

## Modal verbs in Han period Chinese: The syntax and semantics of *kě* 可 and *kě yǐ* 可以\*

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This article mainly focuses on a synchronic study of the modal auxiliary verbs *kě* 可 and *kě yǐ* 可以 in Han period Chinese, including their combination with negation markers. The study reveals that in Han period Chinese *kě* 可 and *kě yǐ* 可以 predominantly express root possibility values; deontic values are mainly confined to the negative; epistemic (evidential) values are almost non-existent and confined to verbs that licence an evidential interpretation, a notion which is already present in Classical Chinese.

*Key words* : auxiliaries, modality, Han period Chinese

Cet article présente principalement une étude synchronique sur les verbes auxiliaires modaux *kě* 可 et *kě yǐ* 可以 au chinois de la période Han, additionnellement quelques dates sur leur emploi en combinaison avec des marqueurs de négation sera discuté,. La discussion démontra qu'en Chinois de la période Han les verbes modaux *kě* 可 et *kě yǐ* 可以 expriment plus souvent les valeur 'root possibility' ; les valeurs déontiques sont bien rares dans les constructions affirmatives ; les valeurs épistémiques (évidentielles) sont presque non-existantes et limitées aux verbes évidentielles, une notion qui existe déjà en chinois classique.

*Mots-clés* : auxiliaires, modalité, Chinois de la période Han:

### 1. INTRODUCTION

#### 1.1. A short introduction to modality

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Since in Chinese modality is not reflected in the morphology of the verb, it has to be expressed by modal adverbs, including negation markers, and by modal auxiliary verbs.<sup>1</sup> Although modality can be considered one of the central issues in the analysis of the verb phrase, not many comprehensive studies are as yet available for Chinese. For Modern Chinese, modal adverbs and verbs have been analysed by *e.g.* Alleton (1977, 1984) and more recently by *e.g.* Li (2003) and for Classical Chinese the modal auxiliary verbs of possibility and of volition have been discussed by Peyraube (1999 and 2001 respectively) and Liu (2000). In general, the analysis of the modal system in a language has to be based on a clear distinction between *deontic* or *root* modality ('obligation', 'permission', etc.)<sup>2</sup> on the one hand and *epistemic* modality ('probability', 'possibility', etc.) on the other hand. The linguistic distinction of two basic kinds of modality was introduced by Jespersen (1924)<sup>3</sup> and was further developed in Lyons (1977, 1978) who defines these two modal values, epistemic and deontic modality, as follows: Epistemic modality is concerned with matters of knowledge, belief or opinion rather than fact (Lyons 1978:793ff) and "deontic modality is concerned with the necessity or possibility

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<sup>1</sup> The status of *can-wish* verbs in Chinese as full verbs or auxiliary verbs has been discussed in Peyraube (1999: 28ff) who finally adopts a category of auxiliary verbs for Classical Chinese which probably developed (through grammaticalization) from full verbs. Auxiliary verbs are characterized by the fact that they only take VPs as their complement.

<sup>2</sup> The term root modality is employed in many studies (*e.g.* Coates, 1983:20f), Bybee *et al.* (1994)). This term refers to a wider domain than deontic modality (see de Haan (1997)), namely to all non-epistemic modal notions. It also includes *dynamic* modality, which is Palmer's term for referring to "non-subjective" deontic modality (de Haan 1997:7).

<sup>3</sup> This has been stated in de Haan (1997:4f, amongst others) "The linguistic usage of these terms finds its origin probably in the works of Jespersen (*e.g.* 1924) who distinguishes between two categories of mood: the category of "containing an element of will" and the category of "containing no element of will" (1924:320-1) ... The first type (...) is now called *deontic modality* and the second type (...) is now called *epistemic modality*."

of acts performed by morally responsible agents” (ibid. 823). Usually, two different subcategories of deontic modality, *i.e.* *obligation* and *permission*, are distinguished: According to the definition of Bybee *et al.* (1994) obligation belongs to agent oriented modality which “reports the existence of internal and external conditions on an agent with respect to the completion of the action expressed in the main predicate”, and it expresses the “existence of external, social conditions compelling an agent to complete the predicate action” (Bybee *et al.* 1994:177). Permission belongs to the speaker oriented modality, and speaker oriented is “meant to include all such directives as well as utterances in which the speaker grants the addressee permission.” (Bybee *et al.* 1994:179). In some approaches a third modal value, *i.e.* the notion of *dynamic* modality (‘ability’ ‘willingness’), usually based on Palmer’s definition (*e.g.* 1986:12; 2001:10), has been added to the two-fold distinction of modal values presented *e.g.* in Lyons.<sup>4</sup> Dynamic modality can be considered a subcategory of root modality. According to Palmer (2001: 9), both *deontic* and *dynamic* modality belong to *Event modality*<sup>5</sup> and are distinguished in “that with deontic modality the conditioning factors are external to the relevant individual, whereas with dynamic modality they are internal.” Deontic modality is based on external authorities, such as rules or laws, or on the authority of the speaker, and dynamic modality relates to the ability or willingness of the subject, also including circumstances that affect them (Palmer 2001:9f). According to Bybee *et al.* (1994:178) one of the categories of dynamic modality, *ability* “generalizes to *root possibility* which

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<sup>4</sup> Palmer himself adopted the distinction *epistemic*, *deontic* and *dynamic* from Von Wright (1951:1-2) (Palmer 2001:8).

<sup>5</sup> Palmer (2001:7f) presents a distinction between *Event modality*, which refers to “the speaker’s attitude towards a potential future event” and *Propositional modality* which refers to “the speaker’s judgement to the proposition”, a contrast which is essentially identical with the one made by Jespersen (1924:329-31) between “containing an element of will” and “containing no element of will”.

reports on general enabling conditions and is not restricted to the internal condition of ability, but also reports on general external conditions, such as social or physical conditions.” Since the term *root possibility* according to the definition provided in Bybee *et al.* (1994:178) not only refers to internal ability, but explicitly includes external conditions, enabling the subject to deal with the situation<sup>6</sup> expressed by the matrix verb, it accounts for a great number of instances of *kě* 可 and *kě yǐ* 可以 in the texts under consideration, and accordingly it will be given preference over Palmer’s term *dynamic modality*. Both, deontic modality and root possibility can be subsumed under the term *root modality*, which has the advantage that all non-epistemic values are subsumed under one category. As the following discussion will show, almost all of the modal values expressed by *kě* 可 belong to either *deontic modality* or to *root possibility*, and can accordingly be subsumed under the category *root modality*, a term which most homogeneously accounts for the different, but related, modal values of the modal auxiliary *kě* 可 at issue in this paper.<sup>7</sup> Within the discussion the following kinds of modality will be distinguished:

1. *Deontic modality* which refers to *root modality* in a narrow sense, indicating *obligation* or *permission*. *Obligation* is usually expressed in English by the auxiliaries MUST (strong):

(a) “I must go.” (Bybee *et al.*, 1994:195)

and SHOULD (weak);

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<sup>6</sup> Throughout the entire article the term ‘situation’ is employed as a cover term for all kinds of situations (the different kinds of lexical aspects or Aktionsart) which can be expressed by the verb; these are: states and activities as atelic situations, and events as telic situations.

<sup>7</sup> The same distinction has been proposed in Coates (1983:21) to better account for the related meanings of non-epistemic MUST in English and has been taken as a model for the following analysis.

(b) “Should he take away all this jewellery” (Bybee *et al.*, 1994:195);

*Permission* is usually expressed by MAY, MIGHT, CAN, COULD

(c) “No vehicle may be left on the University grounds during vacation.” (Coates, 1983:132);

2. *Root possibility* belonging to *root modality* in a wider sense. *Root possibility* is expressed by CAN, MAY

(d) “I can come and see you today.” (Bybee *et al.*, 1994:195)

As already stated, the term *root possibility* is given preference over the term *dynamic modality* which relates to ability as in

(e) John can speak French (Palmer, 2001: 9)

and willingness as in

(f) John will do it for you (Palmer, 2001: 9)

3. *Epistemic modality*. *Epistemic modality* is usually grouped together with *evidential modality*. Both *epistemic* and *evidential modality* are categorised by Palmer as expressing *Propositional modality*: *epistemic modality* expresses the speaker’s judgement about the proposition, whereas *evidential modality* expresses the evidence the speaker has for the proposition (Palmer 2001:8). According to Palmer they are distinguished from *deontic* and *dynamic modality*. *Epistemic* modality can be expressed by MAY, COULD and MIGHT

(e) “He may be very ill.”<sup>8</sup>

Root modal values		Epistemic values	
Deontic modals: Obligation/ Permission	Root possibility	Epistemic modality	Evidential modality

Table 1

As an initial study of modality in pre-Tang Chinese on a large scale, the following discussion will be confined to the modal verb *kě* 可 with its variant *kě yǐ* 可 以 in Han period Chinese, both usually translated by ‘can’ in English.<sup>9</sup> As modal auxiliary verbs expressing possibility, *kě* 可 and its variant *kě yǐ* 可 以 in Classical Chinese have been discussed in Peyraube (1999) and analysed as expressing both deontic (or root) modality (obligation, permission), and epistemic modality (possibility, probability). Peyraube assumes that *kě* 可 in Archaic Chinese is basically deontic and that the epistemic reading emerging later in the Chinese language has probably been derived from the deontic meaning (Peyraube 1999:39). This hypothesis would confirm the universal diachronic development from root (or deontic) modal meanings, which are assumed to be basic, into epistemic modal meanings as proposed by

<sup>8</sup> The capitalized English equivalents for the respective modal values are taken from Coates (1983:5) whereas most of the examples are taken from Bybee *et al.* who present examples from different languages for the respective modal values for which only the English translation is provided here.

<sup>9</sup> The modal notions of the modal auxiliary verb CAN in English have been comprehensively discussed in Coates (1983) and, whenever appropriate, her results will be related to the analysis of the syntactic and semantic constraints of *kě* 可 and *kě yǐ* 可 以 in Han period Chinese provided in this paper.

*e.g.* Traugott (1989:36, 43) or Bybee *et al.* (1994).<sup>10</sup> Although the following discussion focuses on a synchronic analysis of the modal auxiliary verbs *kě* 可 or *kě yǐ* 可以 in Han period Chinese, it will also provide some data regarding the diachronic development of these modals from Classical (based on Peyraube's 1999 study) to Han period Chinese. This data will demonstrate whether or to what extent the general assumptions regarding the historical development of modals as proposed *e.g.* by Bybee *et al.* (1994) account for the semantics of the modal auxiliary verbs *kě* 可 or *kě yǐ* 可以 in Han period Chinese. The diachronic path proposed in Bybee *et al.* assumes a development from agent-oriented to speaker-oriented modalities, from ability to root possibility, from root possibility to epistemic possibility, and from obligation to probability. (Bybee *et al.* 1994:240f). The following investigation will show that for *kě* 可 and *kě yǐ* 可以 no development from root modal to epistemic modal notions can be confirmed from Classical to Han period Chinese. Regarding the development of modal values according to Bybee *et al.*, the auxiliary verbs at issue in this study do not seem to follow the path of grammaticalization proposed by them in a direct way at least in the periods under investigation.

The study is based on data predominantly taken from the *Shǐjì* 史記 (ca. 100 BC), the *Hànshū* 漢書 (1 cent. AD) and the *Lúnhéng* 論衡 (1. cent. AD).

## 1.2. General remarks on the syntax and the semantics of *kě* 可 and *kě yǐ* 可以<sup>11</sup>

<sup>10</sup> Traugott (1989:36) concedes that not all linguists and logicians regard deontics as basic and quotes Coates (1983:18) who says that "Of the many types of modality recognized by logicians, epistemic modality is most clearly relevant for normal language."

