PAST TENSE MARKING BY ADULT CHINESE SPEAKER OF ENGLISH: A CASE STUDY

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The acquisition of tense/aspect morphology in English by second language learners has consistently shown that there are multiple factors constraining the acquisition of past tense morphology of English And researchers have approached the problem from different perspectives One group of studies (Adamson et al 1996, Bayley 1994, Wolfram 1985) looks at learner's English interlanguage past tense morphology from the perspective of morpho-phonological features Another group of studies (Kumpf 1984, Bardovi-Harlig 1995) looks at the issue from the higher level of discourse features Still another body of research (Shirai & Andersen 1995) approaches the issue from the perspective of the Prototype Theory And Berlin & Adamson (1998) look at the issue from all three perspectives In short, phonological factors, discourse factors, semantic factors could all have a bearing on the form of interlanguage past tense An additional direction in the study of interlanguage variation is informed by Speech Accommodation Theory (Giles & Byrne 1982, Coupland 1984) Beebe & Zuengler(1983) and Young(1991) investigate interlanguage variation due to the possible effect of interlocutor The present pilot study attempts to bring above-said four factors into consideration, and by doing so adds a forth dimension to the study of interlanguage time/aspect acquisition, namely the potential effect of such intergroup factors as proposed in Speech Accommodation Theory

Wolfram (1985) working with Vietnamese subjects found that past tense marking of irregular verbs is constrained by the verb class He proposed the Principle of Saliency, which says that the more different a verb's past tense form is from its base form, the more likely it is going to be marked Thus suppletive verbs like *be* and *go* are more likely to be marked for past tense than doubly marked verbs like *feel, keep* and *do*, which are in turn more likely to be marked than internal vowel change verbs and replacive verbs Bayley (1994) using Chinese subjects found results supporting this principle Adamson et al (1996) found similar results, the Replacive verbs behaved differently than expected, however

Kumpf (1984) found that her Japanese subject, who started to learn English after she came to US as an adult, marked more frequently verbs that described past events within background clauses than within the foreground clauses She explained that this was the case because past event reference in background is obligatory context for past tense marking while it is not in the foreground as either past tense or Historical Present is acceptable Bardovi-Harlig (1995) found her 37 subjects of five different first language backgrounds marked past tense more often in the foreground clauses However, she did not tick out the possible effect of HP Berlin & Adamson (1998), ruling out the possibility of HP, found their Chinese children marked more often verbs in background than in foreground Research from discourse approach seems to prove that clause type does have a constraining effect, but they found conflicting results as what kind of clause favors past tense marking These contrasting results could be because they used different subjects In Berlin & Adamson(1998), the subjects were highly proficient children of Chinese background while the subjects in Bardovi-Harlig(1995), the subjects were adult international students of different proficiency levels from five different first language backgrounds Tickoo(1996), after examining Vietnamese adult learners' written production, suggests that the selective marking of past tense of his subjects was due to the transference of a tense-free first

language These contrasting results deserve a more through explanation, perhaps by taking first language past tense morphology into the design

Shirai & Andersen (1995) approached the issue from another perspective, that of Prototype Theory Typological study across different languages by Bybee et al (1994) found that past tense tends to be associated with certain kinds verbs rather than other kinds of verbs Shirai & Andersen (1995) observed that children first applied past tense to certain verbs that describe some prototypical event types and only extended past tense to other type of verbs later on They found that achievement verbs such as *reach* and *die* and accomplishment verbs such as *make a chair* and *build a house*, which are telic because they that imply an inherent time boundary of event, are most likely to be marked for past tense However, activity verbs like *run* and *play* and state verbs like *see* and *love* are not likely to be marked for past tense until later on Berlin & Adamson (1998) found the same constraining effect of semantic verb type on child second language learners Thus, cross-sectional typological study and longitudinal child language acquisition study seem to converge to support the Prototype Theory However, no such research has been done on adult second language learner

