

From obligation to future? A diachronic sketch of the syntax and the semantics of the auxiliary verb *dāng* 當*

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In this paper the syntax and the semantics of the modal auxiliary verb *dāng* and its diachronic development from a full verb into a modal auxiliary verb, and a future marker are at issue. It will be demonstrated that *dāng* predominantly expresses the root modal values of obligation and necessity and that epistemic and future readings are subject to different syntactic constraints. Additionally, the data will show that although *dāng* seems to exhibit typical features of grammaticalisation in its development from a full verb into a modal auxiliary verb and eventually into a future marker, its development differs considerably from the grammaticalisation processes proposed in the linguistic literature.

Key words: Modality, future tense, Pre-Tang Chinese, grammaticalisation.

Cet article traite de la syntaxe et de la sémantique du verbe auxiliaire modal *dāng*. On verra que *dāng* exprime principalement les valeurs radicales d'obligation et de nécessité, et que les valeurs épistémiques sont, elles, soumises à certaines contraintes syntactiques. Bien que l'évolution conduisant au cours de l'histoire le verbe indépendant *dāng* à assurer des fonctions de verbe auxiliaire modal, puis de marqueur de futur, présente en apparence un cas typique de grammaticalisation, les données observées ici montrent que ce processus diffère notablement de ceux proposés jusqu'ici dans la littérature linguistique pour d'autres langues.

Mots clefs : Modalité, future, chinois pré-Tang, grammaticalisation.

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1. INTRODUCTION

In this paper the syntactic and semantic constraints of the auxiliary verb *dāng* 當 in Pre-Táng 唐 Chinese and its diachronic development during these periods, *i.e.* from Late Archaic (5th c. BCE – 2nd c. CE) to Wèi Jìn Nánběi cháo 魏晉南北朝 Chinese (220-581 CE), are at issue. This is part of a comprehensive study on auxiliary verbs and modal adverbs in Pre-Táng Chinese, and it will hopefully provide some evidence for the general debate on modal markers from a language, which can be traced far back in history and which displays considerable differences from the Indo-European languages. Since the latter belong to the best studied languages in the linguistic literature, in particular with regard to English and other Germanic languages, many hypotheses on general paths of grammaticalization, including those of modal markers, have been established on that basis; these hypotheses can be refined by data from other languages which display a considerable time depth such as Chinese.

The data for this study is taken from the *Shǐjì* 史記 [Records of the Historian] (ca. 100 BCE), a historical text that represents well the transition from the language of the Late Archaic to the Hàn period (206-23 BCE and 25-220 CE), and the *Lùnhéng* 論衡 [Discourses Weighed in the Balance] (ca. 80 CE), a philosophical text linguistically typical for the later Hàn 漢 period (25-220 CE). The data for the Wèi Jìn Nánběi cháo period are taken from the *Gāosēng Fǎxiǎn Zhuàn* 高僧法顯傳 [The Life of the Eminent Monk Faxian], a travel report originally written in Chinese at the beginning of the 5th c. CE (Taisho 51, no. 2085), and from the *Miàofǎ Liánhuājīng* 妙法蓮花經 [Lotus Sutra of the Wonderful Law, *Saddharmapuṇḍarīka-sūtra*] (Taisho 9, no. 262). As Buddhist texts both represent a more vernacular language than the contemporary non-Buddhist texts. The first represents an Early Medieval non-translation text originally written in Chinese, and the

latter a Buddhist translation text composed by Kumārajīva, one of the great translators of Buddhist texts into Chinese.

1.1. The different functions of *dāng* 當

In Late Archaic Chinese, the character *dāng* 當 (hereafter *DANG*) mainly represents a full verb ‘to match, to correspond to’. In contrast to an auxiliary verb, which usually requires a verbal complement, a full verb permits both a nominal and a verbal complement (Peyraube 1999:28f). Both transitive (as in the following example) and intransitive employments are possible with *DANG*.¹

- (1) 孤子當室，冠衣不純采 (Lǐjì 禮記, Qūlǐ shàng 曲禮上)
 gū zǐ dāng shì, guān yī bù zhǔn cǎi
 orphan son correspond house, cap dress NEG border colourful
 ‘And if the orphaned son has taken care of the house, his cap and clothes are not decorated with colours.’

Additionally, *DANG* is used as a preposition ‘at’, expressing both local and temporal relations.

- (2) 遇大車當道而覆 (Guóyǔ 國語, Jìn 晉 5)
 yù dà chē dāng dào ér fù
 meet big chariot at road CON turn.over
 ‘He came across a large chariot which had overturned on the road.’