<sup>11</sup> The following abbreviations will be used throughout the discussion: CON = connector; FIN = final particle; MOD = modal adverb; NEG = negation marker; NEG<sub>mod</sub> = modal negation marker; NEG<sub>asp</sub> = aspectual negation marker; NOM = nominalizer; OBJ = object pronoun; PREP = preposition; QUEST = interrogative adverb; SUB = subordinator; ModP = modal phrase.

Syntactically, two different structures with the auxiliary *kě* 可 are available in Classical Chinese (e.g. Pulleyblank, 1995:23):

1. If the auxiliary *kě* 可 is followed directly by a transitive verb, the verb is passivized.<sup>12</sup>

- (1) 人可殺  
 rén kě shā  
 man can kill  
 ‘The man can be killed.’

In these cases, Pulleyblank (1995:23) analyses the auxiliary as an adjective which passivizes the following verb.<sup>13</sup>

2. If *kě* 可 is followed by *yǐ* 以 the verb remains transitive (or intransitive) (Pulleyblank 1995:23):

- (2) 王可以殺人  
 wáng kě yǐ shā rén  
 king can YI kill man  
 ‘The king can kill the man.’

Traditionally, most linguists analyse this construction as a combination of the auxiliary verb *kě* 可 + the preposition *yǐ* 以, or as a disyllabic word *kěyǐ* 可以, an analysis which will be

<sup>12</sup> One of the anonymous reviewers of this article does not agree with Pulleyblank’s analysis of the verb following *kě* 可 as being passivized and compares the structure with the ‘tough-verb’ construction in English. In this construction the adjective, in this case *kě* 可 ‘appropriate’ is followed by an infinitive. But according to my analysis of the semantics of constructions with *kě* 可, Pulleyblank’s analysis seems to me more convincing and will accordingly be adopted here.

<sup>13</sup> According to Bybee *et al.* (1994:185) “some of the source constructions for obligation are passive-like in structure; that is, the one who is obliged is treated like the object or patient in the clause.” This is due to the fact that “obligation is externally imposed” (*ibidem*).



challenged in the following discussion. The prepositional analysis of *yǐ* 以 has already been proposed in *Mǎ Shì wén tōng* (1898) and, for instance, Wang Li (1989), among many others, adopted this analysis. In the *Gǔdài Hànyǔ xūcí cídiǎn* (2000: 327) two different analyses are presented: In the first, *yǐ* 以 is analysed as a preposition and *kě* 可 and *yǐ* 以 as two separate words, in the second, *yǐ* 以 is analysed as a conjunction, *liáncí* 連詞, which forms a disyllabic word together with *kě* 可, a development which is assumed to have taken place after the Han period. According to Pulleyblank, *yǐ* 以 in this construction has to be considered a transitive verb ‘take, use’ which is passivized as it is usually the case with transitive verbs immediately following *kě* 可. For this analysis he gives the following example with an instrumental subject:

- (3) 刀可以殺人  
 dāo kě yǐ shā rén  
 knife can take kill man  
 ‘a knife is possible to use to kill a man’ = ‘a knife may be used to kill a man’.

a construction which in English is confined to an instrumental subject, but which in Chinese is also permitted with a personal subject (Pulleyblank 1995:43).

The rule that the verb only remains transitive (or intransitive) when *kě* 可 is followed by *yǐ* 以 has been quite strictly applied during the Classical period, but starting with the late Classical period it weakens considerably.

In the following discussion the predominant issue will be a semantic analysis of *kě* 可 and *kě yǐ* 可以 in Han period Chinese. As already mentioned, according to Peyraube, in Classical Chinese both *kě* 可 and *kě yǐ* 可以 express mainly deontic modality, but they can, to different extents, express dynamic modality, which is a subcategory of root modality, and occasionally epistemic modality

as well.<sup>14</sup> Since the epistemic notions are supposed to be derived from the root modal notions and accordingly to appear later in Chinese texts, this paper will examine whether Han period texts already provide some evidence for this development. As de Haan (1997) has pointed out, the interrelations of negatives and modals are of particular interest in linguistic studies on modality and consequently, in this paper, the employment of negation markers in combination with *kě* 可 and *kě yǐ* 可 以 has also to be accounted for. Since according to Traugott (1989:52) “the older meanings tend to be maintained longer in negative environments”<sup>15</sup> it can be hypothesized that the negated modals are less disposed to having already changed from indicating root modality to indicating epistemic modality. Traditionally, two different categories of negatives are distinguished according to their initial consonant in the Pre-Classical and Classical Chinese language, all of which are still present in Han period Chinese.<sup>16</sup> Of these two groups, the *p/f*-negatives express neutral negation without any modal values involved whereas the *m/w*-negatives usually indicate different modal values: these are predominantly deontic (root modal) values,

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<sup>14</sup> According to Peyraube (1999:48), deontic modality and probably also dynamic modality are more basic than epistemic modality: “Thus, if any kind of modality is basic, it is probably the deontic modality with its notions of permission, obligation and requirement. As for dynamic modality with its notions of willingness and ability, it could also be basic. In other words, non-epistemic modalities are basic.” The example from the *Lúnyǔ* 論語 which Peyraube presents for epistemic modality, in fact represents evidential modality.

<sup>15</sup> To exemplify this hypothesis Traugott (1989: 52) quotes Tottie (1985) who supports this hypothesis with ‘the maintenance of the volitional sense of *will* in *We won’t go*, and the relative paucity of epistemic (as opposed to deontic) *must not* and especially *mustn’t* in British English.’

<sup>16</sup> According to their initial, the negatives are categorised into: 1. the so-called *p/f*-negatives, and 2. the so-called *m/w*-negatives. The first group consists of all negatives with a \**p*-initial – reconstructed for Middle Chinese and earlier stages of Chinese – which partly develops into an *f*-initial; the second group consists of all negatives with an \**m*-initial in Middle Chinese which develops into a *w*-initial.

but they can also express epistemic modality.<sup>17</sup> Both, modally neutral negatives and negatives with a modal value, can appear to modify the modal predicate: these are in particular the neutral negative *bù* 不 ‘not’, the modal negative *wú* 無 ‘not’, together with its variants, and the aspecto-temporal and modal negative *wèi* 未 ‘not yet’, ‘not at all, never’. The following two examples represent only the modally neutral negative and the aspectual/modal negative *wèi* 未:

- (4) 終不可就,已而棄之. *Shǐjì*: 112; 2961  
 zhōng bù kě jiù, yǐ ér qì zhī  
 finally NEG can finish, then abandon OBJ  
 ‘... when eventually it could not be finished, they gave it up.’
- (5) 是未可鞭而置也 *Shǐjì*: 33; 1532  
 shì wèi kě biān ér zhì yě  
 this NEG<sub>mod</sub> can whip CON leave FIN  
 ‘Someone like him cannot be whipped without consequences.’

Besides these more semantic considerations, a syntactic analysis of the item *yǐ* 以 in the second construction with *kě yǐ* 可以, will be provided. The exact syntactic function of *yǐ* 以 in this construction has never been explained satisfactorily in the Chinese linguistic

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<sup>17</sup> One of the anonymous reviewers pointed out that the negatives *bù* 不 and *fú* 弗 have to be distinguished according to their coda: A coda \*-t has been reconstructed for *fú* 弗 whereas the negative *bù* 不 is reconstructed with either no coda, or, depending on the system of reconstruction of Old Chinese, a voiced velar coda. But as more relevant for the distinction between *fú* 弗 and *bù* 不 he/she adds that according to a note of the Han scholar Hé Xiū 何休 in his commentary to the *Gōngyáng zhuàn* 公羊傳 the negative *fú* 弗 has to be considered an emphatic form of *bù* 不, which can indeed include a modal notion. But since no instances of the negative *fú* 弗 modifying *kě* (*yǐ*) 可 (以) are attested in the texts under investigation, this certainly interesting issue will not be pursued here.

literature, although it is of great interest in the discussion on the exact notion of this morpheme in the Chinese language in general.

## 2. *Kě* 可 AND *Kě Yǐ* 可以 IN HAN PERIOD CHINESE

In the first part of this section, examples for *kě* 可 and *kě yǐ* 可以 in the Classical construction as discussed in Pulleyblank will be presented according to the modal value they represent. Three different kinds of modality will be distinguished throughout the entire paper according to the definitions given in the introductory section:

1. *Deontic modality* (obligation, permission);
2. *Root possibility*;
3. *Epistemic modality* (evidential).

As the following examples will show, most of the instances attested belong to the category root possibility according to the definition given in Bybee *et al.* (1994:178). As far as epistemic modality is concerned, only the category evidential modality is of relevance in the following discussion.

### 2.1. *Kě* 可 + VP<sub>pass</sub>

First a few examples will be given for the Classical construction with *kě* 可 followed by a transitive verb which is passivized. These examples also include those in which the verb is a secondary transitive verb, i.e. an intransitive verb which is transformed into a transitive and passivized verb following *kě* 可.

- a) *Kě* 可 expressing deontic modality (obligation and permission) ‘can = must, may’:

- (6) 「紂可伐矣。」 *Shǐjì*: 3; 108  
 Zhòu kě fá yǐ  
 Zhou can attack FIN  
 ‘Zhou can / must be attacked.’
- (7) 高昭子可畏，及未發，先之。」 *Shǐjì*: 32; 1506  
 Gāo Zhāo zǐ kě wèi, jí wèi fā, xiān zhī  
 Gao Zhao zi can dread, as-long-as NEG start, before OBJ  
 ‘Gao Zhaozi must be dreaded, but as long as he has not yet manifested himself, we can anticipate him.’

In these two examples the deontic value of obligation ‘can = must’ is expressed by *kě* 可.<sup>18</sup> According to Bybee *et al.*, constructions for obligation can in general be “passive-like in structure” (1994:185) – which includes passive forms as in the preceding example –, but contrary to what Bybee *et al.* assume for these constructions, the patient, i.e. the subject, in example (6) and (7) is not the patient of the obligation, the one who is obliged, but the patient of the matrix verb.<sup>19</sup> In contrast to the patient of the matrix verb, the patient of the obligation, who would be the agent of the verb ‘dread’ in a transitive construction, is not specified. This

<sup>18</sup> According to one of the anonymous reviewers, examples (7) and (12) with the state verbs *wèi* 畏 ‘fear’ and *āi* 哀 ‘mourn’ have to be analysed as evaluative, comparable to *e.g.* *kě ài* 可愛 ‘loveable’, *kě jìng* 可敬 ‘worthy of respect’ etc. which have been grammaticalized to evaluative adjectives. But this stage of grammaticalization does not seem to be reached in Han period Chinese, *e.g.* in the *Shǐjì*. Very few examples of these combinations appear in pre-Han and Han period texts and usually they can be analysed as clearly expressing deontic or root possibility values which may include a certain evaluative notion. The exclusively evaluative notion of these adjectives apparently derives from the root modal values, a path which does not seem to be unusual in grammaticalization processes, as *e.g.* Palmer (2001:217f) shows for the grammaticalization of *should* from weak obligation to an evaluative notion.

<sup>19</sup> Bybee *et al.* quote the “be supposed to” construction as an obligation construction with a passive source in English (1994:186).

construction can be compared with the English passive construction with CAN, which according to Coates (1983:96) is employed “when the speaker cannot presuppose the willingness of the subject to carry out the proposition”.<sup>20</sup> In the following example the modal auxiliary expresses the speaker-oriented modality<sup>21</sup> of permission ‘can = may’; a higher authority which reveals itself in the circumstances described, gives permission for the execution:

- (8) ... 不顧天及民之從也。其民皆可誅。 · *Shǐjì*: 33; 1521  
 bù gù tiān jí mín zhī cóng yě. Qí mín jiē  
 NEG regard Heaven and people SUB follow FIN. His people all  
 kě zhū  
 can execute  
 ‘He did not have regard for either Heaven or the allegiance of his people. His people can (= may) be completely executed.’

b) *Kě* 可 expressing root possibility ‘can’:

- (9) 然則東國必可得矣。 · 』 *Shǐjì*: 40; 1728  
 rán zé dōng guó bì kě dé yǐ  
 so then east land certainly can get FIN  
 ‘.. and so the country in the east can be obtained.’