Second language acquisition could be regarded as a long term process of accommodation to the target language and culture norm This is the application of Speech Accommodation Theory (Giles & Byrne 1982) to second language acquisition in terms of socio-psychological factors For example, Regan (1996) found her subjects learning French as a second language approximated native norm in terms of ne deletion in French negative structure (*Je ne sais pas*) after a year of stay in France

Beebe & Zuengler (1983), focusing on the performance in phonology by Thai/Chinese bilinguals, establishes the relevance of speech accommodation theory to interlanguage However, Young (1991), working on a group of lower proficient Chinese learners of English, failed to detect accommodation on the learner's part to their interlocutors in terms of their marking of English plural nouns He suggests that the dichotomy between native and non-native speaker might be problematic and Speech Accommodation Theory might not be the primary explanation for interlanguage variation In the present study, the relevance of Speech accommodation theory will be tested by comparing the subject's past tense marking with native speaker interviewer and that with non-native speaker interviewer

Design

As a case study, the present study aims to investigate the constraining effects of various factors on the marking of past tense by an adult Chinese learner of English as a second language There are seven factors under investigation in this study They are Narrative vs Other Style (1), Verb class (2), Verb type (3), Following Phonological Environment (4), Clause type (5), Semantic verb type (6) and Interviewer (7) Factor 2 and 4 are morpho-phonological factors Factor (5) is discourse factor Factor (6) is semantic factor and factor (7) is situational-psychological factor The research questions are (1) do the factors proposed in the above have an effect on the subject's past tense marking? (2) If they do, in what way do they constrain the subjects' past tense marking

Subject a 25-year-old Chinese student who had been in US for two months at the time of interviews His first language is Chinese and he speaks English as a second language

Data data were collected during a period of one month, starting from mid-March through mid-April The tool used is sociolinguistic interview The question models are self-prepared The first

interview was conducted by the researcher himself and the following two interviews were conducted by a native speaker of English Altogether 120 minutes of interview was recorded and serves as the data for the present study

Procedure the data were coded for obligatory past tense contexts Since the subject is a low proficient learner, it is concluded that he does not have the native-like HP narrative style Besides, he was found using past and present in the same action sequence So the possibility of the subject using Historical Present (HP) in foreground clauses was ruled out

Another problem in coding is how to code narrative style and non-narrative style Since the distinction between foreground and background clause does not apply to style other than narrative, it is necessary to provide a clear operational definition for narrative style The definition of narrative in the present study is adopted from Labov (1972), which defined narrative as an event sequence contained in at least two independent clauses Temporal sequencing does not have to be marked chronological, but has to be implied In addition, agency must be present And finally the core of a complicating action has to be present This is closely related to the coding for foreground and background clauses The complicating action would be coded as foreground clause because it moves the action of a story forward

The first run of Varbrul checked for any significant interactions among the factor groups, yielding a Chi-Square per cell value of *1 012* Another result from the first run is that the Varbrul selected four factor groups to throw out In the final run of Varbrul, only three factor groups were tested, namely verb class (2), clause type (5) and semantic verb type (6), yielding a Chi-Square per cell value of *1 021* There is almost no difference between the fit values of the two runs, which shows that the factors left out of the final Varbrul run do not contribute to the Chi-Square calculation

Results

Overall, the subject marked past tense in obligatory contexts 35% of the times In terms of past tense marking, the subject belongs to the low proficiency group The following groups of factors are found to have constraining effect on the marking of past tense in obligatory context by the subject (See Table 1 on the next page)

Factor group 1 Verb class

For regular verbs, verbs ending with /d/ (p= 34) and /t/ (p= 15) when forming past tense (short past) are not likely to be marked On the contrary, if a verb needs an additional syllable /ɪd/ (p= 59) to form past tense (long past), the addition of a syllable has a slightly favoring effect on the marking of past tense

For irregular verbs, verbs whose past tense forms are maximally different than their bare forms (Suppletive verbs) are strongly favored for past tense marking (p ranges from 84 to 76) Verbs whose past tense forms involve internal vowel change plus the addition of a final consonant (Doubly Marked) are slightly favored for past tense marking (p ranges from 65 to 54) with the exception of 1 type verbs like think, teach, bring and buy Verbs involving only internal vowel change when forming past tense are slightly disfavored for past tense marking (p ranges from 45 to 21) And finally, verbs that involve only the replacement of the final consonant in forming the past tense (Replacive verbs) are least likely to be marked for past tense (p ranges from 35 to 14)

