Acquisition of the Chinese Auxiliaries: Insights from Cross-Referential Learners' Corpora of Chinese, English, and Japanese

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Abstract Chinese epistemic modal verbs "huì" "yào" are difficult to Japanese L1 learners, even C1 level Japanese L1 learners tend to lack "realis/irrealis" modality markers. This tendency is related to Japanese modal/tense/aspect system, namely, non-past tense marker "-ru" covers all irrealis situations. On the other hand, English L1 learners of Chinese use epistemic modal auxiliary verbs "huì" "yào" properly, this tendency might be related to the English auxiliary system which is quite similar to the Chinese auxiliary system. We also discuss overgeneralization by L1 English learners of Chinese. For example, overuse of "huì" by English L1 learners might be caused by the overgeneralization that "huì" is the same as English auxiliary "will". In "TUFS-Shanghai International Studies University learner corpus of English", Chinese learners of English display characteristic overuse of the modal verbs "would" and "will" to express habituality, reflecting overgeneralization of the Chinese modal verb "huì" while Japanese learners of English tend to omit "will" in future contexts.

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1 Introduction

Modal verbs have been highlighted as problematic forms for learners to acquire (会 huì, , 要 yào, 能 néng). This paper focuses on the use of modal verbs by learners of Chinese. Analysis reveals distinct trends which can be considered to reflect learners' native languages. First, we show that the influence of L1 on L2 modal verb use is observed in the written production of Japanese and English learners of Chinese (3.1 & 3.2). Further evidence for the influence of L1 on L2 modal verb use is observed in the written production of Chinese and Japanese learners of English (3.3). Taken together, the data presented provides evidence for difficulty for native speakers of Chinese, English, and Japanese learning each other's languages.

First, in Chinese epistemic modality, even B1 level Japanese L1 learners of Chinese omit modality markers, i.e., the epistemic modal auxiliary verbs 会 huì, 要 yào, 能 néng. We argue that this is related to the Japanese modal/tense/aspect system, namely, the non-past basic verb form "-ru" covers all irrealis meanings, this leads to Japanese learners fail to mark epistemic meanings.

On the other hand, English L1 learners of Chinese use the epistemic modal auxiliary 会 huì, 要 yào, 能 néng properly. This might be related to the English auxiliary system which is quite similar to the Chinese auxiliary system as shown below. This study focuses on (2), namely, the epistemic uses of these auxiliary verbs.

(1) "can" type:

    a. Ability: 会 huì / 能 néng / 可以 kěyǐ
    b. Probability: 会 huì / 能 néng

(2) "will" type

    a. Volitional: 要 yào/想 xiǎng
    b. Probability: 要 yào

(3) "must/should" type

    a. Obligation: 要 yào/应该 yīnggāi/必须 bìxū
    b. Probability: 要 yào

We also discuss overgeneralization by L1 English learners of Chinese. For example, overuse of "huì" might be caused by the overgeneralization that "huì" is the same as English auxiliary "will". As Newbery-Payton and Mochizuki (2020) shows, in TUFS-Shanghai International Studies University learners corpus of English, Chinese learners of English display characteristic misuse of the modal verbs "would" and "will" expressing habituality, reflecting overgeneralization of the Chinese modal verb huì. In contrast, Japanese learners of English omit will in future contexts. Errors involving "huì" "will" are thus in complementary distribution. In both case studies, we, therefore, observe the overgeneralization by both English L1 learners of Chinese and Chinese L1 learners of English that "huì" = "will".

2 The Study

2.1 Methods

Our study uses cross-referential learners' corpora. By comparing L1 Japanese/English learners of Chinese, we can find the differences in the acquisition of Chinese. We suggest that the linguistic typology of L1 affects second language acquisition.

Figure 1 shows the frequency of top 10 modal auxiliary verbs in National Language Committee Modern Chinese Corpus (http://www.cncorpus.org/). According to previous research on first language acquisition, it suggests that deontic and dynamic meaning is acquired earlier than epistemic meaning (Wells, 1979). Also, studies on second language acquisition have concluded that learners tend to acquire deontic and dynamic meaning earlier than epistemic meaning. Since the acquisition of epistemic meaning is delayed in comparison of deontic and dynamic meaning in both L1 and L2 acquisition, this paper focus on 会 huì, 要 yào and 能 néng, which are most frequently used by Chinese native speakers and each of them has the epistemic meaning and deontic or dynamic meaning. This paper presents an empirical study on the difficulties of using those modal auxiliary verbs in L2 Chinese.