In this example strong root possibility, which belongs to the agent-oriented modalities (Bybee 1994:178) is expressed. External circumstances provide the enabling conditions for the execution of the situation expressed by the matrix verb. Here again, the patient is

<sup>20</sup> Coates (1983: 96) gives e.g. the following example from one of the corpora she used: “We believe that solutions can be found which will prove satisfactory (Lanc7-1091)”. According to the data she surveyed, passive voice has “a strong association with root meaning” (Coates 1983:97).

<sup>21</sup> Speaker-oriented modality is defined as follows by Bybee *et al.* (1994:179): “Speaker-oriented modalities do not report the existence of conditions on the agent, but rather allow the speaker to impose such conditions on the addressee.”

the patient of the matrix verb, and the patient of the obligation, the agent, is not specified. The modal value is reinforced by the modal adverb *bì* 必 ‘certainly’. In the following example, a hypothetical possibility is expressed in the apodosis of a concessive sentence, the root possibility value is less strong:

- (10) 山東雖亂，秦之地可全而有，宗廟之祀未當絕也。  
 Shāndōng suī luàn, Qín zhī dì kě quán ér  
 Shandong even-if revolt, Qin SUB region can complete CON  
 yǒu, zōng miào zhī sì wèi dāng jué yě  
 have, ancestor temple SUB sacrifice NEG must discontinue FIN  
 ‘... and even with the chaos in Shandong, the region of Qin could have been kept intact, and the ancestors’ sacrifices need not have been interrupted.’  
*Shǐjì*: 6; 276

The first V *quán* 全 ‘complete, whole’ which is connected to the matrix VP by the subordinating connector *ér* 而 serves as an adverbial phrase, syntactically identical to the following example with the time span adverbial *yī dàn* 一旦 ‘within one morning’ appearing between *kě* 可 and the matrix verb.

- (11) 可一旦而盡也。  
 kě yī dàn ér jǐn yě  
 can one morning CON exhaust FIN  
 ‘... then it can be finished in one morning.’  
*Shǐjì*: 40; 1730

In the following example (12) a rhetorical question corresponding to a negative which expresses root possibility (or maybe even prohibition) is modally marked by *kě* 可. In this rhetorical question it is doubted whether the nature of death can be considered an enabling condition for deep morning. Here again an adverbial phrase is inserted between *kě* 可 and V2.

- (12) 死者天地之理，物之自然，奚可甚哀！

sǐ zhě tiān dì zhī lǐ, wù zhī zì rán,  
 die NOM heaven earth SUB principle, thing SUB self be-like,  
 xí kě shèn āi  
 how can very mourn  
 ‘Death is an underlying principle of heaven and earth, and  
 the natural end of all living beings, how can it then be so  
 deeply mourned?’ *Hànshū*: 4; 132<sup>22</sup>

Whereas the examples (9)–(12) clearly express root modality ‘can’, mainly reporting on external circumstances, and providing the enabling conditions for the occurrence of the situation referred to by the matrix verb, in the following example, obviously, an evaluative notion is involved. According to Palmer (1986:119-121) evaluatives belong to the (widely defined) deontic modalities, since “they are concerned with attitudes rather than commitments to truth”.<sup>23</sup>

(13) 古賢文之美善可甘，非徒器中之物也；  
 gǔ xián wén zhī měi shàn kě gān, fēi tú  
 old virtuous literature SUB beautiful good can sweet, NEG only  
 qì zhōng zhī wù yě  
 vessel middle SUB thing FIN  
 ‘The Beauty and goodness of the virtuous words of old can  
 be found to be sweet, they are more than food in a vessel.’  
*Lúnhéng*: 38.5.36

According to the transmitted texts, in Han period Chinese, examples with *kě* 可 expressing deontic modality in a narrow sense, namely, obligation or permission ‘can = must, may’, are not very frequent, most examples evidently express root possibility, a modal value which – according to Coates (1983:88) – shows a close

<sup>22</sup> A quite similar example appears in *Shǐjì*: 10; 433.

<sup>23</sup> Evaluatives in Chinese are discussed in Hsieh (2005). See also note 18.



relation to the deontic value of permission.<sup>24</sup> This does not necessarily argue against the hypothesis that the deontic meaning of *kě* 可 is its basic meaning, since according to Coates (1983:13) examples for the ‘core’ meaning of modals occur infrequently, *e.g.* examples for CAN in English expressing permission are extremely infrequent.<sup>25</sup> Examples which can unambiguously be analysed as epistemic are apparently quite infrequent, if they exist at all. Occasionally modals with *kě* 可 seem to involve evaluative modality which sometimes is considered to belong to the epistemic modalities but which is usually subsumed under root modality (Palmer 1986:121). In this construction, the agent of the passive phrase, the one who is obliged to perform the situation referred to by the matrix verb, is not specified, but is supposed to be human, whereas the patient, always the patient of the matrix verb, can display the feature [+human] or [-human], but also the feature [+abstract].<sup>26</sup> Different interpretations of the omission of the agent in the passive construction with *kě* 可 seem to be possible: 1. The willingness of the agent to perform the situation cannot be

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<sup>24</sup> This has been evidenced for English CAN by Coates (1983:88) who relates a permission reading and a possibility reading for the English modal CAN as follows: “CAN (‘Permission’) is related to CAN (‘Possibility’) through a gradient of restriction (*cf.* Lyons: 1977:828ff ...).” She argues that “CAN can be seen as implying a universe of possible worlds, ranging from the most restricted (when human laws and rules are in force) to the least restricted (where everything is permitted except what is contrary to so-called natural laws.)” If this analysis is correct, a change from speaker oriented to agent oriented modality must have taken place during this process (according to Bybee *et al.*), since root possibility is defined as agent oriented and permission is defined as speaker oriented modality (Bybee *et al.* 1994:178f).

<sup>25</sup> In the table in Coates (1983:25) CAN expresses Root possibility in the overwhelming majority of cases, much more infrequently it expresses Ability and only very rarely does it indicate Permission.

<sup>26</sup> According to Coates (1983:98), passive constructions with inanimate subjects are typically found in formal contexts.

presupposed by the speaker;<sup>27</sup> 2. The speaker does not have the authority to oblige the agent directly to perform the situation; and 3. The agent cannot be specified since it cannot be individualised. Regarding the lexical aspect of the modal predicate, modals in general are stative, but specific to the modal value they express, they can – according to Coates – choose matrix verbs of different situation types.<sup>28</sup> In the passive construction with *kě* 可, telic verbs, namely *event verbs* referring to an achievement or an accomplishment, are most frequently employed and they can appear expressing both, the deontic and the root possibility values. Atelic verbs – these are *activity verbs* and *state verbs* –, seem to be more confined in their employment and rather tend to appear expressing the modal value of root possibility, although – as example (7) with the emotive state verb *wèi* 畏 ‘fear, dread’ shows – they can also occur in predicates indicating a deontic value, here obligation.

## 2.2 *Kě yǐ* 可以 + VP<sub>tr/itr</sub>

### 2.2.1. A syntactic analysis of *yǐ* 以 in *kě yǐ* 可以

Different hypotheses regarding the analysis of *yǐ* 以 in combination with *kě* 可 have been proposed in the linguistic literature:

1. *Yǐ* 以 is analysed as a stranded *preposition* (Wang Li 1989, Liu Li 2000, *Gǔdài Hànyǔ xūcí cídiǎn*, and many others) on a par with *yǔ* 與 which can also appear in combination with *kě* 可;<sup>29</sup> the complement of the proposition is supposed to be deleted;

<sup>27</sup> This interpretation is on a par with the interpretation proposed by Coates (1983: 96) for passive constructions with English CAN.

<sup>28</sup> This has been demonstrated by Coates for the English Modal CAN which, when expressing permission, exclusively, and when expressing root possibility, predominantly chooses a dynamic matrix verb (Coates 1983: 99).

<sup>29</sup> An analysis of *kě yǔ* 可與 which has the same functions as *kě yǐ* 可以 is provided in Liu (2000:107ff).

2. *Yǐ* 以 is analysed as a *conjunction* e.g. (*Gǔdài Hànyǔ xūcí cídiǎn*: 327), connecting *kě* 可 and V2;
3. *Yǐ* 以 is analysed as a *transitive verb* (Pulleyblank, 1995:43) which is passivized following *kě* 可 ;
4. *Kě yǐ* 可 以 is analysed as a *disyllabic verb* (Liu 1994, Peyraube 1999, and others).<sup>30</sup>

According to the examples presented it is perfectly obvious that *yǐ* 以 is more closely connected to *kě* 可 than to the following VP, since *kě* 可 and *yǐ* 以 cannot be separated, but different syntactic elements can appear between *yǐ* 以 and the matrix verb.<sup>31</sup> Additionally, *kě yǐ* 可 以 can have focus over two successive VPs without having to be repeated, which is only possible if it forms a constituent. This syntactic evidence can of course be considered a supporting argument for the hypothesis that *kě yǐ* 可 以 can already be analysed as a disyllabic word. But since *yǐ* 以 can obviously be dropped without changing the valency of the matrix verb, this conclusion is not mandatory. As the preceding discussion has shown, quite parallel examples with and without *yǐ* 以 appear in Han period texts.

Regarding the prepositional analysis of *yǐ* 以: it is certainly based on the function of *yǐ* 以 as an instrumental preposition. This function is evidenced by the following example, quoted from Liu (2000:104):

“(226) 恭儉豈可以聲音笑貌為哉？ 孟子：離婁上<sup>32</sup>

<sup>30</sup> According to Peyraube (1999:42) who quotes Liu to support his hypothesis, *kě yǐ* 可 以 can already be a disyllabic word in Classical Chinese.

<sup>31</sup> But according to Liu (2000:107), a short pause can intervene between *kě* 可 and *yǐ* 以. This does not necessarily argue against the verbal analysis for *yǐ* 以 put forward here.

<sup>32</sup> *Mengzi*, Book IVA, 16. The following translation is quoted from Lau (2003: 163).

gōng jiǎn qǐ kě yǐ shēng yīn xiào mào  
 reverence frugal QUEST can YI sound tone smile appearance  
 wéi zāi  
 make FIN  
 ‘Can an unctuous voice and a smiling countenance pass for  
 respectfulness and frugality?’”

According to Liu this sentence could be altered to the following regular structure with *kě yǐ* 可以, with the complement of the preposition in sentence-initial position (the brackets indicate the empty space left as a trace of the complement):

“(226’) 聲音笑貌豈可以 [ ] 為恭儉哉?” (Liu 2000; 105)

If this analysis were correct, the complement of the preposition in (226) would have been moved to sentence initial position – probably analysable as a topic – and the preposition would have been left without an overt trace as a stranded preposition. If Chinese were a language that allowed prepositional stranding, which has not been convincingly argued for as yet, examples like these could certainly provide some evidence for a prepositional analysis of *yǐ* 以.<sup>33</sup> But at least in Han period Chinese most of the instances of *kě yǐ* 可以 clearly have an agential subject, no instrumental reference for *yǐ* 以 occurs in the sentence and sometimes it is actually only implied in the context,<sup>34</sup> which does not make an analysis of *yǐ* 以

<sup>33</sup> As already mentioned, the prepositional analysis of *yǐ* 以 – also forwarded by one of the anonymous reviewers – has been frequently proposed in the traditional linguistic literature on Classical Chinese. This analysis is based on the assumption that – contrary to Modern Chinese, where it is not permitted – prepositional stranding is in general possible in Classical Chinese, an assumption which has been transmitted in the linguistic literature, but for which sufficient evidence based on general linguistic hypotheses has not yet been provided.

