attested in Northern Mandarin varieties.

9   An alternative solution for maintaining the same item formulation in the two versions would have been to submit both questionnaires to the same group of respondents, but over a sufficiently wide period of time so as to avoid any recall bias. For reasons of time and opportunity, however, the authors decided to administer the two versions simultaneously to different groups of respondents with as similar characteristics as possible.

10   The questionnaire is available at <www.cflnetwork.org>.

11   The questionnaire submitted to the respondents initially contained 10 sentences with 10 items in each part. However, two sentences were excluded to avoid potential ambiguity.

12   Since the SFPs in different varieties within the same group have different phonological realizations, the decision to administer a written questionnaire was made in order to avoid phonological influences and/or ambiguities that would have been impossible to predict without previous knowledge of how the sample was composed.

13   The place of birth or the acquisition environment, as an anonymous reviewer pointed out, are not always reliable proxies. For these reason, we only kept in the sample those participants who provided sufficient cues to identify the variety they speak.

14   Following Saillard (2016), the participants' specific level of RV use was assessed based on the background section of the questionnaires, which included information on the acquisition environment of the RV and the SMC, in addition to the context and frequency of use in everyday life. Each participant was assigned a level on a 6-point progressive scale. Level one comprised those who stated they had only learned the regional variety without actually using it at home, level two covered those who did not use the RV at home, despite their parents doing so, and level three applied to those who used it to communicate with their parents. Level four comprised those who also used it to communicate with their older siblings, while level five covered those who also used it to communicate with their younger siblings. Level six applied to those who used the RV to communicate with colleagues from their own hometown. The active production of the RV was taken as the relevant parameter to distinguish between monolingual and bilingual speakers (Edwards 2004), i.e. speakers below level three were considered monolingual, while speakers with a higher level of use were considered bilingual.

[15] For the reader's reference, significant values are those with a *p-value* ≤ .05 The columns 'SFPs' in Tables 4 and 5 contain the two particles provided as alternatives to group A.

[16] However, it should be pointed out that the lack of a significant correlation between the dialects spoken by group B and the SFPs selected might be partly due to the many modalities of the dependent variable (SFPs) or to a natural variation in the sample. It is thus difficult to analyze and make generalizations from open-ended questionnaires without (semi-)controlled answers.

[17] Since no significant difference was found between the control group and the experimental one, our discussion in this section will be based on literature describing the use of SFPs in SMC that is relevant to each of the specific scenarios. The literature in question includes Liu (2001) and Yang (2013).

[18] As correctly suggested by an anonymous reviewer, this result could also be explained by the highly frequent occurrence of 好 *hǎo* with 的 *de* to express the meaning 'ok'.

[19] One possibility that must be acknowledged to account for the low occurrence of ba in items 5 and 7 is that the participants disregarded or failed to read through the second line of the dialogue – containing the positive reply of the speaker B – without which the selection of ba can hardly be triggered.

[20] Even though the number of Min speakers that use this particle is too small for us to draw any conclusions, future research might help to clarify whether the use of the particle *la* in this context is indeed connected with the speakers' RV.

[21] Group B was probably affected by the open-ended question type; their responses to each item reflect idiosyncratic preferences and evidence a large number of low frequency SFPs, thus influencing the result of the statistical tests.

[22] According to Field et al. (2012), the standardized residuals with values that lie outside ±1.96 are significant at $p < .05$, while those outside ±2.58 are significant at $p < .01$ and those outside ±3.29 are significant at $p < .001$. However, when talking about zscores, the authors also state that in "smallish samples it's OK to look for values above 1.96" (Field et al. 2012: 175). Given that our sample can be considered a rather small one in that we examine groups A and B separately, we may regard standard residuals with a value lying outside ±1.96 as significant).

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