Data is extracted from learners' corpora written by native English speakers and native Japanese speakers at CEFR-based B1 levels. We focus on a significant difference in the production of 会 huì, 要 yào and 能 néng between the corpora of native English speakers and native Japanese speakers. The corpus of Japanese native speakers displays an underuse of the modal auxiliary verbs 会 huì, 要 yào and 能 néng. On the other hand, the corpus of English native speakers does not underuse 会 huì, 要 yào and 能 néng as frequently as native Japanese speakers and shows an overuse of 会 huì, 要 yào and 能 néng. This striking contrast is due to differences in the means of expressing modality in each language.
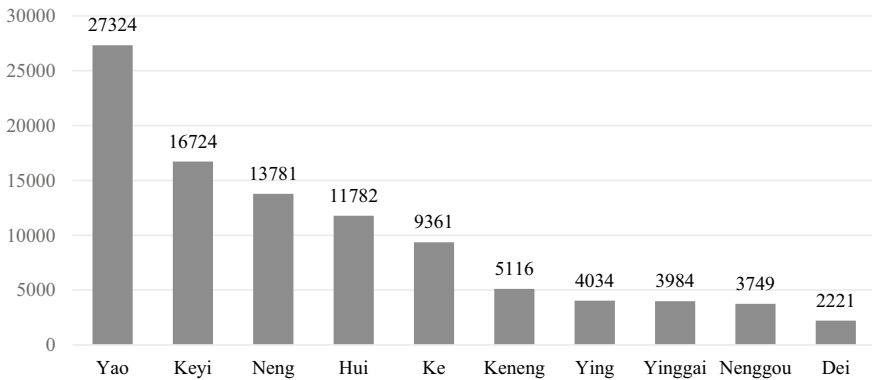

Fig. 1 Frequency of modal auxiliary verbs in CN corpus

Table 1 Data summary

Learner group	Files	Total characters
JLC	286	110,419
ELC	344	33,490
Total	620	143,909

Palmer (2001) points out that there are two ways in which languages deal grammatically with the overall category of modality: the modal system and mood. Both may occur within a single language. In most languages, however, only one of these devices seems to occur or, at least, one is much more salient than the other. Under this classification, both Chinese and English mainly use modal verbs, whereas Japanese mainly uses adhesive verbs and morphology and auxiliary words to express modality (Wen, 2019). Thus, we suggest that the modal systems of Chinese and English are expected to be easier to acquire for speakers of these languages. On the other hand, Chinese and Japanese are expected to be more difficult to acquire for each other.

This study discusses the differences in the acquisition of Chinese by Japanese L1 and English L1, and how the language typology, in this case the different means of expressing modality, affects the acquisition in L2 learning.

2.2 Data

The data used in this study consists of essays by L1 Japanese learners of Chinese (JLC) and L1 English learners of Chinese (ELC). JLC's group was undergraduate students majoring in Chinese at Tokyo University of Foreign Studies. ELC's data was obtained from a TOCFL (Test of Chinese as a Foreign Language) writing pretest provided by National Taiwan Normal University. Both groups of learners are roughly B1 level, which is an intermediate level in the CEFR framework. Initially, 286 JLC essays and 344 ELC essays were collected. A summary is provided in Table 1.

2.3 Data Processing

The essays were proofread by Chinese native speakers with an MA. or Ph.D. in linguistics/language education and sufficient experience in teaching Chinese at university level. Errors and the corresponding corrections were added to the essay texts using a program developed by Yu Kang. Proofread essays clearly indicate errors and corrections so that the errors can be identified within the respective sentences. Results are reported in the following sections.

3 Results and Discussions

3.1 Quantitative Analysis

Tables 2, 3 and 4 display the major categories of errors related to the modal auxiliary verbs 会 huì, 能 néng and 要 yào observed in each group of learners. "Underuse" refers to instances where learners incorrectly omitted a modal auxiliary verb. "Overuse" indicates that deleting a modal auxiliary verb will lead to a correct expression.