<sup>34</sup> According to Liu (2000:104f) the reference for *yǐ* 以 can appear either in the initial position of the sentence or it can be obvious from the preceding context. Liu

as a preposition very convincing.<sup>35</sup> Historically, the most cogent analysis of 以 seems to be the one advanced by Pulleyblank for Classical Chinese, namely the analysis of 以 as “a transitive verb made passive by the governing adjective” (1995:43).<sup>36</sup> The meaning of 以 as a full verb is ‘take, use’. In the passive construction its full meaning is changed to a general notion of ‘take’.<sup>37</sup> The syntactic structure of the ModP does not provide any evidence against a verbal analysis of 以, nor does the fact that it can occasionally be dropped. This dropping of 以 may have been due to a redundancy felt in those cases where an unambiguously transitive verb followed 可. Additionally, the development of a disyllabic verb seems much more likely with two verbs as its basis, one of them with a very general notion, which underwent semantic bleaching, than with a verb and a stranded preposition following the verb or with a verb and a conjunction.<sup>38</sup>

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(2000:105) analyses it as the subject of the sentence, but maybe an analysis as the topic would be more appropriate.

<sup>35</sup> Actually, sometimes 以 following 可 clearly has to be analysed as a preposition, but then it is always followed by its complement as in the following example:

- (i) 其下之國可以兵從天下 · *Shǐjì 27: 1325*  
 qí xià zhī guó kě yǐ bīng cóng tiānxià  
 Its below SUB state can with soldiers follow empire  
 ‘And the country below can with its soldiers induce the empire to follow it.’

Examples such as this are not very frequent.

<sup>36</sup> Although Pulleyblank does not elaborate on his analysis, it seems to be obvious that, although 以 in general functions as a preposition in Classical and also in Han period Chinese, this particular construction may be regarded as one of the vestiges of a verbal use of 以. Closer investigations of 以 (and maybe some other prepositions in Classical and Han period Chinese) may reveal other constructions in which 以 rather has to be analysed as a verb than as a preposition.

<sup>37</sup> This analysis may also account for the other so-called ‘prepositions’ found in the position of 以, namely 與 and 為, which could accordingly be analysed as transitive verbs with the general notion of ‘take’ and ‘make’ respectively.

<sup>38</sup> The fact that in general a strong obligation cannot be expressed by the combination of 可 and 以 can support the verbal analysis of 以 from a

Accordingly, I propose the following the syntactic analysis of *kě yǐ* 可以 + VP :

NP<sub>i</sub> [<sub>ModP</sub> *kě* [<sub>VP</sub> *yǐ* t<sub>i</sub> ] [<sub>s</sub> *pro*<sub>i</sub> [<sub>VP</sub> Adv [<sub>VP</sub> V NP]]]]

The modal auxiliary verb *kě* 可 selects the transitive verb *yǐ* 以 ‘take, use, assume, etc.’ as its complement which – as all transitive verbs following *kě* 可 – becomes passivized. The subject is the patient of *yǐ* 以 and at the same time the agent (indicated by *pro*) of the purposive clause selected by *kě* 可 and *yǐ* 以 .

### 2.2.2. The semantics of *kě yǐ* 可以

In the following, examples for *kě yǐ* 可以 followed by a non-passivized transitive or an intransitive verb will be presented:

a) *Kě yǐ* 可以 expressing deontic modality (obligation, permission) ‘can = must / may’:

- (14) 晉其可以逆天乎？ Shǐjì: 39; 1653  
 Jìn qí kě yǐ nì tiān hú  
 Jin MOD can YI go-against heaven FIN  
 ‘... could Jin possibly go against heaven (lit: ‘could Jin be taken / used to go against Heaven’)?’

Quite frequently modals with *kě* 可 appear in highly rhetorical contexts, as in the preceding example in a rhetorical question, asking for permission ‘is Jin allowed to go against heaven’, which semantically corresponds to a prohibition: ‘Jin must not go against

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semantic point of view. In many of the instances expressing obligation with a passivized verb following *kě* 可 the speaker, e.g. a minister, a princely adviser, expresses a general obligation for a non-specified agent. But in the construction with *yǐ* 以 with the general notion ‘take’, the agent is present and it would be impolite if the speaker, i.e. a princely adviser, would employ a structure in which his superior, namely, the agent can be directly obliged to perform a situation.

heaven'. In example (14) the agent of the modal, a state, does not explicitly display the feature [+human], but it can be implied, since the name of a state usually also refers metonymically to the leader of the state. Example (15) is semantically quite similar, again permission is demanded in a rhetorical question. Contrastively to example (14) where the matrix verb is transitive, in example (15) it is intransitive, the agent is expressed in the preceding clause. In both rhetorical questions permission is demanded, or rather prohibition is expected, from a higher authority.

- (15) 君在殯而可以樂乎？」 *Shǐjì*: 31; 1458<sup>39</sup>  
 jūn zài bìn ér kě yǐ yuè hú  
 ruler be-at coffin CON can YI music FIN  
 'When the ruler is laid out in the coffin, could we possibly make music then (lit: 'can we be assumed to make music then')?'

In example (16) and (17), permission is given by an explicitly mentioned speaker in an affirmative sentence. In example (16), the agent is expressed in the clause preceding the modal clause and in (17) the agent is not expressed, but it is clearly the addressee of the unspecified individual granting the permission.

- (16) 「君賜臣，觴三行可以罷。」 *Shǐjì*: 39; 1674  
 jūn cì chén, shāng sān xíng kě yǐ bà  
 prince offer minister, wine-cup three go can YI stop  
 'When a prince offers (a wine-cup) to a minister, the cup has to go around three times and then he may stop / he is allowed to stop it (lit: 'he can be taken to stop it').'

- (17) 人或曰：「可以去矣。」 *Shǐjì*: 38; 1609<sup>40</sup>

<sup>39</sup> This sentence is an almost literal quotation from *Zuǒzhuàn*, Xiāng 29 (*Shísānjīng zhùshū* 2008 下).

<sup>40</sup> An identical phrase without the final is found in *Mengzi* IVB, 4, also expressing permission, but both instances are not related.

rén huò yuē: kě yǐ qù yǐ  
 man someone say can YI go FIN  
 ‘Someone said: “You can / may go (lit.: ‘you can be taken to go’).”’

Agent-oriented examples with *kě yǐ* 可以 expressing an obligation seem to be quite infrequent and are sometimes rather problematic as can be evidenced by the following example:

- (18) 「事已急矣，請為王誑楚為王，王可以閒出。」  
 shì yǐ jí yǐ, qǐng wèi wáng guàng Chǔ wéi  
 affair already urgent FIN, ask for king deceive Chu be  
 wáng, wáng kě yǐ jiàn chū  
 king, king can YI meantime go-out  
 ‘The situation is already very urgent, and so I ask you to let me deceive Chu on your behalf in taking your place as the king, and you have to get out in the meantime / so that you can get out in the meantime (lit.: ‘you can be assumed to go out in the meantime’).’ *Shǐjì*: 7; 326<sup>41</sup>

This is one of the very few examples which can possibly be analysed as expressing an obligation. But here, as with most of the examples, an interpretation as expressing root possibility seems to be more likely. One of the very few unambiguous examples for root modality, obligation ‘can = must’, is the following:

- (19) 弟子曰：「可以速矣。」 *Shǐjì*: 47; 1921<sup>42</sup>

<sup>41</sup> A more concise version of this sentence appears in *Hànshū*: 1; 40.

<sup>42</sup> This example refers to *Mengzi* IIA, 2, but in *Mengzi*, the modal phrase does not express obligation, but root possibility:

- (i) 可以久則久 · 可以速則速 ·  
 kě yǐ jiǔ zé jiǔ, kě yǐ sù zé sù  
 can YI long then long, can YI hasten then hasten



dì zǐ yuē: kě yǐ sù yǐ  
 disciple say : can YI hasten FIN  
 ‘His disciples said: “You must hasten (lit.: you can be taken /  
 used / assumed to hasten)!”’

As in example (17), the agent is not expressed, but it is clearly the addressee of the speech and corresponds to a second person pronoun: the addressee, Kongzi, is urged by his disciples to flee, since the Marshall Huan Tui has already pulled out his sword to kill him. In both examples (18) and (19) the verb is intransitive.

b) *Kě yǐ* 可以 expressing root possibility ‘can’:

(20) 及其鋒而用之，可以有大功。 . . . *Shǐjì*: 8: 367  
 jí qí fēng ér yòng zhī, kě yǐ yǒu dà gōng  
 reach its tip-of-weapon CON use OBJ, can YI have great success  
 ‘If you take up your weapon and use it, you can have great  
 success (lit.: ‘you can be taken to have great success’).’

In this example strong root possibility (certainty) is expressed. The agent is not present in the surface structure, but from the context it is evidently the addressee of the speech and accordingly it corresponds to a second person pronoun. In the following examples (21) and (22) the root possibility value is less strong than in (20); in example (21), the agent, *wáng* 王 ‘king’, in this example the addressee of the speech, ‘Your Majesty’, is explicitly mentioned. In example (22) the agent, again the addressee of the speech, is not visible in the surface structure, but as in example (20) it evidently corresponds to a second person pronoun. Syntactically, these examples do not differ from those expressing deontic modality indicating permission.

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‘... would delay his departure or hasten it, all according to circumstances.’  
 The translation is quoted from Lau (2003:65).

- (21) 東方有大變，然後王可以多割得地也。 *Shǐjì*: 70; 2299  
 dōng fāng yǒu dà biàn, rán hòu wáng kě yǐ duō  
 east region have great change, afterwards king can YI many  
 gē dé dì yě  
 cut get land FIN  
 ‘If there is a great revolt in the east, Your Majesty can seize a lot of land and take it [into your possession] (lit: ‘Your Majesty can be taken to cut land greatly and take it’).’
- (22) 今魏氏方疑，可以少割收也。 *Shǐjì*: 72; 2326<sup>43</sup>  
 jīn Wèi shì fāng yí, kě yǐ shǎo gē shōu yě  
 now Wei family just doubt, can YI little cut confiscate FIN  
 ‘At present the Wei family is in doubt [about what to do] and you can seize and confiscate a bit of their territory (lit: ‘you can be taken to cut land to a small extent and confiscate their territory’).’

Contrary to the preceding examples, in the following example (23) the agent – which does not surface in the clause – displays the feature [+abstract]. The modal auxiliary *kě yǐ* 可以 has scope over both VPs, which can provide some evidence for the close connection between *kě* 可 and *yǐ* 以.

- (23) 乃兩便，可以上繼禹功，下除民疾。 *Hànshū*: 27; 1697  
 nǎi liǎng biàn, kě yǐ shàng jì Yǔ gōng, xià  
 then both convenient, can YI above continue Yu success, below  
 chú mín jí  
 remove people illness  
 ‘... then it is twice convenient, on the one hand, it can continue Yu’s success and on the other hand, it can remove the people’s sickness (lit.: ‘above, it can be taken to continue

<sup>43</sup> This instance is a quotation of *Zhànguó cè* 310/157/29.

Yu's success and below, it can be taken to remove the people's sickness').'

In the following example (24), the enabling conditions for the situation supposed to be performed by the agent, who surfaces in one of the preceding clauses, are internal to the agent and not – as in the preceding examples – external social conditions. Examples like these clearly show that there is a connection between root possibility and *ability modality*.