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INPUT   31   TOTAL CHI-SQUARE = 49 029      CHI-SQUARE/CELL = 1 021

Factor group 1  Verb class
Irregular verbs
                                          P      %      N
                Suppletive        e      76     67%    12
                                  w      84     49%    74
                      total                     52%    86
                Doubly marked     x      65     50%    56
                                  n      58     33%     3
                                  m      54     39%    23
                                  ı      40     17%    23
                      total                     40%   105
                Internal vowel    v      45     43%    44
                                  c      21     20%    10
                      total                     39%    54
                Replacıve         r      35     40%    10
                                  h      14      7%    30
                      total                     15%    40
Regular verbs                            P      %      N
                                  d      34     21%    72
                                  t      15     18%    28
                                  g      59     43%    35
                      total                     25%   135

Factor Group 2  clause type              p      %      N
                Foreground        f      61     47%   195
                Background        a      41     25%   224

Factor Group 3  semantıc verb type       p      %      N
                Telıc             t      71     51%   197
                Atelıc            a      31     21%   222
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Table 1

Factor group 2 clause type

Foreground favors past tense markıng (p=   61) whıle background dısfavors past tense markıng (p=   41)

Factor group 3 semantıc verb type

Telıc verbs are strongly favored for past tense markıng (p=   71) whıle atelıc verbs are strongly dısfavored for past tense markıng (p=   31)

There is a clear order of constraint strength (Telicity seems to have the strongest constraining effect on past tense marking, and clause type has a secondary constraining effect) Table 2 shows the order of constraining strength

Constraining order

	t	92%			f	55%
w			t			
	a	40%		b	42%
	t	18%			f	25%
h			a			
	a	0%		b	20%

Table 2

Discussion

Factor 1 Verb class

Some verb classes have too few tokens, so those classes of verbs that have less than 20 token are excluded from the discussion

Regular vs irregular verbs

Generally speaking, irregular verbs were marked more often than regular verbs, with perhaps the exception of Replacive verbs which were marked less often than regular verbs This result replicates the finding of Adamson et al(1996) who theorizes that Replacive verbs are less salient than regular verbs because the final /d/, /t/ or /ɪd/ for a regular verb is additional and thus is more salient while Replacive verbs only involve the replacement of the final consonant, which should be less salient The subjects in Adamson et al(1996) were high proficient learners, but the subject in this study is a low proficient learner Taken together, it can be said that Principle of Saliency constrains the past tense marking, regardless of proficiency level

Regular verbs

The Principle of Saliency would predict that long past forms are more likely to be marked than short past forms, because the former requires an additional syllable This prediction was borne out in this study too The subject marked long past (59) more frequently than the short past (34 and 15) As a matter of fact, in contrary to the short past who have strong disfavoring effect, long past has a slightly favoring effect on past tense marking

Irregular verbs

The results support Wolfram (1985) and Adamson et al(1996) The principle predicts that the more different a verb's past tense form phonologically from its base form, the more likely it is marked

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for past tense This is exactly what the present study found Judging from the results of the present study, there emerges a continuum with respect to the strength of the constraining effect of verb class At one end of the continuum is the type of verbs that went through the maximal phonological change when forming past tense, and they are found to strongly favor past tense marking (52%) At the other end is the type of verbs that went through minimal phonological change when forming past tense and they are strongly disfavored for past tense marking (15%) The only exception is the i-type verbs Verbs of this type of verbs that appear in the data include such irregular verbs as think-thought, bring-brought, teach-taught and buy-bought Their past tense forms are more salient in that they are more different from their base forms in comparison with those verbs whose past forms only involve internal vowel change However, this type of verbs were found less favored for past tense marking than r-type verbs, a subgroup of verbs of internal vowel change In spite of that, taken together, it holds true that doubly marked verbs (40%) are more likely to be marked than verbs with internal vowel change only(39%)