Table 2 Frequency of correct and error in 会 huì, 要 yào, 能 néng: Chinese learner corpus (Japanese L1)

		会 huì		要 yào		能 néng	
		Frequency	Proportion	Frequency	Proportion	Frequency	Proportion
Correct		183	35.10%	142	55.00%	123	50.40%
Error	Underuse	(291)	(55.70%)	(81)	(31.40%)	(86)	(35.20%)
	Overuse	(3)	(0.60%)	(1)	(0.40%)	(0)	(0.00%)
	Replace	(23)	(4.40%)	(31)	(12.00%)	(34)	(13.90%)
	Move	(2)	(0.40%)	3)	(1.20%)	(1)	(0.40%)
	Total of errors	319	64.90%	116	45.00%	121	(50.00%)
Total		522	100.00%	258	100.00%	244	100.00%

Table 3 Frequency of correct and error in 会 huì, 要 yào, 能 néng: Chinese learner corpus (English L1)

		会 huì		要 yào		能 néng	
		Frequency	Proportion	Frequency	Proportion	Frequency	Proportion
Correct		667	81.04%	550	89.58%	129	80.12%
Error	Underuse	(64)	(7.78%)	(12)	(1.95%)	(16)	(9.94%)
	Overuse	(79)	(9.60%)	(41)	(6.68%)	(8)	(4.97%)
	Replace	(12)	(1.46%)	(11)	(1.79%)	(7)	4.35%)
	Move	(1)	(0.12%)	(0)	(0.00%)	(1)	(0.62%)
	Total of errors	156	18.96%	64	10.42%	32	19.88%
Total		823	100.00%	614	100.00%	161	100.00%

Table 4 Frequency of correct and error in 会 huì, 要 yào, 能 néng: Chinese learner corpus (Korean L1)

		会 huì		要 yào		能 néng	
		Frequency	Proportion	Frequency	Proportion	Frequency	Proportion
Correct		94	56.60%	89	86.40%	89	81.70%
Error	Underuse	*(61)*	*(36.70%)*	*14*	*(13.60%)*	*13*	*(11.90%)*
	Overuse	*(0)*	*(0.00%)*	*0*	*(0.00%)*	*1*	*(0.90%)*
	Replace	*(10)*	*(6.00%)*	*0*	*(0.00%)*	*6*	*(5.50%)*
	Move	*(1)*	*(0.60%)*	*0*	*(0.00%)*	*0*	*(0.00%)*
	Total of errors	72	43.30%	14	13.60%	20	18.30%
Total		166	100.00%	103	100.00%	109	100.00%

As shown in Tables 2 and 3, the proportion of underuse errors caused by JLC was considerably higher than ELC data. In contrast, the proportion of overuse errors caused by ELC was higher than JLC data. It may ultimately reflect the effects from L1 (Japanese) linguistic typology in the L2 (Chinese) acquisition. For ELC L1 (English) and L2 (Chinese) alike possess modal auxiliary verbs, whereas for JLC L1 (Japanese) and L2 (Chinese) have different forms of expression.

First of all, among the Chinese auxiliary verbs, Japanese L1 learners most commonly make mistakes with 会 huì, 要 yào and 能 néng. Therefore, we will take up these three auxiliary verbs and analyze them.

Table 2 shows that Japanese L1 learners misuse 会 huì the most in comparison to the correct use (319; 64.9%). Furthermore, underuse accounts for over half of the total at 55.7%. In other words, underuse of 会 huì is remarkably common. On the other hand, in 要 yào and 能 néng, the proportion of correct use is the higher, with 55% of all uses deemed correct for 要 yào and 50.4% for 能 néng.

Turning to the Chinese compositions of English L1 learners, unlike the Chinese compositions of Japanese L1 learners, the proportion of correct use of 会 huì (81.04%) is higher than that of incorrect use, and the proportion of underuse is not significantly higher than the other error categories. Another aspect in which English L1 learners differ from Japanese L1 learners is in the overuse of 会 huì. Overuse of hui accounts for 9.60% of errors by ELC, whereas the figure is close to zero for JLC.

To summarize the above discussion, the proportion of misuse 会 huì, 要 yào and 能 néng caused by Japanese L1 learners was larger than English L1 learners. Furthermore Japanese L1 learners, conspicuously underuse 会 huì, while overuse is rarely seen. English L1 learners, on the contrary, show overuse of 会 huì and relatively few examples of underuse. This may be related to the linguistic form of the L1; whether or not there is a form equivalent to Chinese 会 huì in Japanese (no) or English (yes).

To further strengthen this argument, we now turn to the misuse of Chinese 会 huì by Korean L1 learners.