- (24) 「臣幸有老母，家貧，客游以為狗屠，可以旦夕得甘毳以養親。」  
 chén xìng yǒu lǎo mǔ, jiā pín, kè yóu  
 subject lucky have old mother, family poor, wander-around  
 yǐ wéi gǒu tú, kě yǐ dàn xī dé gān  
 become dog butcher, can YI morning evening get sweet  
 cuì yǐ yǎng qīn  
 delicious in-order-to feed relative  
 'Luckily I still have my old mother, but my family is poor and I had to wander around and work as a dog butcher, and so I can get sweet and savoury food every day to feed her (lit.: 'so I can be taken / used / assumed to get sweet and savoury food every day to feed her').' *Shiji*: 86; 2522

c) *Kě yǐ* 可以 expressing epistemic modality:

As with *kě* 可 and a passivized verb, examples with *kě yǐ* 可以 unambiguously expressing epistemic modality are extremely infrequent. Only in examples such as the following two does a genuine epistemic interpretation seem to be possible, since both can be analysed as expressing evidential modality and evidentials belong to the category of epistemic modality (see Traugott, 1989:32 quoting Palmer). In example (25), the modal phrase is embedded in a complement clause following the verb *wén* 聞 'hear' which clearly

licences an evidential interpretation. But still, a root possibility interpretation cannot be excluded completely, since the possibility value expressed depends on external social conditions. In example (26), the modal phrase is embedded in a complement clause of the word *yán* 言 ‘say’, and in this example, the facts related in the indirect speech following *yán* 言 are based on personal experience and can accordingly be regarded as expressing evidential modality. The speaker and the unspecified agent of the modal phrase are not identical.

- (25) 臣聞之，圖王不王，其敝可以伯。 *Shǐjì*: 41; 1749  
 chén wén zhī, tú wàng bù wàng, qí bì kě yǐ bó  
 I hear OBJ, plan king NEG king, its bad can YI earl  
 ‘I have heard it said, if it had been planned that someone become king and he does not become king, then he can at least become a hegemonial ruler (lit.: ‘then he can at least be taken to become a hegemonial ruler’).’
- (26) 及張騫言可以通大夏，乃復事西南夷。 *Shǐjì*: 123; 3166  
 jí Zhāng Qiān yán kě yǐ tōng Dàxià,  
 as-soon-as Zhang Qian say can YI go-through Bactria,  
 nǎi fù shì xī nán yí  
 then again deal-with west south tribe  
 ‘After Zhang Qian had told that it was possible to get through to Bactria, they dealt again with the south-western tribes (lit.: After Zhang Qian had told that it can be assumed to get through to Bactria).’

The overall situation of *kě yǐ* 可以 with regard to the modal values expressed does not differ considerably from the situation of *kě* 可 except for the fact that the modal value of obligation is apparently quite rare. This may be due to the fact that the speaker in most of the cases cannot be supposed to have sufficient power over the agent to oblige him in a direct way to perform the situation expressed by the predicate. Consequently, if a strong obligation has

to be expressed, the passive construction with *kě* 可 is pragmatically more appropriate, since it is, as a construction that does not presuppose the willingness of the agent, the more polite construction. Some of the instances in *Shiji* are quotations from Classical texts, but similar phrases with identical semantic implications are also attested in Han period texts without a dependence on the Classical texts. The majority of examples exhibits root possibility; epistemic values are extremely infrequent and confined to evidential modality. The agent of the matrix verb is either present, or it can be deduced from the context. It can display the features [+human] and [-human], including the feature [+abstract]. Both telic and atelic verbs can appear as matrix verbs, but the predominant number of verbs is telic, indicating one particular event which is expected to take place in the future.

### 2.3 *Kě* 可 + VP<sub>tr/itr</sub>

In this section examples with a non-passivized transitive or intransitive verb following *kě* 可 without the addition of *yǐ* 以 will be discussed. During the Han period, the quite stringent rule of Classical Chinese that a verb following *kě* 可 has to be analysed as a passive weakens considerably. Accordingly, in Han period texts a lot of instances appear with a transitive verb followed by an object or with an intransitive verb without any secondary transitivization following *kě* 可. Here again, examples will be presented according to their modal value.

a) *Kě* 可 expressing deontic modality (obligation, permission) ‘can = must, may’:

- (27) 必受命於戶，則可高其戶耳，誰能至者! *Shiji*: 75; 2352  
 bì shòu mìng yú hù, zé kě gāo qí hù ěr,  
 certainly receive fate PREP door, then can heighten its door FIN,  
 shuí néng zhì zhī

who can reach OBJ

‘But if his destiny must be determined by the [height of the] doorframe (lit: ‘if he must get his destiny from the door), he just has to make the doorframe higher, and who could reach it then?’

In this example a weak obligation, one of the agent-oriented modalities is expressed. The [+human] agent is not explicitly specified, but it is obvious from the context. The matrix verb is transitive while it is intransitive in the following example.

- (28) 須臾，梁眴籍曰：「可行矣！」 *Shǐjì*: 7; 297  
 xūyú, Liáng shùn Jí yuē: kě xíng yǐ  
 after-a-while, Liang wink Ji say: can go FIN  
 ‘After a while, Liang winked at Ji and said: “You may proceed!”’

In example (28) the speaker-oriented modality of permission ‘can = may’ is expressed. The permission is granted by the speaker, the agent is not specified, but it evidently corresponds to a second person pronoun as in the following example which expresses a weak obligation,<sup>44</sup> maybe also implying an evaluative notion.

- (29) 可奔他國·」 *Shǐjì*:39; 1645  
 kě bēn tuō guó  
 can flee other land  
 ‘You should flee to another country.’

b) *Kě* 可 expressing root possibility ‘can’:

- (30) 請令萊人為樂，因執魯君，可得志·」 *Shǐjì*: 32;1505  
 qǐng líng Lái rén wéi yuè, yīn zhí Lǔ jūn, kě

<sup>44</sup> One of the anonymous reviewers proposes the term ‘advisory’ for the kind of weak obligation, a term which is certainly appropriate for this example.

demand make Lai people make music, so seize Lu ruler, can  
 dé zhì  
 get intention  
 ‘And I ask you to order the people of Lai to make music, and  
 then you will seize the ruler of Lu, and you can attain your  
 aim.’

- (31) 「因其饑伐之，可有大功。」 *Shǐjì*: 5; 188  
 yīn qí jī fá zhí, kě yǒu dà gōng  
 rely its famine attack OBJ, can have great success  
 ‘If we take advantage of their famine and attack, we can have  
 great success.’

Both examples (30) and (31) clearly express root possibility; in  
 example (31) the strong root possibility value of certainty is  
 expressed without any additional marking: ‘You will certainly  
 have ...’ The modal phrase in example (31) is – except for the lack  
 of *yǐ* 以 – syntactically and semantically identical with the modal  
 phrase in example (20). In both examples (30) and (31) the agent –  
 although not visible in the surface structure – clearly displays the  
 feature [+human] and corresponds to a second person pronoun. The  
 matrix verb is transitive. In the following example (32) with an  
 intransitive verb, the agent is again [+human] and, as is apparent  
 from the preceding context, it corresponds to a first person pronoun.

- (32) 「馬邑長吏已死，可急來。」 *Shǐjì*: 108; 2861  
 mǎyì zhǎng lì yǐ sǐ, kě jí lái  
 mayi head inspector already dead, can quick come  
 ‘The high officials of Mayi are already dead, now we can  
 intrude quickly.’

Examples (30)–(32) unambiguously express root possibility,  
 whereas the following example (33) has to be analysed as including

an evaluative notion, which – as already mentioned – is usually categorised as a root modal value.

- (33) 「臣愚以為可賜爵關內侯，食邑三百戶，勿令典事。  
 chén yú yī wéi kě cì jué guān nèi hóu,  
 I stupid assume can bestow rank pass inner marquis,  
 shíyì sān bǎi hù, wù líng diǎn shì  
 fief three hundred household, NEG let manage affair  
 ‘I am stupid, but I assume that you can / should bestow upon  
 him a position and make him the marquis of Guannei, with a  
 fief of three hundred households, in order not to let him  
 participate in the government.’ *Hànshū* 36: 1947

In this example, an interpretation of the modal as expressing an epistemic modal value cannot be completely excluded, but since the assumptions of the speaker result from circumstances revealed in the preceding narrative and are supposed to forward an evaluation and recommendation, the evaluative interpretation is more feasible. Altogether, in the construction *kě* 可 + VP<sub>tr/itr</sub>, both deontic values, the agent-oriented value of obligation and the speaker-oriented value of permission, but also root possibility values are attested. One of the examples given additionally implies an evaluative notion. The predominant number of verbs is telic, but atelic verbs are also permitted in this construction.

#### 2.4 Concluding remarks on *kě* 可 and *kě yǐ* 可以

As the following table shows, the distribution regarding the modal values is almost identical independently of the syntactic structure, namely the insertion or non insertion of *yǐ* 以. But whereas in the Classical structure with *kě* 可: *kě* 可 V<sub>pass</sub>, the agent-oriented deontic value of *obligation* regularly appears, it is almost excluded from the structures with *kě yǐ* 可以. This is apparently due to the presence or absence of the agent in the respective



structures. Occasionally the exact deontic value of the modal is difficult to determine, since both *kě* 可 and *kě yǐ* 可 以 are frequently employed in highly rhetorical contexts, e.g. in rhetorical questions, in which case their modal value has to be deduced from the corresponding affirmative or negative sentence. In all three different structures, unambiguously root modal values expressing strong or weak root possibility are most frequent whereas those expressing the agent-oriented value of obligation and the speaker-oriented value of permission or the deontic value of prohibition respectively are comparably infrequent. Occasionally, both *kě* 可 and *kě yǐ* 可 以 can express an evaluative modal value which – according to the linguistic approach adopted here – has been considered a root modal value, or – even more infrequently – they can express an evidential value which is epistemic. The epistemic values of possibility, probability and certainty are very difficult to confirm during this period. Accordingly, no great differences can be observed in comparison to the situation in Classical Chinese as it had been depicted by Peyraube (1999). The examples presented by Peyraube for epistemic modality (Peyraube 1999:39 and 43) express the – in Han period Chinese still marginal – modal value of evidential modality (1999:39, example 20) and – according to my analysis – the modal value of root possibility (1999:43, example 29). As far as can be deduced from the presented examples, in the case of *kě* 可 root possibility apparently does not develop from ability modality which is the path of development proposed by Bybee *et al.* (1994:192); root possibility rather seems to be one of the core meanings of *kě* 可. Both agent oriented and speaker oriented values are present with *kě* 可 and *kě yǐ* 可 以 with neither of them evidently being derived from the other. Apparently, the path of grammaticalization proposed for English ‘can’ is not immediately comparable to that of *kě* 可 and *kě yǐ* 可 以. Epistemic values in general are very rare in Han period Chinese and they are confined to evidential modality which is already attested in Classical texts as has been shown by Peyraube (1999:39). Evaluative notions are also

already attested, but they are apparently as infrequent as in Classical Chinese.

	<i>Kě</i> 可 + VP <sub>pass</sub>	<i>Kě yǐ</i> 可以 + VP <sub>tr/itr</sub>	<i>Kě</i> 可 + VP <sub>tr/itr</sub>
Deontic: agent-oriented (obligation)	+ (obligation)	+ ? (obligation) <sup>45</sup>	+ (obligation)
Deontic: speaker-oriented (permission)	+ (permission)	+ (permission, prohibition)	+ (permission)
Root possibility: agent-oriented	+ (strong, weak)	+ (strong, weak)	+ (strong, weak)
Root: evaluative	? evaluative	? evaluative	? evaluative
Epistemic: Evidential	-	? evidential	? evidential

Table 2.