Factor 2 clause type

The present study found similar results to Bardovi-Harlig (1995) in terms of the effect of clause type on past tense marking In view of this result, it is argued that foreground clause favors paste tense marking Although Bardovi-Harlig counted the percentage of past tense marking in both foreground and background, regardless of whether an obligatory context exists, I believe that her results are nonetheless valid It is not likely that the subjects in her study used past tense for non-obligatory contexts, and if that is the case, it is really interesting finding that deserves investigation Counting Historical Present (HP) as obligatory does not affect her finding that foreground clause favors past tense marking The reason is that even if historical present was counted as obligatory context for past tense marking and a subject was found using the historical present, that would only lower his/her overall percentage of past tense marking in foreground Since her finding of past tense marking in foreground is consistently higher than that in background nonetheless, then foreground must really favor past tense marking

Factor 3 semantic verb type

The factor of semantic verb type is found to affect the subject's past tense marking Telic verbs favor marking and atelic ones disfavor marking This finding is in agreement with Shirai & Anderson (1995), and corroborates results of other studies, including Berlin & Adamson (1998) Since the subjects in both Shirai & Andersen (1995) and Berlin & Adamosn (1998) were children, and the present uses adult subject, this could mean that prototypical semantic types of the verbs could be a universal constraint on learner's past tense marking

The other four factors were not found significantly contributing to Chi-Square, but still deserve discussions

1 *Narrative vs other style*

Although there is a difference of 8 percentage points between the subject's past tense marking in narrative style and other style, the difference is not statistically significant (See Table 3 in below)

	Apps		non-apps		total		
n	148	35%	272	65%	420	100%	
o	18	27%	49	73%	67	100%	(Table 3)

Besides, there is the possibility of weak interaction between style and other factor Cross tabulation of Style factor and interviewer factor shows that there is a gain of 5 percentage points in past tense marking when switching from non-native speaker interviewer to native speaker interviewer in style other than narrative In contrast, there is drop of 10 percentage points in narrative style There seems to be a weak interaction between style and interviewer effect

	N		o		t	
1 1	100	39%	14	26%	114	37%
2 1	48	29%	4	31%	52	30%
t 1	148	35%	18	27%		

significance = 004

Table 4

Since there is an interaction between the two variables which is significant at 05 level and the distinction between background and foreground does not apply to other style, style factor is left out of the final run of Varbrul

2 *Main verb vs auxiliary verb*

	Apps	non-apps	total
m	137 34%	270 66%	407 100%
a	29 36%	51 64%	80 100%

Table 5

It seems that whether a verb is a main verb or an auxiliary verb does not make any difference In addition, verb type could bring in weak interaction, because it does not constrain past tense marking in a systematic way

	M		a		t	
F 1	78	44%	14	78%	92	47%
B 1	45	26%	11	23%	56	25%
T 1	123	35%	25	38%		

Significance = 001

Table 6

While it is generally true that foregrounding favors marking and background disfavors marking, there is no difference whether the verb is a main verb or an auxiliary verb in backgrounding However, the subject tended to mark more often the verb when it is an auxiliary verb than it is a main verb in foregrounding (44%-78%) Verb type seems to only to make any difference in foregrounding

In short, verb type does not constrain past tense marking in a systematic way It is left out of the final run of the Varbrul too

2 *following phonological environment*

Following Phonological environment does not seem to constrain past tense marking in the present study

	Apps		non-apps		total	
C	124	34%	240	66%	364	100%
V	36	32%	77	68%	113	100%
N	6	60%	4	40%	10	100%

	d		t	
C	12	18%	4	19%
V	1	11%	1	17%

Table 7

Whether the following segment is a vowel or a consonant does not make a difference, because the subject was equally unlikely to mark past This is true of all the verbs lumped together or just for verbs ending with /d/ and /t/ when forming past tense Although a following pause seems to favor past tense marking, there are too few tokens (10) to draw any conclusions As a result, this factor is left out of Varbrul test too