Korean, which is the same agglutinative language as Japanese, behaves in the same tendency as Japanese data: the proportion of errors involving underuse of 会 huì is high, and overuse is low. The Korean L1 leaners are likely at a higher proficiency level than the JLC learners, as they belong to the Chinese department of a university in China. However, the trends are still similar to those of Japanese L1 learners in terms of the tendency of misuse of the auxiliary verb 会 huì. In other words, it is thought that the typology of Japanese has influenced the language of study Chinese.

3.2 Errors in Chinese Modal Auxiliary Verbs in Japanese Learners' Writing

This section will discuss error trends in Chinese modal auxiliary verb 会 huì in Japanese learners' writing. Through the investigation in Sect. 3.1, the underuse showed by Japanese L1 leaners and the overuse showed by English L1 leaners are the most notable error types in our parallel corpus. The following section will specifically discuss those contrastive error types of the Chinese modal auxiliary verb 会 huì caused by Japanese L1 and English L1.

Before discussing data and findings, it is necessary to first establish a basic understanding of 会 huì's meaning and usage. In terms of semantic meaning, we subsumed the use of 会 huì into four classifications as followings.

A. Modality meaning

  (A1) Dynamic modality meaning
  (A2) Epistemic modality meaning

B. Tense/Aspect

  (B1) Future meaning
  (B2) Habitual meaning

"Dynamic" and "epistemic" are the two types of the usual three categories of modality. The conceptual "modality" has been given various definitions and described with different sets of terms by researchers. It is generally accepted that modality refers to "realis/irrealis" (Givón, 1994) and it is associated with three types of meaning: epistemic, deontic, and dynamic. Many Chinese linguists developed their Chinese modality theories from the semantic classifications advanced by Lyons (1977), such as Tsai (2015). For 会 huì, the (A1) dynamic modality meaning expresses the ability or volition of the subject, such as (4a). The (A2) epistemic modality meaning of 会 huì indicates a subjective conjecture about the irrealis event, it is intended to express the proposition that "I think…" or "It will be…" as illustrated in (4b). 会 huì can also be used as a future tense marker as (B1).

Table 5 Semantic classification for the underuse of 会 huì

		Underuse	Correct	Proportion of omission (%)
A. Modality	Dynamic	2	30	6.25
	Epistemic	104	66	61.18
B. Tense/aspect	Future	113	54	67.66
	Habitual	76	25	75.25

According to Yang (2015), the future tense in Chinese is an overt expression, which can be expressed by adverbs and modal auxiliary verbs, such as 会 huì, especially in conditional sentences, which means a possible behavior or state under certain circumstances, such as (4c). The future tense marker 会 huì is also used to express the habitual meaning as (B2), which describes the regular and repeated occurrence of a scene for a period of time (Yang, 2015: pp. 115–158), such as (4d).

(4)

    a. 他　会说英语。(Dynamic modality meaning)
       He can speak English.
    b. 明天他　会来。(Epistemic modality meaning)
       I think he will come tomorrow.
    c. 如果明天有课，他　会来学校的。
       Rúguǒ míngtiān yǒu kè, tā huì lái xuéxiào de. (Future meaning)
       If they have a lesson tomorrow, he will come to school.
    d. 他经常　会来学校。Tā jīngcháng huì lái xuéxiào. (Habitual meaning)
       He often comes to school.

Referring to the semantic classification of 会 huì summarized above, we figured out frequency result for underuse and correct use of 会 huì caused by Japanese L1 learners shown in Table 5.

Table 5 shows that among the uses of 会 huì, there are many misuses of underuse in the "Epistemic" (proportion of misuse: 61.18%), "Future" (proportion of misuse: 67.66%), and "Habitual" (proportion of misuse: 75.25%) categories. In contrast, there are few underuse in the use of "Dynamic" 会 huì (proportion of misuse: 6.25%). In the next part, we will discuss the reasons that cause Japanese students to underuse Hui from the view of modality and tense/aspect.

It has been theorized that acquiring modality will be difficult for second language learners, particularly when the first language and second language use different ways of expressing modality. It has also been pointed out that acquisition of modal verbs is difficult in the order of "dynamic and denotic > epistemic". Through the above observation, we have also confirmed that it is easier to acquire dynamic and deontic meaning than the epistemic meaning for JCL since they omitted the epistemic 会 huì more frequently than the dynamic 会 huì.