### 3. THE MODAL AUXILIARY *Kě* 可 / *Kě yǐ* 可以 IN COMBINATION WITH NEGATIVES

In Classical and Han period Chinese, the modally neutral negative *bù* 不 ‘not’, the aspectual and modal negative *wèi* 未 ‘not yet’, ‘not at all, never’, and the modal negative *wú* 無 ‘not’ can appear to modify the modal predicate. Although the negation marker *wèi* 未 has predominantly been analysed as an aspectual negative, it has been pointed out (Harbsmeier 1991, Meisterernst, 2008) that it can also express modal notions depending on the semantics of the verb. In the following discussion, the syntactic and semantic constraints of a negated modal predicate will be analysed with particular regard to the position of the negation marker in relation to the modal auxiliary verb and to possible semantic

<sup>45</sup> The modal value of obligation is extremely rare. This statement can be supported by Liu (1994: 384) who does not give any examples which express obligation for *kě yǐ* 可以 + V.

differences evoked by the employment of a neutral or a modal negation marker. In the examples presented in the following section the different syntactic structures involved with the modal auxiliary *kě* 可 will not be distinguished since they all can, to the same extent, express different root modal values respectively whereas epistemic modal values hardly ever occur.

### 3.1. Negation with the modally neutral negative *bù* 不

The most important neutral negative – and the only one of relevance in the texts under consideration – is *bù* 不 (*\*pət*, *\*put*)<sup>46</sup> which as a neutral negative simply denies the situation the verb refers to independently of the mode or the aspect of the verb. Although historically this negative was typical for intransitive verbal predicates establishing a descriptive relation between the subject and the predicate,<sup>47</sup> in Classical and Han period Chinese it occurs with different kinds of verbal predicates. Two different positions are available for the negative *bù* 不 : 1. preceding the auxiliary *kě* 可 and 2. preceding V2. Very frequent are instances of double negation, with the negative *bù* 不 both preceding the auxiliary and preceding V2, resulting in the expression of a strong deontic modality.

#### 3.1.1. The negative *bù* 不 in the structure *bù* 不 + *kě* 可 (以) + VP: NEG V<sub>mod</sub> VP

Instances with a negative marker preceding *kě* 可 in general express the root modal (deontic) value of prohibition. They can refer to both an agent-oriented modality corresponding to an

<sup>46</sup> All Middle Chinese reconstructions are taken from Pulleyblank (1991).

<sup>47</sup> Djamouri (1991: 15) remarks: “BU apparaît essentiellement dans des énoncés ‘attributifs’, s’appliquant soit à des verbes proprement intransitifs, soit à des caractérisant traduisant une propriété descriptive, en position prédicative, ...”.

obligation in the affirmative: ‘must’, or a speaker-oriented modality, corresponding to permission in the affirmative: ‘may’.

a) *Bù* 不 + *kě* 可 (以) + VP expressing deontic modality, prohibition ‘cannot = must not’:

- (34) 以吾從大夫之後，不可以徒行。』 *Shǐjì*: 67; 2210  
 yǐ wú cóng dàifū zhī hòu, bù kě yǐ tú xíng  
 because I follow dignitary SUB after, NEG can YI on-foot go  
 ‘... since I follow the grand masters, I cannot / may not go on foot.’
- (35) 故君子不可須臾離禮，須臾離禮則暴慢之行窮外；  
 gù jūnzǐ bù kě xūyú lí lǐ,  
 therefore gentleman NEG can for-a-moment separate rite,  
 xūyú lí lǐ zé bào màn zhī  
 for-a-moment separate rite then cruel negligent SUB  
 xìng qióng wài;  
 behaviour exhaust outside;  
 ‘Therefore the gentleman must not even for a while neglect the rites, if he neglects the rites even for a while, then cruelty and negligence will be everywhere outside [from where the rites enter].’ *Shǐjì*: 24; 1237

In both examples the deontic modality of prohibition is expressed, corresponding in the affirmative to the agent-oriented modality of obligation. The matrix verb is transitive, in example (34) modally modified by *kě yǐ* 可以 and in example (35) by *kě* 可 alone. The agent in both examples is expressed and displays the feature [+human] and an adverbial phrase precedes the matrix verb. Contrastively, in the following example (36), which exhibits the same modal value as (34) and (35), the verb is passivized, and the patient displays the feature [-human].

- (36) 夷吾所居國國重，不可失也。·」 *Shǐjì*: 32; 1486  
 Yíwú suǒ jū guó guó zhòng, bù kě shī yě  
 Yiwu REL live country country important, NEG can neglect FIN  
 ‘When Yiwu lives in a country, this country becomes important and must not be neglected.’

Examples (34)–(36) all exhibit agent-oriented modality and correspond to an obligation, whereas the determination of the following examples (37)–(39) as expressing agent- or speaker-oriented modality seems to be less straightforward.

- (37) 「雖急不可以驅，柰何棄之？」 *Shǐjì*: 7; 322  
 suī jí bù kě yǐ qū, nài hé qì zhī  
 even-if urgent NEG can YI drive forward, what-about abandon OBJ  
 ‘However urgent our situation be, we cannot / must not hurry [too much]; how could we possibly abandon them (the children) / and there is no way of abandoning the children?’
- (38) 晉不可假道也，是且滅虞。 *Shǐjì*: 39; 1647  
 jìn bù kě jiǎ dào yě, shì qiě miè Yú  
 jin NEG can lend way FIN, this FUT/MOD destroy Yu  
 ‘Jin must / may not be given permission to pass [through our territory], this would certainly destroy Yu.’
- (39) 秦虎狼，不可信，... *Shǐjì*: 40; 1728  
 Qín hǔ láng, bù kě xìn  
 Qin tiger wolf, NEG can trust  
 ‘[The king of] Qin is like a tiger or a wolf; he cannot / must not be trusted.’

All three instances clearly express the deontic modality of prohibition, and although an agent-oriented interpretation corresponding to an obligation in the affirmative seems to be quite feasible, an interpretation of the modal value as corresponding to the speaker-oriented modality of permission cannot be excluded;

particularly in example (39).<sup>48</sup> In example (37) the verb following *kě yǐ* 可以 remains intransitive, whereas in (38) the ditransitive verb *jiǎ* 假 ‘lend someone something’. and (39) the transitive verb *xìn* 信 ‘trust someone’ are passivized.

Examples (40) and (41) evidently indicate a speaker-oriented prohibition corresponding to permission in the supposed affirmative. In example (40) the transitive verb is passivized whereas in (41) a transitive verb follows *kě yǐ* 可以. Both the patient in (40) and the agent in (41) display the feature [+human]

- (40) 忍人也，不可立也。』 *Shǐjì*: 40; 1698<sup>49</sup>  
 rěn rén yě, bù kě lì yě  
 relentless man FIN, NEG can establish FIN  
 ‘He is a relentless person and cannot / must not be established [as heir apparent].’
- (41) 師在制命而已，稟命則不威，專命則不孝，故君之嗣適不可以帥師。  
 shī zài zhì mìng ér yǐ, bǐn mìng zé bù wēi,  
 army be-at decide order CON finish, receive order then NEG  
 wēi, zhuān mìng zé bù xiào, gù jūn zhī  
 authoritative, claim order then NEG filial, therefore ruler SUB  
 sì dí bù kě yǐ shuò shī  
 offspring son NEG can YI lead army  
 ‘In the army it is all just about issuing orders; but if someone has to accept orders, then he is not authoritative, and if he gives orders himself, then he is not filial; therefore the son of a ruler cannot / must not lead an army.’ *Shǐjì*: 39; 1643

<sup>48</sup> *Kě xìn* 可信 ‘can / may be trusted’ is one of the more frequently occurring combinations of *kě* 可 with a state verb in the *Shǐjì* which occasionally licences an evaluative analysis. Another example of the combination *kě* 可 + state verb involving an evaluative notion has been presented above (example (13)).

<sup>49</sup> This instance is a quotation from *Zuǒzhuàn*, *Wén* 1 (*Shísānjīng zhùshū* 1837 中).

In the following two examples (42) and (43) both interpretations of *kě* 可, expressing deontic modality or expressing root possibility, are possible. The matrix verb is transitive and the agent, specified in (42) but non-specified in (43), is [+human].

- (42) 「臣聞敗軍之將，不可以言勇， *Shǐjì*: 92; 2617  
 chén wén bài jūn zhī jiàng, bù kě yǐ yán yǒng,  
 subject hear defeat army SUB general, NEG can YI speak bravery,  
 亡國之大夫，不可以圖存。  
 wáng guó zhī dàifū, bù kě yǐ tú cún  
 perish land SUB dignitary, NEG can YI plan exist  
 ‘I have heard that the general of a defeated army may not  
 speak about bravery and the dignitaries of a perished country  
may not devise plans for maintenance.’
- (43) 樂終不可以語，不可以道古 *Shǐjì*: 24; 1222<sup>50</sup>  
 yuè zhōng bù kě yǐ yǔ, bù kě yǐ dào gǔ  
 music finally NEG can YI discuss, NEG can YI talk antiquity  
 ‘When the music is finished one may not discuss, nor talk  
 about antiquity.’

b) *Bù* 不 + *kě* 可 (以) + VP expressing root possibility ‘cannot, could not’:

<sup>50</sup> This instance is a quotation from *Lǐjì, Yuèjì* (*Shísānjīng zhùshū* 1540 中).

- (44) 河決不可復壅，魚爛不可復全。 *Shǐjì*: 6; 292  
 hé jué bù kě fù yǒng, yú làn bù  
 river burst NEG can again block, fish overcook NEG  
 kě fù quán  
 can again complete  
 ‘[It was as if] a river had burst its banks and these could not  
 be repaired again and fish were overcooked and could not be  
 made whole again.’

In this example, *kě* 可 apparently expresses root possibility; no external circumstances are present as enabling conditions for the completion of the situation referred to by the matrix verb. The verb is passivized. The following example (45) is structurally quite similar to example (44).

- (45) 妾切痛死者不可復生而刑者不可復續，  
 qiè qiē tòng sǐ zhě bù kě fù shēng ér xíng  
 I sharp pain die NOM NEG can again live CON punish  
 zhě bù kě fù xù  
 NOM NEG can again continue  
 ‘I feel a sharp pain because the dead cannot be made alive again  
 and those who have lost extremities by punishment (lit.: have  
 been punished) cannot have them replaced.’ *Shǐjì*: 105; 2795
- (46) 頃襄王橫元年，秦要懷王不可得地，... *Shǐjì*: 40; 1729  
 Qǐng Xiāng wáng Héng yuán nián, Qín yāo Huái wáng  
 Qing Xiang king Heng first year, Qin press Huai king  
 bù kě dé dì  
 NEG can get country  
 ‘In the first year of Heng, king Qing-Xiang, Qin put a lot of  
 pressure on king Huai, but could not get the country.’

In this example, too, root possibility, maybe including a notion of ability, is expressed. The exact circumstances which prevent the



situation from being completed are not determined. The specified agent, a state, can display both, the features [-human] and [+human], since the name of a state can always also metonymically refer to the ruler of the state. The matrix verb following *kě* 可 is transitive.

Apparently all instances of *kě* (*yǐ*) 可 (以) negated by *bù* 不, the modally neutral negative, express root modal values. Negated by *bù* 不, the unambiguously deontic values in a narrower sense are more frequently represented than the root possibility values, in contrast to the same construction in the affirmative which predominantly represents root possibility values and less frequently deontic values in a narrower sense. Most of the examples indicate a clear prohibition which can either be agent-oriented, namely, corresponding to an obligation in the respective affirmative, or speaker-oriented, namely, corresponding to permission in the affirmative which agrees well with Peyraube's analysis of the construction *bù kě* 不可 VP.<sup>51</sup> With the negated modal auxiliary *kě* (*yǐ*) 可 (以) it can occasionally be difficult to draw a clear line between the agent-oriented and the speaker-oriented values.

3.1.2. The negative *bù* 不 in the structure *bù* 不 + *kě* 可 (以) + *bù* 不 VP: NEG V<sub>mod</sub> NEG VP

Double negation, namely, a negative marker preceding *kě* 可 and a negative marker preceding the matrix verb always expresses strong deontic modality, usually a strong obligation 'must', and in contrast to the affirmative construction it never expresses root possibility.