¹ The following list of abbreviations has been used throughout this paper: ASP = aspectual adverb; CON = connector; COP = copula; MOD = modal marker; NEG = negative marker; NEG_{asp} = aspectual negative marker; NEG_{Mod} = modal negative marker; NMLZ = nominalizer; OBJ = object; PL = plural; PREP = preposition; PRT = particle ; REL = relative particle ; SFP = sentence-final particle ; SUB = subordinator.

In the Hàn period literature (206 BCE – 220 CE), *DANG* increasingly occurs as a modal auxiliary verb, *i.e.* with a verbal complement, in the meaning ‘ought, should’, which is an extension of its meaning as a full verb.

- (3) 我真王嗣，當立，吾欲求之 (Shǐjì 史記 31,1463)
 wǒ zhēn wáng sù, dāng lì, wú yù qiú zhī
 I true king successor, *DANG* enthrone, I want require OBJ
 ‘I am the true successor to the king who should be enthroned,
 and I want to insist on it.’

The basic meaning of *DANG* is glossed in the *Shuōwén Jiězì* 說文解字 [Explaining Simple and Analyzing Compound Characters] as “*tián xiāng zhí* 田相值” ‘fields correspond to each other’. According to Dobson (1962:280), *DANG* is first attested as a modal auxiliary in the *Shāngshū* 商書 [The Book of Shang]; and in this instance it is labelled by him as “the positive injunctive form”, *i.e.* in his terminology, as a ‘modal determiner’ (see also Li 2004:219). In general, *DANG* appears late as a modal auxiliary verb. In the Late Archaic literature, it is still only occasionally attested (Unger 1987:78, Yáng and Hé 1992:218). Only in Hàn period Chinese does *DANG* evidently appear more frequently, with such a “markedly increased frequency that it is possible that by Late Hàn the injunctive mood is marked whether a change of mood takes place or not” (Dobson 1964:20). Whereas in most linguistic approaches *DANG* is labelled as an auxiliary verb, the *Gǔdài Hànyǔ Xūcí Cídiǎn* 古代漢語虛詞辭典 [A Dictionary of Function Words in Ancient Chinese] (hereafter, GDHYXCCD) (2000:87) categorises it as an adverb with basically two different functions: (1) as an adverb indicating different shades of necessity and future values, and (2) in a complex sentence, as an adverb semantically comparable to *háiy* 還 ‘still, yet, even’ in Modern Chinese. In the latter case it refers to a situation that is not supposed to change; according to the examples presented, this sense seems to be

confined to particular syntactic environments. In contrast to this categorisation, in Yáng and Hé (1992:218), *DANG* is labelled as an auxiliary verb (*zhùdòngcí* 助動詞). However, the authors concede that auxiliary verbs and adverbs are often difficult to distinguish, since they basically share the same syntactic position, although they differ in the fact that adverbs in contrast to auxiliary verbs can modify adjectives and even nominal predicates, whereas auxiliary verbs can appear on their own without a verb as their complement (Yáng and Hé 1992:209). As the prevalent analysis, the categorisation of *DANG* as an auxiliary verb will be adopted as a working hypothesis in this paper, although it never ceases to also take nominal complements.

1.2. The modal value of the auxiliary verb *DANG*

In the linguistic literature modality is most frequently subdivided into the two basic categories: epistemic and deontic modality. This distinction was introduced by Jespersen (1924) and was further developed, for instance, in Lyons (1977, 1978), who defines epistemic modality as being concerned with matters of knowledge, belief or opinion rather than fact (Lyons 1978:793ff), and deontic modality as being “concerned with the necessity or possibility of acts performed by morally responsible agents” (*ibid.* 823). In other words, epistemic modals express knowledge on the side of the speaker, and deontic modals express an obligation imposed on an agent (frequently, but not necessarily by the speaker). Within deontic modality, usually, two different subcategories, *i.e.* obligation and permission, are differentiated (*cf.* Meisterernst 2008b: 87). The bipartite distinction of epistemic and deontic modality disregards the differences within the class of non-epistemic modalities, whereas they are often included in the term ‘root modality’, which refers to deontic modality in a broader sense. From epistemic, evidential modality is sometimes distinguished. Different categorisations and subdivisions have been adopted in the

linguistic literature for root or deontic modal values. The term root modality is employed in the generative framework, but also in basic studies on modality (e.g. in Coates 1983), and in more recent semantic studies (e.g. Hacquard 2006). The term will equally be employed in the following discussion, where it is defined as including deontic modality in the strictest, *i.e.* the performative sense, that is, expressing commands, but also other deontic values. According to this framework, the modal auxiliary verb *DANG* predominantly expresses non-epistemic modal, *i.e.* root or deontic modal values, namely root necessity and obligation, a necessity according to laws, conventions, agreements etc. and corresponds thus approximately to the English modal auxiliary verb *SHOULD*.² It frequently selects agentive verb, a fact that fits well the constraints proposed by Coates (1983:66) for the English modal *SHOULD* in its root meaning.³ Epistemic values are in general quite rare with *DANG* and usually not entirely unambiguous. The following example represents the predominant function of the modal auxiliary verb *DANG*.