In the case of acquisition for the dynamic 会 huì by JCL, based on the correspondence between Chinese and Japanese, we can see that in the meaning of dynamic,

there are corresponding forms in Japanese, such as "-tai" (volition) and "-dekiru, -(rar)eru" (ability). Furthermore, they are semantically clear.

As shown in the following examples the dynamic 会 huì has been omitted in some cases, but data show that such cases are very few, while in most cases, dynamic "会" is used correctly, as in (5a) and (5b).

(5) a. Dynamic: ability
Correct use by Japanese L1:
很少　　有 外教 **会** 用 流利的日语，所以 外教　不能　　仔细地
Hěnshǎo yǒu wàijiào huì yòng liúlì de Rìyǔ，　suǒyǐ wàijiào bù néng zǐxì de
教　学生　　英语。
jiāo xuéshēng Yīngyǔ.
Translated to Japanese:
外国人教員　　　は　　日本語 を　　流暢 に　　**話せる**
Gaikokugokyouin-wa Nihongo-o　ryūchō-ni　hanas-eru
Foreign teachers-NOM Japanese-ACC fluently **speak-can**
こと　は　　ほとんどない
koto-wa　　　hotondo-nai
fact-TOP　　nearly -Neg
Foreign teachers can rarely speak Japanese fluently.
b. Dynamic: volition
Correct use by Japanese L1:
可是　为了不后悔 的　购物，我 以后 也　**会** 继续 采用　这个 方式。
Kěshì wèile bú hòuhuǐ de gòuwù，wǒ yǐhòu yě huì jìxù cǎiyòng zhège fāngshì
Translated to Japanese:
…今後も　　この　やり方 を　引き続き　採用した<u>い</u>。
...kongo-mo kono yarikata-o　hikitsuzuki　saiyōshi-tai
Future-also this method-ACC continue **adopt-want**.

We would like to continue to adopt this method in the future.

In contrast, Japanese also has auxiliary verb to express "inference", such as "-darou", just like the use of 会 huì 's epistemic meaning but its addition is not essential.

c. Epistemic
Error use by Japanese L1:
十 岁　以后 外语 学习　能力 <**φ→会**>　下降。 (epistemic)
*Shí suì yǐhòu wàiyǔ xuéxí nénglì <**φ→huì** > xiàjiàng.*
Translated to Japanese:
10 歳を　　　　　過ぎると、外国語　　　　の
10sai-o　　　　sugiru-to,　gaikokugo-　　no
10 years old-ACC　pass-when　foreign language-GEN
学習能力　　　が　　下がって行く(**だろう**)。
gakushūnōryoku-ga　　sagatte-iku　(darō).
  learning ability-NOM　decline-go　(**probably-IRR**).

When you turned 10 years old, your ability to learn a foreign language will decline (probably).

"Future", and "habitual" uses of 会 huì have no obligatory corresponding form in Japanese. Epistemic, future, or habitual meaning is often expressed using the non-past basic verb form "**-ru/-u**" covers all irrealis meanings such as (5d) and (5e).

d. Future

>   *Error use by Japanese L1:*
>   有 时候 吃不完   的话, 〈**φ→会**〉 浪费 食物。
>   *Yǒushíhou chī-bù-wán de huà, 〈**φ →huì** 〉làngfèi shíwù.*
>   *Translated to Japanese:*
>   食べきれないと、   食べ物 の 無駄に   なってしま**う**。
>   *Tabe-kir-e-nai-to,   tabemono-no mudani   nat-te-shima-**u**.*
>   Eat all-can-NEG-CONJ, food- GEN wasted   be-PROG-end-**PRS**
>   If you cannot eat it all, the food will be wasted.

e. habitual

>   *Error use by Japanese L1:*
>   闲 时 我 <**φ→会**> 打开 电视机， 找找   有趣 的 节目。
>   *Xiánshí wǒ <**φ→huì**> dǎkāi diànshìjī，zhǎozhao yǒuqù de jiémù.*
>   *Translated to Japanese:*
>   暇な   ときは   テレビを つけて、
>   *Himana-toki-wa   terebi-o   tsuke-te,*
>   free time-when-TOP TV-ACC   turn on- PRS
>   面 白い 番 組 を 探**す**。
>   *omoshiroi bangumi- o   sagas-**u**.*
>   interesting program-ACC   look for-**PRS**.
>   In my free time, I always turn on the TV and look for interesting programs.

Also in the misuse of auxiliary verbs "能" and "要", when they are used in the epistemic meaning, they are omitted.