This finding that the subject's marking contradicts Adamson et al(1996) which found that /t/ and /d/ deletion in past tense marking was more frequent before pauses and consonants than before vowels among his Spanish speaking subjects He theorized that it is partly because of the tendency of resyllabification, a process whereby a syllable sequence is changed toward more canonical (CV CV CV) The contradiction could be resolved by citing the phonotactic rule of Chinese A syllable in Chinese can start either with a vowel or a consonant Consonantal ending is not allowed, except for nasals As a result, a word ending with /t/ or /d/ is impossible in Chinese Since the subject in this study is a low-proficiency learner, this first language phonological rule may constrain his performance so that short past ending with either /t/ or /d/ was disfavored for marking In addition, resyllabification is not allowed in Chinese either Even if the next syllable starts with a vowel, the two syllables have to be kept separate /xin'ai/ means "beloved", but resyllabification would result in a totally new word /xinai/ which refers to a peninsular in Egypt This is the reason that following vowel does not make a difference in Chinese learner's past tense marking

4 *interviewer effect*

	apps		non-apps		total	
1	114	37%	197	63%	311	100%
2	52	30%	124	70%	176	100%

Table 8

Calculation of Frequency shows that there is a slight difference in the subject's past tense marking across the two different interviewers However, the difference is not significant As a result this factor is left out of the final run of Varbrul Despite of that, analysis of Interviewer factor presents interesting results

The expectation when a native speaker interviewer was included into the study was that since the non-native interviewer is himself a speaker of English as a second language and did not always mark past tense in obligatory contexts as a native speaker does either, the subject would mark past tense more often with native speaker interviewer, in an attempt to accommodate to the native speakers' norm However, this study seems to point to the opposite If there is any difference due to the interviewer effect, the difference is exactly the opposite of what was expected at the beginning of the study The subject was found more likely to mark past tense with the non-native interviewer This is something that deserves further investigation

One purported reason is that the subject used more monitoring with the non-native interviewer Why would he use more native like morphology with non-native speaker? The answer might lie in the fact that the interview was conducted in English although both the interviewer and the interviewee share the same first language The choice of the code for the interview may have an effect on the subject, making the interview less "natural" Another reason that is more plausible might be that the subject was converging toward non-native speaker interviewer and diverging from the native speaker interviewer Coupland (1984) that studies the style shift of a travel agent shows that the agent converged in different degree to clients from social classes not very distant from his own, but actually diverges from the high class client In the case of present study, the subject, as a low-proficient learner, seemed to be aware of the huge difference between himself and the native speaker interviewer in terms of English proficiency and as a result maintains his style and diverges from his interlocutor However, with the non-native speaker interviewer who was perceived as more like himself both in terms of ethnicity and in terms of proficiency, he actually converged more, and thus marked past tense more frequently

However, whether a learner will accommodate to his/her interlocutor is also dependent on the learner's perception of the interaction situation and his/her attitude of the interlocutor's language and culture As Coupland (1984) found, the travel agent in his study accommodated to his clients from different social classes in some degree except the client from the most prestigious class who is socially most distanced from him So it is likely that socio-psychological factor can have a bearing on learner's language

Conclusions

The present case study replicates a few previous studies and at the same time raised some new questions

1 The present study confirms that morpho-phonological factors have a strong constraining effect on the subject's past tense marking The Principle of Salience is a powerful research tool in that its prediction was almost always borne out in the present study However, the influence of following phonological environment, if there is any, seems to be a function of learner's first language phonotactic features

2 Higher level factors like Discourse factors also constrain learner's past tense marking This study shows that foreground clause favors past tense marking, regardless whether HP is considered as obligatory context or not

3 The semantic features of verbs have a strong constraining effect on learner's past tense marking The present study gives support to the claim that the constraint of verbal semantics is universal

4 Although the present study did not produce conclusive findings about the possible effect of socio-psychological factor, the results nevertheless point to the possibility of incorporating such factor into research design Such exploration could contribute greatly to our understanding of the socio-psychological factor in second language acquisition

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