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<sup>51</sup> Peyraube (1999: 40) "Of these four fundamental meanings of the auxiliary *kě*, the first one (expression of a permission, *i.e.* deontic modality) is the most common one, especially this is always the meaning expressed by the negative form *bu kě* VP, ..."

- (47) 故有國者不可以不知春秋， *Shǐjì*: 130; 3298  
 gù yǒu guó zhě bù kě yǐ bù zhī chūn qiū  
 therefore have state NOM NEG can YI NEG know spring autumn  
 ‘Therefore, those who have a state / are responsible for a state must know the Spring-and-Autumn-Annals, ...’
- (48) 大將軍尊重益貴，君不可以不拜。』 *Shǐjì*: 120; 3108  
 dà jiàngjūn zūn zhòng yì guì, jūn bù  
 great general venerable important more honour, prince NEG  
 kě yǐ bù bài  
 can YI NEG bow  
 ‘The great general is very important and is receiving more and more honours, you must show him your reverence.’

In examples (47) and (48) the agent of the strong obligation is specified and displays the feature [+human]. The title *jūn* 君 ‘prince’ refers to the addressee and corresponds to a polite second person pronoun. The verb is transitive in (47) and intransitive in (48). In the following example the agent is not specified, but it is quite obvious from the context that it is the addressee and corresponds to a second person pronoun. Between the second negation marker and the matrix verb an adverb and the reflexive pronoun *zì* 自 ‘self’ are inserted.

- (49) 「旦日不可不蚤自來謝項王。』 *Shǐjì*: 7; 312  
 dàn rì bù kě bù zǎo zì lái xiè Xiàng wáng  
 morning day NEG can NEG early self come apologize Xiang king  
 ‘You must come yourself early tomorrow morning and apologize to king Xiang.’

3.1.3 The negative *bù* 不 in the structure *kě* 可 (以) + *bù* 不 VP:  
V<sub>mod</sub> NEG VP

Whereas examples (47) to (49) all exhibit double negation, in the examples (50) and (51) only the matrix VP is negated in a rhetorical question. The structure *kě* 可 NEG VP mainly appears in rhetorical questions as has already been stated for Classical Chinese by Liu (2000:94). Both examples clearly express the deontic modal value of obligation ‘must not?’ The agent in both instances displays the feature [+human], the verb is an intransitive state verb.

- (50) 勢之於人也，可不慎與？ *Shǐjì*: 40; 1737  
Shì zhī yú rén yě, kě bù shèn yú  
Influence SUB at man FIN, can NEG careful FIN  
‘And in using one’s power with regard to human beings,  
must one not be careful / one must be careful!?’

- (51) 子孫驕奢忘之，以亡其家，為人子可不慎乎！  
zǐ sūn jiāo shē wàng zhī, yǐ wáng  
son grandson arrogant extravagant forget OBJ, so forget  
qí jiā, wéi rén zǐ kě bù shèn hú  
its family, be man son can NEG careful FIN  
‘The sons and grandsons are arrogant and extravagant and forget them (= the achievements of their ancestors) and so they ruin their families; [therefore], if one is someone’s son, is it then permissible not to be careful? = one has to be careful.’ *Shǐjì*: 33; 1520

3.2. Negation with the aspectual-modal negative *wèi* 未 in the structure: *wèi* 未 + *kě* 可 + VP: NEG V<sub>mod</sub> VP

According to most grammars, the basic notion of *wèi* 未 is to denote a situation in the past which has not yet started or come to

its completion at reference time, usually glossed by *méiyǒu* 沒有.<sup>52</sup> In this function as an aspectual negation marker *wèi* 未 selects, similar to *méiyǒu* 沒有 in Modern Mandarin, an event as its complement.<sup>53</sup> But for some occurrences, particularly in combination with modal verbs such as *néng* 能 ‘can, be able to’, *kě* 可 ‘can’, and *zú* 足 ‘suffice’ it is glossed by *bù* 不 and often denotes a situation which will never be completed or occur.<sup>54</sup> In these cases it can imply a tenseless categorical judgement<sup>55</sup> which to a certain extent conforms with Harbsmeier’s (1981) analysis, who demonstrates that *wèi* 未 can adopt a logical function besides its so-called temporal or aspectual functions.<sup>56</sup> As a modal negative, *wèi* 未 predominantly expresses strong affirmative modality. Instances with the negative *wèi* preceding *kě* 可 are quite frequent<sup>57</sup>, but the negative is confined to the auxiliary verb, no instances of *wèi* 未 preceding V2 exist.

a) *Wèi* 未 expressing deontic modality ‘cannot = must not’:

In examples (52) and (53) the speaker-oriented deontic value of prohibition is expressed which would correspond to permission in the respective affirmative. They both refer to a context in which the

<sup>52</sup> A comprehensive analysis of *wèi* 未 has been provided in Meisterernst (2008).

<sup>53</sup> The same has been shown for *méiyǒu* 沒有 in a comprehensive study by Lin (2003).

<sup>54</sup> Examples for this structure can be found e.g. in He *et al.* (1985) and in *Gǔdài Hànyǔ xūcí cídiǎn* (2000).

<sup>55</sup> A similar analysis is provided in Dobson (1959: 43) who describes the difference between *bù* 不 and *wèi* 未 as follows: “The difference is between particular denial (an envisaged instance), and universal denial (all envisaged instances).” Accordingly, *wèi* 未 in these cases could be considered a universal negative.

<sup>56</sup> Harbsmeier (1981:42): “In this section I want to demonstrate that there also is a non-temporal ‘gnomic’ use of *wei* which is naturally related to but clearly distinct from the basic *temporal* ‘not yet’. In this ‘gnomic’ sense, *wei* comes to mean ‘not necessarily’, ‘not quite’, etc. like the non-temporal ‘still’ ... Gnostic *wei* will be seen to refer to a ‘logical’ rather than a temporal progression.”

<sup>57</sup> A detailed analysis of the negative marker *wèi* 未 also in combination with modal verbs has been presented in Meisterernst (2008).

prognostication of an oracle has to be considered and they both include an aspectual notion due to the situation type of the matrix verb. Both examples representing a deontic notion are quotations from Classical texts. Genuine Han period examples negated by *wèi* 未 expressing a deontic modal value are very difficult to find.

(52) 未可以戚我先王 · *Shǐjì*: 33;  
1516<sup>58</sup>

wèi kě yǐ qī wǒ xiān wáng  
NEG can YI approach I former king  
'I must not approach our former kings (yet).'

(53) 鼎之輕重，未可問也 · *Shǐjì*: 40;  
1700<sup>59</sup>

dǐng zhī qīng zhòng, wèi kě wèn yě  
tripod SUB light heavy, NEG can ask FIN  
'One must not ask (yet) about the heaviness / importance of the tripods.'

b) *Wèi* 未 expressing root possibility 'can':

In the following example *kě* 可 apparently expresses root possibility, external circumstances still deny the non-specified agent the expected knowledge expressed by the verb *zhī* 知 'know'. The matrix verb is passivized and the patient has the feature [+abstract]. According to the semantics of the verb *zhī* 知 'know' a possible evidential notion of the modal cannot be completely excluded; though in the negated structure, an interpretation as expressing root possibility is certainly more conclusive. Examples of the verb *zhī* 知 negated by *wèi* 未 are comparably frequent.

<sup>58</sup> This instance is a quotation from *Shàngshū, Zhōushū, Jīnténg* 尚書 · 周書 · 金縢 (*Shísānjīng zhùshū* 196 上).

<sup>59</sup> This instance is again a quotation from *Zuǒzhuàn, Xuān 3* (*Shísānjīng zhùshū* 1868 下).

- (54) 客謂相國曰：「秦之輕重未可知也。」 *Shiji*: 4; 168<sup>60</sup>  
 kè wèi xiàng guó yuē: Qín zhī qīng zhòng wèi kě  
 guest mean chancellor state say. Qin SUB light heavy NEG can  
 zhī yě  
 know FIN  
 ‘The guest told the chancellor: “Whether Qin takes you  
 lightly or seriously cannot be known (yet).”’

Altogether, most of the examples with *wèi* 未 clearly involve a temporal interpretation and express deontic modality, namely, a prohibition and almost all of them express the modal value of root possibility.

### 3.3. Negation with the modal negative *wú* 無 / 毋 in the structure *kě* 可 + *wú* 無 + VP: V<sub>mod</sub> NEG VP

The most important modal negation marker and the only one relevant in this context is *wú* (\**mu*ǎ) 無 with its variants *wú* 毋 and *wú* 无 which originally represented two distinct morphemes: 1. a modal negative, properly written *wú* 毋, and 2. a verb meaning ‘not have’, properly written *wú* 無 (or *wú* 无).<sup>61</sup> As a modal negative it can express either root modal values or epistemic modal values.<sup>62</sup> In the texts under consideration, most examples with the combination *wú kě* 無可 are followed by *zhě* 者. In these instances, *wú* 無 has to be analysed as verbal ‘not have’. The only instances relevant here are those with the structure *kě* 可 NEG VP. Whereas, as already

<sup>60</sup> *Wèi kě zhī* 未可知 is a very common phrase in Classical and Han period Chinese. It occurs frequently in the Classical literature.

<sup>61</sup> Regarding these variants Pulleyblank (1995: 107) notes that “The morphemes were already homophonous in late Zhou times and are confused in many texts such as the *Mencius*, but were very likely pronounced differently at an early period.”

<sup>62</sup> This is the original function of the negative *wú* 毋 according to Djamouri (1991: 54). According to Takashima (1996), the *p*- and the *m*-negatives are historically distinguished (in the inscriptions) by the involvement of the will and the ability to control by human beings.

mentioned, the same structure *kě* 可 NEG VP with the negation marker *bù* 不 predominantly expresses rhetorical questions; with the modal negation marker *wú* 無 statements are equally possible. In general, examples with the negative *wú* 無 (and its variant *wú* 毋) are quite rare.<sup>63</sup>

a) *Wú* 無 / 毋 expressing deontic modality (obligation) ‘can = must’:

The following two examples (55) and (56) both show the deontic modal value of strong obligation, in (55) in a rhetorical question, only the matrix verb is negated, and in (56) in an affirmative sentence with both the modal auxiliary verb and the matrix verb negated. Similar to the examples doubly negated by the negation marker *bù* 不, in this instance, too, double negation implies a strong obligation. In example (55) the matrix verb is passivized, whereas in (56), following *kě yǐ* 可以, it is not. The agent in (56) is specified and [+human].

- (55) 「楚雖無道，有臣若是，可無存乎！」 *Shǐjì*: 66; 2177  
 Chǔ suī wú dào, yǒu chén ruò shì, kě wú  
 Chu even-if not-have way, have subject like this, can NEG  
 cún hú  
 preserve FIN  
 ‘Chu may not have the right way, but it has subjects like these, is it possible that it may not be preserved / it must be preserved!’

<sup>63</sup> The three examples in the *Shǐjì* with *wú lǐ* 無禮 will be left out here (with *kě yǐ* 可以: *Shǐjì*: 32; 1488 and 70; 2284; and with *kě* 可 *Shǐjì*: 42: 1765), since *wú* 無 in combination with *lǐ* 禮 very likely has to be analysed as verbal.