(6) *Error use by Japanese L1:*
>   从   这些 观点 来 判断, 我 认为 在家里 自己 做饭 比 在 外 边 吃
>   *Cóng zhèxiē guāndiǎn lái pànduàn,wǒ rènwéi zài jiāli zìjǐ   zuòfàn bǐ zài wàibian chī*
>   <**φ→要**>   好得 多。
>   *<**φ→ yào** > hǎo de duō*
>   *Translated to Japanese:*
>   …、家で   ご飯を   作る 方 が   良いと 思 う。
>   *Ie-de   gohan-o   tsukuru-hou-ga   yoi- to- omo-u.*
>   home-LOC   food-ACC   cook-rather-NOM   good-QUOT-think-PRS
>   …I think it is better to cook at home.

(7) *Error use by Japanese L1:*
>   这个 房子 一定 <**φ→能**> 让 你们   生活   得更 好。
>   *Zhèige fángzi yídìng <**φ→ néng** > ràng nǐmen shēnghuó de gèng hǎo.*
>   *Translated to Japanese:*
>   この家に   住むと、きっと あなたたちの 生活 が さらに 良く なる。
>   *Kono-ie-ni   sumu-to, kitto   anatatachi -no seikatsu-ga sarani yoku-nar-u.*
>   DEM-house-LOC live- CONJ surely you-GEN life-NOM even good-be-PRE

Living in this house will surely make your life even better.

In this section above, we provided evidence for the influence of L1 on use of modal auxiliaries in L2 Chinese. The lack of obligatory morphological forms in Japanese appeared to be related to underuse of modal auxiliaries in L2 Chinese. English native speakers, on the other hand, appeared to have fewer difficulties with 会 huì, presumably due to similarities with "will" and other modal verbs in L1. In this case then, (perceived) similarity between L1 and L2 was beneficial to learners. However, this is

not necessarily always the case. In the next section, we provide supporting evidence for our theory that modal auxiliary use is affected by L1 characteristics, although in this case perceived similarities also lead to errors in some cases.

3.3 Errors in English Modal Auxiliaries in Japanese/Chinese Learners' Writing

In this section we provide evidence of a similar phenomenon in L2 English. Newbery-Payton and Mochizuki (2020) analyzed an L1-to-English translation task conducted by Chinese and Japanese native speakers and discovered a number of distinct error trends. The most notable difference in relation to the previous sections was nonnative use of the modal verb "will". L1 Chinese learners exhibited overuse of "will", whereas L1 Japanese learners exhibited underuse of "will".

Qualitative analysis revealed that L1 Chinese learners overused "will" in situations where the original text expressed habitual meaning. This tendency to use "will" was despite the narrative largely being confined to the past. Examples from the translation task are shown below, together with the relevant sentence from the original Chinese text. The original sentences prominently feature 会 huì, suggesting that Chinese L1 learners associate "will" and "would" with 会 huì. As a result, in contexts where 会 huì is required or preferred, Chinese L1 learners tend to select "will" or "would". In (8) and (9), learners used "will" where no modal verb is required. In (10)–(12), learners used "will" where "would" is appropriate. Note that the learners' translations may not match the original sentences and any other errors have not been highlighted or corrected.

(8)   Now whenever I think back that study life, I (will) φ always recall the scene of visiting my teacher. (Ch_57_2013)

如今每当我回想起当时的留学生活时，总是**会**想起每回到老师家里做客时的情景。

Rújīn měidāng wǒ huíxiǎng-qǐ dāngshí de liúxué shēnghuó shí，zǒngshì huìxiǎng-qǐ měihuí dào lǎoshī jiā li zuòkè shí de qíngjǐng.

(9)   Ever since that time, whenever I find rice pudding in any Chinese restaurant, I (will) φ order it, just to retaste Professor Hu and his family's hospitality. (Ch_05_2013)

从那以后，每当在中国餐馆里看到八宝饭，我一定**会**点来品尝，不为别的，就只为想再回味一次胡老师和他家人的待客之道。

Cóng nà yǐhòu，měidāng zài Zhōngguó cānguǎn li kàndào Bābǎofàn，wǒ yídìng huì diǎn lái pǐncháng，bú wèi biéde，jiù zhǐ wèi xiǎng zài huíwèi yí cì Hú lǎoshī hé tā jiārén de dàikèzhīdào