- (4) 五月，齊太倉令淳于公有罪當刑 (Shǐjì 10,427)
 wǔ yuè Qí tàicānglǐng Chúnúyú gōng
 five month Qí director.of.imperial.granaries Chúnúyú father
 yǒu zuì dāng xíng
 have guilt DANG punish
 ‘In the fifth month, the director of the imperial granaries of Qí,
 master Chúnúyú, committed a crime and should be punished.’

² According to Anderl (2004:431), *DANG* (in the *Zūtángjí* 祖堂集 [Collection from the Patriarchs’ Hall] 10th c. CE) represents “obligation, necessity (expresses the speaker’s conviction that an event will take place in the future)”. See also Li (2004:219), who assumes ‘deontic necessity’ as the earliest modal meaning of *DANG*.

³ See also Heine (1995:25) who claims that agent-oriented, (*i.e.* deontic or root) modality is predominantly associated with action and telic verbs. According to him, the situation with stative verbs is more complicated: “[W]hile some, like *wissen* ‘know (information)’ and *haben* ‘have’, gravitate toward agent-oriented uses, *kennen* ‘know, be acquainted with’, has a majority of epistemic uses.”

The meaning of *SHOULD* in English (labelling an expression of obligation weaker than *MUST*) is defined by Coates (1983:59) as follows: “at its strongest, *SHOULD* takes on the meaning of moral obligation, or duty (defined in moral or legal terms). At its weakest, it merely offers advice, if subjective, or describes correct procedure, if objective.” The kind of modality expressed by *SHOULD* is less strong than the deontic meaning of strict obligation expressed by *MUST*; it usually rather implies a suggestion than a command. With *MUST* the speaker demands action and expects to be obeyed, whereas with *SHOULD* he only suggests it, not necessarily expecting compliance (Coates 1983:58f). The consequences induced by the modal *MUST* are stronger than those induced by *SHOULD* (Portner 2009:34). Different root readings of *SHOULD* are provided in the literature (for a distinction of modal readings see *e.g.* Kratzer 1981, *cf.* Portner 2009:55); of these, particularly the deontic reading (referring to obligations), and the bouletic reading (referring to wishes) are relevant in the context of modal *DANG*. Although the above mentioned semantic characteristics largely also correspond to *DANG*, there are obvious differences in the employment of *DANG* and *SHOULD*. However, its characteristic as expressing a more indirect obligation, a suggestion, qualifies *DANG* as an essential modal auxiliary in Chinese, since in many social contexts in Late Archaic and Hàn period Chinese a direct command expressed by an equivalent to English *MUST* would be considered inappropriate.

Occasionally *DANG* also expresses epistemic modal values besides its core root values. In Hàn period Chinese, the period in which *DANG* is first regularly attested as a modal auxiliary verb, the core root, and the epistemic meaning as in the following example seem to exist simultaneously.

- (5) 朱公長男以為赦，弟固當出也 (Shiji 41,1754)
 Zhū gōng zhǎng nán yǐwéi shè dì gù
 Zhū father older son think release younger.brother.certainly

dāng chū yě
 DANG go.out FIN

‘The oldest son of father Zhū thought that since there was an amnesty, his younger brother should certainly get out.’

However, as in the example presented, the epistemic reading is usually dependent on additional syntactic devices. With regard to a deontic-epistemic polysemy, many linguistic studies, *e.g.* Traugott (1989:36, 43) or Bybee *et al.* (1994), to mention only a few, propose a universal diachronic development from root (or deontic) modal meanings, which are assumed to be basic, to epistemic modal meanings, a hypothesis which does not seem to have the same relevance for Chinese as it has *e.g.* for the English language.

In Hàn period Chinese *DANG* belongs to those modals (modal auxiliaries, verbs, and adverbs) that express ‘sentential modality’, *i.e.* the expression of the modal meaning on sentence level (see Portner 2009:4). At the same time the function of *DANG* extends to the marking of the future; in this function it becomes more frequently employed in the Buddhist literature.

In the following study, the syntactic and semantic constraints of *DANG* will be at issue first, to establish its exact semantics as a modal marker with particular regard to its syntactic constraints, and second, to provide some evidence for its development into a future marker, a development that evidently does not imply a loss of its modal functions in the Early Buddhist literature, *i.e.* both functions exist simultaneously. The examples show that to a certain extent, the auxiliary verb *DANG* is a prototypical example for the grammaticalization process of a verb that develops from a full verb into an auxiliary modal verb and eventually into a marker of the future tense. However, during its history, both the original and the derived functions exist simultaneously, and the more basic functions as a full verb and a modal auxiliary verb are eventually the ones that prevail in later stages of the Chinese language.