- (56) 「人果不可以無學，觀黯之言也日益甚。」  
 rén guǒ bù kě yǐ wú xué, guàn Ān zhī yán yě  
 man really NEG can YI NEG learn, watch An SUB word FIN  
 rì yì shèn  
 day more bad  
 ‘Men really must learn, according to your words it is getting  
 worse daily.’ *Shǐjì*: 120;  
 3109<sup>64</sup>

In the following example (57), the verb following *kě* 可 is intransitive, again, the deontic modal value of obligation is expressed: ‘you are obliged not to go’, but regarding the attitude of the speaker, an evaluative notion is certainly involved. Apparently, the notion of obligation in this example is secondary, i.e. a reanalysis of the notion of advice or exhortation which belongs to the (speaker oriented) deontic modal value of permission; the speaker does not have the official right to directly oblige the crown prince.<sup>65</sup>

- (57) 「界盜見太子白旄，即殺太子，太子可毋行。」  
 jiè dào jiàn tàiǐ bái máo, jí shā  
 frontier brigand see crown prince white banner, then kill  
 tàiǐ, tàiǐ kě wú xíng  
 crown prince, crown prince can NEG leave  
 ‘If the brigands at the frontiers see your white banner, they  
 will kill you, you must not go.’ *Shǐjì*:37;  
 1593<sup>66</sup>

<sup>64</sup> There are only five instances of *kě yǐ wú* 可以無 in the *Shǐjì*. This instance appears almost identically in *Hànshū*: 50; 2320 as one of only two instances. But the phrase *kě yǐ wú xué* 可以無學 also occurs in *Zuǒzhuàn*, Zhāo 18 (*Shǐsānjīng zhùshū* 2086 中).

<sup>65</sup> This analysis is owed to one of the anonymous reviewers of the article.

<sup>66</sup> This is the only instance in the *Shǐjì*.



## b) Wú 無 / 毋 expressing root possibility ‘can’:

Occasionally, modal predicates negated with the negation marker wú 無 can also indicate root possibility, but this notion is confined to the structure kě 可 NEG VP; double negation exclusively expresses strong deontic modality:

- (58) 為敵弱，用力少而功多，可以毋盡百姓之勞，而序往古之勳。  
*Shiji*. 43; 1806<sup>67</sup>  
 wèi dí ruò, yòng lì shǎo ér gōng duō, kě yǐ  
 for enemy weak, use strength few CON success many, can YI  
 wú jǐn bǎi xìng zhī láo, ér xù  
 NEG complete hundred clan SUB effort, CON continue  
 wǎng gǔ zhī xūn  
 go antiquity SUB merit  
 ‘Therefore my enemies are weak and without much effort the success will be great, and it will be possible without exhausting the strength of the people to continue the great merits of antiquity.’

## 3.4. Concluding remarks on the modal auxiliary kě 可 / kě yǐ 可以 in combination with negatives

Three different structures involving negation are available for a modal predicate with kě 可: 1. NEG V<sub>mod</sub> VP; 2. V<sub>mod</sub> NEG VP; and 3. NEG V<sub>mod</sub> NEG VP. Quite obviously, in the first structure the negation marker has wide scope, including the complete modal predicate, whereas in the second structure it has narrow scope, only including the matrix verb:<sup>68</sup>

<sup>67</sup> This is the only instance in the *Shiji*, there is none in *Hànshū*. This instance is an almost literal quotation from *Zhànguó cè* 221/116/19.

<sup>68</sup> These distributions correspond to what Cormack and Smith label Pol[Neg], and Adv[Neg], roughly corresponding to sentential negation and verb phrase negation. (Cormack and Smith (2002:136f).

1. NOT [POSSIBLE that VP]
2. POSSIBLE [that NOT VP]

In the first case, the whole proposition is denied whereas in the second case, only the VP is denied. The speaker-oriented modalities (speaker-oriented prohibition corresponding to permission in the respective affirmative) can only be expressed by structure 1. NEG  $V_{\text{mod}}$  VP. This leads to the hypothesis that speaker-oriented modalities always refer to the entire proposition, a hypothesis which has to be verified for the other modal auxiliary verbs in Chinese as well. Agent oriented modalities (agent-oriented prohibition corresponding to obligation in the respective affirmative), obligation, and root possibility, can in general be expressed by all three structures, but they are subject to certain constraints regarding the negation marker employed. With structure 3, the doubly negated structure NEG  $V_{\text{mod}}$  NEG VP, only strong obligation can be indicated.

	<i>bù+</i> <i>kě(yǐ)+V</i>	<i>bù+kě(yǐ)</i> <i>+bù+V</i>	<i>kě(yǐ)+</i> <i>bù+V</i>	<i>wèi+</i> <i>kě(yǐ)+V</i>	<i>(bù)kě(yǐ)</i> <i>+wú+V</i>
Root modality	+	+	+	+	+
Deontic: Prohibition ( $\langle \rangle$ obligation)	+		+		+
Deontic: Prohibition ( $\langle \rangle$ permission)	+			+	?
Deontic: Agent- oriented (obligation)		+	+		+
		(strong)	(strong)		
Root possibility	+			+	+
Epistemic					

Table 3: *Bù + kě (yǐ) + V*; *bù + kě (yǐ) + bù + V*; *kě (yǐ) + bù + V*; *wèi + kě (yǐ) + V*; *kě (yǐ) + wú V*

Table 2 shows that although all structures with *kě* 可 and *kě yǐ* 可以 involving a negative marker exclusively express root modal values, most of them in the narrower sense of deontic values, they differ in the details. Most widely employed are structures with the simple neutral negation with *bù* 不 modifying the modal auxiliary verb: NEG  $V_{\text{mod}}$  VP (structure 1), since they can refer to agent-oriented and speaker-oriented values of prohibition and additionally to root possibility. Whereas in the affirmative, *kě* 可 and *kě yǐ* 可以 predominantly express root possibility values, and only exceptionally deontic values in a narrower sense, in the negative they predominantly express the deontic value of prohibition. According to the examples presented, the structure with a double neutral negative marker: NEG  $V_{\text{mod}}$  NEG VP (structure 2) exclusively expresses agent-oriented strong obligation, it never expresses root possibility. The structure with the neutral negative *bù* 不 modifying the matrix verb:  $V_{\text{mod}}$  NEG VP (structure 3) usually represents agent-oriented deontic values. The structure with the aspectual negative *wèi* 未 : NEG  $V_{\text{mod}}$  VP (structure 1) expresses speaker-oriented deontic modal values, but apparently in Han period texts the root possibility values, particularly with the verb *zhī* 知 ‘know’, are more frequent. Structures with the modal negative *wú* 無 (NEG)  $V_{\text{mod}}$  NEG VP (structure 2 and 3) are in general quite rare and usually express agent-oriented modal values, *i.e.* the deontic value of obligation and occasionally root possibility.<sup>69</sup> Altogether, there is an obvious constraint on the position of the negation marker regarding speaker-oriented modal values, namely, permission: these have to be represented by structure 1, NEG  $V_{\text{mod}}$  VP, to the effect that the negation marker has scope over the entire modal

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<sup>69</sup> Example (57) can be regarded as a possible exception, since according to one of the reviewers, the modal value of obligation has to be considered a reanalysis of the modal value of permission; but the fact that the negation marker only has scope over the verb rather argues against an analysis as indicating a speaker-oriented modal value and supports the analysis of the example of indicating obligation.

proposition.<sup>70</sup> But evidently the modality of the negation marker in general does not seem to be indicative for the modal value of the predicate, although it must be admitted that – as could be expected – the neutral negative *bù* 不 displays the widest range of employment of the negation markers under consideration. Additionally the table shows that, although the deontic modal values are predominant in combination with negative markers as could be expected according to Traugott's assumption that "older meanings tend to be maintained longer in negative environments" (1989:52), root possibility values are also attested and are even more frequent with *e.g.* the negative marker *wèi* 未.

#### 4. CONCLUSION

The preceding discussion quite clearly reveals that in Han period Chinese the predominant number by far of the instances of the verb *kě* 可 and its variant *kě yǐ* 可以 expresses root modal values. Deontic values, both agent-oriented (obligation) and speaker-oriented (permission) are comparably rare which does not necessarily argue against their status as being more basic than the other notions expressed.<sup>71</sup> With *kě* 可, in the structure *kě* 可 V<sub>pass</sub>,

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<sup>70</sup> This corresponds well to what Cormack and Smith assume for their Modal<sub>1</sub> and Modal<sub>2</sub> contrast in English (2002: 138): "In English we find that the main division between Modal<sub>1</sub> and Modal<sub>2</sub> corresponds to the contrast between necessity and possibility, where obligation patterns with the former, and permission with the latter." The position of the respective modals with regard to the two different negation markers they represent as follows (ibidem): "CT (Modal<sub>1</sub>) Pol(POS/NEG) (Modal<sub>2</sub>) (Adv[NEG]) ..." This means that in structures indicating permission the modal proposition is in the scope of the sentential negative which is exactly the case in structure 1 in Han period Chinese: NEG V<sub>mod</sub> VP.

<sup>71</sup> But to confirm this hypothesis a detailed study of the semantics of *kě* 可 and *kě yǐ* 可以 from the time of their first appearance would be required which goes beyond the purpose of the present study which rather focuses on a synchronic analysis of *kě* 可 and *kě yǐ* 可以.

both values are simultaneously attested, whereas with *kě yǐ* 可以, in the structure *kě yǐ* 可以  $V_{tr./itr.}$ , mainly the speaker-oriented value of permission is attested. In the structure *kě* 可  $V_{tr./itr.}$ , similar to the structure *kě* 可  $V_{pass.}$ , again both deontic modal values, obligation and permission, are attested. But by far the most instances of *kě* 可 and *kě yǐ* 可以 equally express the root modal value of root possibility. This notion is apparently not derived from the notion of ability which also, but only occasionally, can be expressed by *kě* 可 / *kě yǐ* 可以. Accordingly, with the modal auxiliary verb *kě* 可 / *kě yǐ* 可以 a development from the modal notion of ability to the modal notion of root possibility which in Bybee *et al.* (1994:240f) has been assumed to be the general path of grammaticalization cannot be confirmed. But the synchronic data of *kě* 可 and *kě yǐ* 可以 conforms well with the synchronic data for CAN in English as presented in Coates (1983). In English as well, the predominant number of instances of CAN indicates root possibility (Coates 1983:25). In some of the instances presented, an evaluative notion is involved which according to Palmer (1986:121) belongs (widely defined) to the deontic modal values. Regarding epistemic notions, they hardly ever occur in Han period texts. Only a few instances, mainly in combination with verbs that licence an evidential interpretation, permit an epistemic interpretation, always confined to an evidential interpretation. Since this notion is already present in Classical Chinese, no development can be attested from deontic to epistemic notions from Classical to Han period Chinese.

In combination with negation markers, three different structures are available: 1. NEG  $V_{mod}$  VP; 2. NEG  $V_{mod}$  NEG VP; and 3.  $V_{mod}$  NEG VP. These structures show differences in focus which can be roughly equated to those presented by Cormack and Smith who distinguish between Pol[Neg] and Adv[Neg], corresponding to sentential negation and verb phrase negation (Cormack and Smith (2002:136f). The speaker-oriented values corresponding to *permission* are basically confined to structure 1 independently of the negation marker employed: permission can be expressed by the

neutral negation marker *bù* 不 and by the aspectual-modal negation marker *wèi* 未 which is confined to the position preceding *kě* 可 . But with the negation marker *wèi* 未 , deontic values are extremely infrequent in Han period texts, the only examples are quotation from earlier texts. Most of the instances with *wèi* 未 express root possibility; and in the numerous examples with the verb *zhī* 知 an evidential notion cannot be excluded. Instances with the modal negative *wú* 無 are in general quite rare in Han period texts, they can express both deontic and root possibility values. Double negation always expresses strong deontic values, usually obligation. Except with the negation marker *wèi* 未 , an epistemic notion in negated structures with *kě* 可 / *kě yǐ* 可以 can be completely excluded, most of the instances express deontic values in a narrower sense, but root possibility values occur as well. Neither a development from agent-oriented to speaker-oriented, nor from ability to root possibility, or from root to epistemic values as has been assumed in Bybee *et al.* (1994:240f) as the general path of grammaticalization can be evidenced by the data from Han period Chinese in comparison with the data presented in Peyraube (1999).

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