(10) Even though, my professor and his families (will) would warmly welcome me into the house. (Ch_40_2013)

（也由于当时老师宿舍里还没有安装电话，所以常常都是无事先告知的突然造访，）但是尽管如此，老师及其家人每次也都一定**会**欣然开门迎客，我也从未尝过闭门之羹。

(Yě yóuyú dāngshí lǎoshī sùshè li hái méiyǒu ānzhuāng diànhuà, suǒyǐ chángchang dōu shì wú shìxiān gàozhī de tūrán zàofǎng,) dànshì jǐnguǎn rúcǐ, lǎoshī jí qí jiārén měicì yě dōu yídìng huì xīnrán kāi mén yíng kè, wǒ yě cóng wèicháng guò bìménzhīgēng.

(11)   As soon as I sat down, my teacher (will) underline put some Long Jin tea in a Chinese traditional cup with a cover and then made tea for me using hot water. (Ch_34_2013)

我一坐定后，老师**会**先在一个传统中国式的、带盖子的茶杯里放入一小撮的龙井茶叶,然后从热水瓶里倒出热开水，为我沏上一杯热茶。

Wǒ yí zuòdìng hòu, lǎoshī huì xiān zài yí ge chuántǒng Zhōngguóshì de, dài gàizi de chábēi li fàngrù yìxiǎocuō de lóngjǐng cháyè, ránhòu cóng rèshuǐpíng li dǎo chū rè kāishuǐ, wèi wǒ qī shàng yìbēi rèchá.

(12)   Each time on our class, the teacher (will) would roll the quilts for long strip like Western cabbage cake and then make up the bed like a long bench and told me to sit on it to enjoy class. (Ch_49_2013)

每次上课时，老师都**会**将棉被卷成像西式卷心蛋糕似的长条状，然后将床铺整理得如同一条长凳子，要我坐在上面上课。

Měicì shàngkè shí，lǎoshī dōu huì jiāng miánbèi juǎn chéng xiàng xīshì juǎnxīn dàngāo shìde chángtiáo zhuàng, ránhòu jiāng chuángpù zhěnglǐ de rútóng yì tiáo cháng dèngzi，yào wǒ zuò zài shàngmian shàngkè.

One reason Chinese L1 learners may have difficulty distinguishing "will" and "would" is the fact that 会 huì is used regardless of time reference. For example, 会 huì corresponds to "will" in (13a), but in reported speech in (13b), which exhibits so-called "tense shift", the appropriate modal verb is "would".

(13)

a.   Wo hui hen mang.
        'I will be busy.'
b.   Zhansan shuo ta hui hen mang
        'Zhangsan said that he would be busy.' (Lin, 2006, p. 18)

Tsai (2015) lists the following uses of 会 huì. The use of 会 huì as a "future modal" (14d) corresponds to "will"; the habitual meaning in (14c) does not show the same correspondence.

(14)

a.   yiqian waijiaoguan dou hui fayu. [verb]
        before diplomat all know French
        'In old time, all diplomats know French.'
b.   yiqian waijiaoguan dou hui shuo fayu. [dynamic modal]
        before diplomat all can speak French
        'In old time, all diplomats can speak French.'

    c. waijiaoguan changchang hui lai zheli. [deontic modal]
       diplomat often tend.to come here
       'Diplomats often tend to come here.'
    d. waijiaoguan hui changchang lai zheli. [future modal]
       diplomat will often come here
       'Diplomats will come here often.'
    e. shui hui wang dichu liu. [generic modal]
       water HUI towards low.land flow
       'Water flows to lower places.'
    f. waijiaoguan dagai hui lai zheli. [epistemic modal]
       diplomat probably Irr come here
       'Diplomats will probably come here.'
       (Tsai, 2015: 278)

Binnick (2005) offers the following examples of habitual "will", taken from online sources. However, compared to the use of "would" to mark habitual events in the past, habitual "will" is a marked form. Non-past habitual events are more commonly expressed without modal verbs, often with adverbials like "every now and then" or "from time to time" in the examples below. not typically expressed using modal verbs.