2. THE DIACHRONIC DEVELOPMENT OF *DANG*

2.1. *DANG* in Late Archaic Chinese

In Late Archaic texts the character *DANG* mainly represents a full verb ‘to match, to correspond to’, and a preposition ‘at’. In the following, a few examples will be presented for these readings of *DANG*. The first example displays a very typical employment of this verb from the ritual literature: *DANG* appears as a transitive verb with the noun *wèi* 位 ‘position’ as its object, obligation is marked by the modal auxiliary *bì* 必 ‘must’ which expresses both deontic and epistemic meanings (with the epistemic meanings being predominant). In these examples, *DANG* always expresses appropriateness according to a law, rule, or norm.

- (6) 行爵出祿。必當其位 (Lìjì, Yuèlíng 月令)
 xíng jué chū lù, bì dāng qí wèi
 carry.out title issue salary, must correspond its position
 ‘The conferring of titles and the issuing of salaries must be appropriate (in accordance with the position).’

In example (7), the appropriateness of titles and salaries is focussed on. Examples like these can certainly be considered to be the source structure for the prepositional use of *DANG*. The prepositional use (exemplified by 8) becomes increasingly prominent in the post-Classical literature and is still attested in Modern Chinese, *e.g.* in the same phrase, as in example (8).

- (7) 解屨不敢當階 (Lìjì, Qūlǐ shàng)
 jiě jù bù gǎn dāng jiē
 open shoe NEG dare be.opposite stair
 ‘If he opens his shoes he may not dare [to do it] in front of the staircase.’

- (8) 子囊曰。不可。當今吾不能與晉爭 (*Zuǒzhuàn* 左傳, *Xiāng* 相 9)
 Zǐ Náng yuē bù kě, dāng jīn wú bù néng yǔ
 Zǐ Náng say: NEG possible, at today I NEG can with
 Jìn zhēng
 Jìn fight
 ‘Zǐ Náng said: “It is impossible! Today I cannot fight with Jìn.”’

Finally, in example (9), *DANG* appears as an auxiliary verb, expressing an obligation.

- (9) 雖然則彼疾當養者。孰若妻與宰 (*Lǐjì*, *Tángōng xià* 檀弓下)
 suī rán zé bǐ jí dāng yǎng zhě, shú
 however be.like then that ill, *DANG* nourish NMLZ, which
 ruò qī yǔ zǎi
 be.like wife and steward
 ‘However, if he is going to be ill, of those who should nourish him, who would be better than his wife and his steward?’

Although all the functions of *DANG* in Late Archaic (Classical) Chinese are still attested in the post-Classical literature and although its employment as a preposition increases considerably during the Hàn period, only the last function as a modal auxiliary verb will be at issue in the following discussion. As the examples show, a development of the verb *DANG* into an auxiliary verb expressing an obligation, a necessity according to rules, *i.e.* the appropriate behaviour requested by norms, is well motivated by its semantics as a full verb. The same is valid for its employment as a preposition.

2.2. The syntax and the semantics of the auxiliary verb *DANG* in Hàn period Chinese

In the following section the main topic of this paper, the syntax and the semantics of *DANG*, will be discussed. First a short

overview of the different functions of *DANG*, including its function as a future marker, will be presented. As already mentioned, *DANG* appears as a full verb ‘to match, to correspond to’, ‘to undertake, to act as’ in both Hàn period Chinese and the Buddhist literature. The following two examples represent this function in the *Shiji*. In both examples the semantics of *DANG* imply the appropriateness or adequateness of an action, the way of dealing with a situation according to law, rule, or expectation, *i.e.* they do not differ semantically from the examples presented above. In example (10), *DANG* appears in a transitive, and in (11), in an intransitive construction. In example (11) as in example (6), obligation is expressed by the modal auxiliary *bì* 必 ‘must’.

- (10) 三年，伊尹攝行政當國，以朝諸侯 (Shiji 3,99)
 sān nián, Yī Yǐn shè xíng zhèng dāng
 three year, Yī Yǐn acting conduct government correspond
 guó, yǐ cháo zhūhóu
 state, thus go.to.court feudal.lord
 ‘In the third year, Yī Yǐn conducted the government as a substitute and took care of the state, and thus he made the feudal lords come to court.’
- (11) 舉錯必當，莫不如畫 (Shiji 6,245)
 jǔ cù bì dāng, mò bù
 raise leave.aside must adequate, nothing NEG
 rú huà
 like draw
 ‘What they take up or leave aside must be adequate, and everything is as if predetermined.’

From this function, indicating the performance appropriate to a situation develops the meaning as a modal auxiliary verb that expresses obligation (necessity). The declarative meaning (or modally neutral meaning ‘it is so’, *i.e.* ‘a situation is performed

adequately’) of the predicate found in examples (10) and (11) changes into a ‘mand’, that is a hortatory expression that calls for action on the side of an addressee: ‘so be it’ rather than ‘it is so’ (Lyons 1978:751). Mands are distinguished into commands, requests and demands which share the same characteristics with respect to tense (Lyons 1978:751). With the employment of *DANG* as a modal auxiliary verb, the declarative sentence can change into a jussive sentence, as in the following example (12). This example represents a kind of intermediate stage between the employment of *DANG* as a full verb ‘appropriate’ and as a modal auxiliary verb. In this example, contrary to the preceding examples in which *DANG* has to be analysed as a full verb, it takes a verbal complement. The latter circumstance is the basic requirement for the development into an auxiliary verb.⁴ The verbal complement is additionally modified by a manner adverb, which is very rare with *DANG* but does not argue against the analysis of *DANG* in this example as an auxiliary verb.

- (12) 天子儀當獨奉酌祠始皇廟 (Shǐjì 6,266)
 tiān zǐ yí dāng dú fèngzhuó cí
 heaven son ceremony *DANG* alone offer.wine sacrifice
 Shǐ Huáng miào
 Shǐ Huáng temple
 ‘According to the rites of the Son of Heaven, You alone
 should offer wine as a sacrifice at the temple of Shǐ Huáng.’

The example displays root obligation, a necessity according to the prescription of the proper rites; the verb is an agentive verb in an active construction (see Coates 1983:66). To express root obligation is the predominant function of *DANG* in Hàn period Chinese. This meaning still prevails in Early Medieval Chinese (2nd – 6th c. CE),

⁴ Although the basic requirement for an auxiliary verb is to take a verbal complement, not all verbs that take verbal complements qualify for an analysis as auxiliary verbs.

while a new function develops besides the strictly modal values: this is the marking of the future tense as in example (13) from the *Miàofǎ Liánhuājīng*, a Buddhist translation text from the beginning of the 5th century. In this example *DANG* appears in the last of a succession of predicates referring to the past, the present and the future. Past and present are indicated by an aspecto-temporal and a temporal adverb respectively, whereas the future tense is marked by *DANG*.

- (13) 我所說經典無量千萬億，已說、今說、當說，而於其中
(Taisho, 9, no.262, p.31b)
- | | | | | | | |
|----------|--------------|-------------------|---------|-----------|----------|---------|
| wǒ | suǒ | shuō | jīng | diǎn | wú | liàng |
| I | REL | tell | classic | scripture | not-have | measure |
| qiān | wàn | yì, | yì | shuō, | | |
| thousand | ten-thousand | hundred thousand, | already | tell, | | |
| jīn | shuō, | dāng | shuō, | ér | yú | qí |
| now | tell, | <i>DANG</i> | tell, | CON | at | its |
| | | | | | | middle, |
- ‘Of all the immeasurable thousands, ten-thousands, hundred thousands of sūtras I have recited, which have already been recited, are recited now and will be recited, among all these, ...’

This new function develops from the basic function of modal *DANG*, which is predominantly employed to indicate the strong or weak root meaning of obligation (necessity), as in example (12).⁵ As a future marker, *DANG* appears in both original Chinese and

⁵ Bybee *et al.* (1994:264) assume that “most obligation markers that become futures express strong rather than weak obligation. The difference between the two ... is that strong obligation compels one to follow the social or moral course set by a belief system or social norms, whereas weak obligation merely counsels or recommends following the course. Thus intention may be inferred from statements of strong obligation, but not from statements of weak obligation.” The Chinese data does not necessarily support this hypothesis, since the obligation expressed by *DANG* is usually not very strong.

translation texts. In the following analysis the exact modal values of *DANG* will be discussed with particular regard to the interplay of the semantics of the modal auxiliary verb with the semantics of the verb it modifies. Furthermore it will be demonstrated whether or not and to what extent the distinction between subjective and objective meanings established for English *SHOULD* by Coates (1983) is applicable to Hàn period *DANG*.⁶ Additionally, the syntactic conditions for the development of the future reading will be revealed. In general, the future tense is closely related semantically to the category of modality. In addition, as pointed out in Bybee *et al.* (1994:263), modal markers of obligation belong to the lexical sources that have the capacity to develop into markers of the future. This development is supported by the fact already mentioned in Lyons (1978:751) that ‘mands’ are closely related to tense and refer to a fulfilment of the required situation in the future.