(15) The dress is kept in a bag but every now and then she <u>will</u> bring it out for review.
     (Binnick, 2005: 339)
(16) From time to time he <u>will</u> yell that he doesn't "want to be managed," but overall, I am the one who is more frustrated. (Binnick, 2005: 341)
(17) Patch is very affectionate. She would prefer to be by your side all day. She <u>will</u> jump up and head butt you to get your attention. (Binnick, 2005: 358)

Habitual "will" is also in competition with other uses of the modal verb. In conditional sentences, "will" is typically interpreted as expressing future time reference. Note also that Binnick's examples are all in the third person. While a comprehensive study of "will" is beyond the scope of the present paper, it appears that volitional readings are favored over habitual readings in the first person. These two factors mean that "will" is disallowed in (8)–(9). Furthermore, as Carlson (2012: 834) states, habitual "will" does not appear with individual-level states. Overall, we can say that "will" is restricted in its habitual uses and thus does not match 会 huì in this regard. Note that in the translation examples habituality is explicitly expressed by adverbial expressions like "always" (12) or "every time" (13). It is possible that such adverbials act as a trigger for Chinese L1 learners' L1-like use of the modal verb.

Given the paucity of habitual "will" in L1 English, it seems reasonable to assume that learners have received minimal exposure to such forms. Therefore, the source of non-nativelike habitual use of "will" by Chinese native speakers more likely stems from the future time reference use, where "will" and 会 huì overlap.

Jarvis and Pavlenko (2008: 178–180) claim that subjective similarities between source and recipient languages (in this case, between Chinese and English) are a

major cause of crosslinguistic influence. Furthermore, when "perceived similarities are numerous enough, they lead the learner to assume a strong similarity between the languages a whole, which in turn leads them to assume additional specific similarities beyond the ones they have already encountered." In the current case study, the objective similarity between 会 huì and "will", namely, their use to mark future time reference, resulted in a perceived similarity between 会 huì and "will" in habitual meaning.

It would be oversimplistic to describe Chinese L1 learners' association of "will" with 会 huì as an example of negative transfer, because in other contexts this in fact leads them to select the correct modal verb. This is evident when comparing errors involving "will" made by L1 Japanese learners. The examples below show how Japanese L1 learners omit "will" when it is required to mark future time reference. Crucially, Chinese L1 learners do not exhibit similar errors. In other words, the presence of an auxiliary verb in L1 to mark future time reference appears to make this use of "will" easier for Chinese L1 learners. Japanese lacks obligatory morphological marking for both future time reference and habituality.

(17) I (φ) <u>will</u> never forget the tender, mild, blissful sweetness of fresh-steamed Babaofan. (Jp_07_2013)

(18) First, I (φ) <u>will</u> tell the memory during my study in Shanghai. (Jp_43_2013).

In summary, the presence of the auxiliary verb 会 huì in L1 appears to be a factor in erroneous use of "will" in habitual contexts, but helps Chinese L1 learners to avoid errors in marking future time reference. In contrast, Japanese lacks comparable forms to "will" in either habitual or future time reference senses. The complementary distribution of errors can be summarized in the below Table 6.

Odlin (2008: 317–318) reports a study by Sastry-Kuppa (1995) investigating the use of "will" as a marker of habitual aspect, including in past contexts, by native speakers of Tamil with a high level of English proficiency. Sastry-Kuppa suggests this distinct non-nativelike use of "will" stems from the extension of a similar future tense marker in Tamil to habitual meaning unrestrained by temporal reference. The similarities to 会 huì in Chinese are striking, as are the non-nativelike uses of "will" that appear.

In conclusion, considered together with the data reported above, these results provide support to the hypothesis that L1 affects the use of modal verbs in L2 (for distinct error trends related to tense and aspect, see Newbery-Payton & Mochizuki, 2020).

Table 6 Issues of overuse and omission involving 会 huì

	Chinese L1		Japanese L1	
Future time reference	会 huì	Nativelike use	(none)	Omission
Habituality	会 huì	Overuse	(none)	Nativelike use

4 Conclusion

This paper has provided evidence from a variety of phenomena that suggest that characteristics of L1 can effect use of modal auxiliaries in L2. This may have a beneficial effect, as in the case of ELC,'s use of 会 huì, or it may lead to overgeneralization, as in the case of CLE's use of "will". In contrast, the lack of an equivalent form in L1 lead to omission of 会 huì and other modal auxiliaries by JLC, but in the case of JLE it in fact prevented over generalization of "will" to habitual meaning. In all cases, analysis of corpus data has allowed us to identify potential areas of difficulty for native speakers of Chinese, English, and Japanese learning each other's languages. This paper's findings, therefore, have direct implications for the teaching of these forms in the language classroom.

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