2.3. The semantics of *DANG* as an auxiliary verb

In the following section the different semantic nuances of the root modal *DANG* in Hàn period Chinese will be presented.

(a) root obligation

The following examples all express a relatively strong obligation according to rules, laws, rites etc. In example (14) from the late Hàn period text *Lùnhéng*, the law is explicitly mentioned. These are cases of an objective necessity, the default case of which is regarded by Coates (1983:62) as being counterfactual (in her terminology: contra-factive), as in example (14); however, evidently most of the following examples do not belong to this category. In (14), the predicate refers to a hypothetical situation in the past, a situation which should have taken place but did not; it

⁶ Coates (1983: 60) assumes a strong obligation which is subjective as core meaning for *SHOULD* and a weak objective obligation at the periphery. According to her, genuine objective examples are rare.

does not express a direct request or demand, whereas in example (15), it refers to a factual situation which is required by the law. In example (14), the matrix verb, the complement of *DANG*, is a typical achievement verb; the subject has the thematic role of experiencer and is accordingly not agentive.

- (14) 則庖廚監食者法皆當死，心又不忍也 (Lùnhéng 20.2.12)
zé páochú jiānshí zhě fǎ jiē dāng sǐ,
then kitchen food.supervisor NMLZ law all *DANG* die,
xīn yòu bù rěn yě
heart again NEG bear SFP
‘Then the cooks and supervisors of the food should all have died according to the law, and again, I could not bear it in my heart.’

In example (15) the verb is an agentive achievement verb. However, the verb appears in an unmarked passive, the subject represents the patient and the agent of the situation is only implicitly present. The deontic modality is external to the subject; according to de Schepper and Zwarts (2009:257) these cases are labelled non-directed deontics (following Barbiers 1995). The deontic modal expresses a demand; demands “differ from commands and requests in that they are not necessarily addressed to those upon whom the obligation of fulfilment is imposed” (Lyons 1978:751). As the examples will demonstrate, this kind of modality is quite typical for *DANG*.

- (15) 五月，齊太倉令淳于公有罪當刑 (Shǐjì 10,427)
wǔ yuè, Qí tài cānglìng
five month, Qí director.of.imperial.granaries
Chúnyú gōng yǒu zuì dāng xíng
Chúnyú father have guilt *DANG* punish
‘In the fifth month, the director of the imperial granaries of Qí, master Chúnyú, committed a crime and should be punished.’

In the following example (16) again, a rather strong obligation, this time according to the proper rites, is expressed in a direct request expressing deontic modality in its strictest sense. In this example, the verb is agentive, and the subject represents the agent, who is the addressee of the request. However, the expression of a strict (performative) modality is not typical for *DANG* in the Hàn period literature.

- (16) 王當歃血而定從，次者吾君，次者遂 (Shǐjì 76,2368)
 wáng dāng shà xuè ér dìng zōng,
 king *DANG* smear blood CON establish alliance,
 cì zhě wú jūn, cì zhě suì
 next NMLZ I prince, next NMLZ follow
 ‘Your majesty should smear blood [on his lips] in order to establish alliance, the next will be my prince, and as the next I will follow.’

In the following two examples (17) and (18), the verb is an agentive achievement verb, the subject represents the agent of the situation suggested; however, the agent is impersonal and not specified. In example (17) the agent is represented by the relativizer *zhě* 者. The obligation is imposed by rites according to a testamentary edict.

- (17) 自當給喪事服臨者，皆無踐 (Shǐjì 10,434)
 zì dāng jǐ sāng shì fúlín
 self *DANG* provide mourning affair mourning.clothes.service
 zhě, jiē wú jiàn
 NMLZ, all NEG_{Mod} unhemmed.mourning.apparel
 ‘For those who should themselves make the provisions for the mourning ceremonials, wear mourning clothes and perform the mourning services, all of them need not wear unhemmed clothes.’

In the following example (18), the ordering source for the root modal is less obvious than in the preceding examples. No laws or

rites are explicitly mentioned as the basis for the obligation, but rather conventions or rules implied by experience.

- (18) ...土德應黃龍見，當改正朔服色制度 (Shǐjì 10,429)
 tǔ dé yìng huáng lóng xiàn,
 earth quality meet yellow dragon appear,
 dāng gǎi zhēngshuò fú sè zhì dù
 DANG change first.day.of.year apparel colour decide measure
 ‘... during the earth essence the appearance of a yellow
 dragon may occur, one should change the standards of the
 beginning of the year and the colour of the empirical apparel.’

In the following examples the deontic force is evidently less strong and the modality is less objective. Instead of specified rules or rites, natural laws, unspecified norms or conventions, laws of fairness etc. are involved which can include a certain degree of evaluation by the speaker. In these cases, sometimes the ordering source is explicitly mentioned within the utterance. In example (19), the modal meaning is rather bouletic (having to do with desires/wishes) than deontic in a strict sense. The verb is an agentive achievement verb, and the impersonal subject represents the not explicitly mentioned agent of the required situation.

- (19) 增減其壽，亦當增減其身，形安得如故？ (Lìnhéng 7.5.52)
 zēng jiǎn qí shòu, yì dāng zēng
 increase diminish his lifespan, also DANG increase
 jiǎn qí shēn, xíng ān dé rú gù
 diminish his body, shape how can be.like old
 ‘In order to increase or diminish one’s lifespan, one should
 also increase or diminish one’s body, how can the shape then
 remain as before?’

In the following example, the agent is again not specified. It can be represented by a second person or an impersonal third person

subject. However, even if a second person subject is assumed, the modal is not performative. The modal expresses root obligation, according to a natural law, or a prediction, which can be subjective or objective. In this example the negative consequences to be expected in a world in which the obligation imposed by the modal has not become true, are explicitly mentioned.

- (20) 語曰：「當斷不斷，反受其亂。」 (Shǐjì 78, 2399)
 yǔ yuē: dāng duàn bù duàn, fǎn shòu qí luàn
 saying say: DANG cut.off NEG cut.off, return receive its chaos
 ‘There is a saying: “If you are supposed to cut off and you don’t, you will accordingly meet with chaos.”’

Contrary to the preceding examples, in the following example, the subject is [-human], which is in general quite rare. The modal expresses a prediction according to destiny and natural laws. The subject represents the experiencer of the two intransitive verbs, the first of which is an activity verb and the second a state verb. The modal appears in a conditional protasis.

- (21) 國當衰亂，賢聖不能盛；時當治，惡人不能亂
 (Lùnhéng 53.5.26)
 guó dāng shuāi luàn, xián shèng bù néng chéng;
 state DANG decline chaos, virtuous wise NEG can hold;
 shí dāng zhì, è rén bù néng luàn
 time DANG well.governed, bad man NEG can chaos
 ‘If a state is supposed to decline and to be in chaos, even virtuous and wise people cannot keep it in order; if the time is supposed to be well-governed, even bad people cannot cause chaos.’

Similar to example (21), in example (22) the modal expresses a root necessity according to destiny or a natural law of fairness, but it is less objective than in the preceding examples. The subject

represents the role of the benefactive. In this example, again, as in (14), the modal has evidently a counter-factual meaning; it refers to what should have happened in the past, but contrary to the assumed natural law did not. The speaker conveys the necessity of the proposed situation according to his evaluation of the ordering conventions, which are explicitly mentioned in the sentence. The matrix verb is a telic achievement verb.

- (22) 顏淵、伯牛，行善者也，當得隨命，福祐隨至，何故遭凶？
 (Lùnhéng 6.5.46)
 Yán Yuān, Bó Niú, xìng shàn zhě yě, dāng dé suí
 Yán Yuān, Bó Niú, conduct good NMLZ SFP, DANG get follow
 mìng, fú yòu suí zhì, hégù zāo xiōng
 destiny, good.fortune blessing follow arrive, why meet misfortune
 ‘Yán Yuān, Bó Niú, they were [people] whose conduct was
 good, they should have received an adequate destiny, and
 good fortune and blessings should have arrived subsequently,
 why did they meet with misfortune?’

The last example in this section evidently represents subjective modality. The speaker conveys his evaluation of the necessity of the situation according to unspecified conventions. The verb is an agentive telic verb and the subject represents the agent; the modal expresses a previously uttered direct request quoted by the speaker.

- (23) 我方先君後臣，因謂王即弗用鞅，當殺之 (Shǐjì 68,2227)
 wǒ fāng xiān jūn hòu chén, yīn wèi
 I ASP forward ruler put.behind vassal, therefore say
 wáng jí fú yòng Yǎng, dāng shā zhī
 king if NEG employ Yǎng, DANG kill OBJ
 ‘I am just putting the ruler first and the vassal last, and
 therefore I told the king that if he did not employ you, Yǎng,
 he should kill you.’

(b) The modal auxiliary verb *DANG* in combination with negative markers

If a modal auxiliary is negated, it usually expresses root modal values, as has been stated, for instance, in Heine (1995:25): “In negative (and interrogative) propositions (and in the Past tense) the modals correlate primarily with agent-oriented rather than with epistemic modality” (see also Coates 1983:66). It has as yet not been confirmed whether this hypothesis also holds for Late Archaic and Hàn period Chinese, since the combination of modal auxiliary verbs and adverbs with negative markers has only been touched upon in studies on modality in Late Archaic Chinese.⁷ With regard to *DANG*, two different negative markers are attested: the modally neutral negative marker *bù* 不, which belongs to the class of the so-called *p/f*-negatives markers, and the aspectual negative *wèi* 未, which belongs to the class of the so-called *m/w*-negatives.⁸ Although the negative marker *wèi* has predominantly been analysed as an aspectual negative, it has been pointed out (Harbsmeier 1981, Meisterernst, 2008a) that it can—depending on the semantics of the verb—also express modal notions. *Bù* and *wèi* are the only negative markers attested in combination with the auxiliary verb *DANG* in the Hàn period texts at issue here; the negative *wú* 無 is, if at all, only attested with *DANG* as a full verb. These constraints are comparable to those of the modal auxiliary verb *kě* 可, which is also

⁷ For a study on the modal auxiliary verb *kě* 可/ *kěyǐ* 可以 in combination with negative markers, see Meisterernst (2008c).

⁸ According to their initial, the negatives are categorised into: (1) *p/f*-negatives, and (2) *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 that develop into a *w*-initial. Of these two groups, the *p/f*-negatives express neutral negation deprived of any modal value. The *m/w*-negatives, on the other hand, usually indicate different modal values. These are predominantly deontic (root modal) values, but they can also express epistemic modality according to Djamouri (1991), see also Takashima (1996).

predominantly attested with the negative markers *bù* and *wèi* in Hàn period Chinese (Meisterernst 2008c).⁹ However, with *DANG* both negative markers always precede the auxiliary verb in the Hàn period literature, whereas two positions are available for the most common negative marker *bù* with the verb *kě*, *i.e.* the order NEG *kě* V₂ and *kě* NEG V₂.¹⁰ Furthermore, double negation (with the negative marker *bù*) is attested with *kě*, but not with *DANG* (Meisterernst 2008c). Examples (24) and (25) represent the modal auxiliary verb *DANG* negated by the neutral negative marker *bù*. The examples evidently express root modal values, *i.e.* in example (24) a prohibition according to rites, or norms, and in example (25) a prohibition according to the prediction of destiny. In example (24), the verb is agentive, an activity verb, and the subject represents the agent of the required situation. In example (25), the verb is telic in a passive construction, the subject assumes the role of patient; no agent is explicitly involved.

- (24) 子弘等皆非孝惠帝子，不當奉宗廟 *Shǐjì* 10,415
 Zǐ Hóng děng jiē fēi Xiào Huì dì zǐ,
 Zi Hóng group all not.be Xiào Huì emperor son,
 bù dāng fèng zōng miào
 NEG DANG serve ancestor ancestral.temple
 ‘Zǐ Hóng and the others, they are all not sons of emperor Xiào Huì, they should not serve at the ancestral temples.’
- (25) 夫后稷不當棄，故牛馬不踐 (*Lùnhéng* 9.5.26)
 fú Hòujì bù dāng qì, gù niú mǎ bù jiàn
 PRT Hòujì NEG DANG abandon, therefore ox horse NEG tread
 ‘Hòujì was not supposed to be abandoned, therefore ox and horse did not tread on him, ...’

⁹ Occasionally the negative marker *wú* 无 is attested, always following the auxiliary verb and preceding V₂.

¹⁰ In later texts, *e.g.* from the Táng period (618-907), including the later commentary literature on the *Shǐjì* the order *DANG* NEG is attested. This change of position might be due to the functional extension of *DANG*.

The examples display semantic features similar to those of the respective examples in the affirmative. Whereas in the affirmative, a situation is marked as a suggested or required necessity, in the negative it is marked as prohibited or supposedly prohibited.

The following examples represent negation with the aspectual negative marker *wèi* 未. *Wèi* usually selects an event as its complement, similar to (and usually glossed by) *méiyǒu* 沒有 in Modern Chinese. The basic function of *wèi* is to denote that an event has not yet started or reached its completion at reference time (cf. Lin 2003). Occasionally, particularly in combination with modal verbs such as *néng* 能 ‘can, to be able to’, *kě* ‘can’, and *zú* 足 ‘to suffice’, *wèi* denotes a situation that will never be completed or even occur (see Hé *et al.* 1985, and GDHYXCCD 2000 for examples). In these cases it predominantly expresses a strong categorical denial, *i.e.* a tenseless categorical judgement, a logical rather than a temporal or aspectual function (Harbsmeier 1981:42). In general, examples of *wèi dāng* 未當 are not very frequent in the analysed data (around ten instances in the *Shǐjì* and the *Lùnhéng*, respectively) and are almost exclusively confined to the Hàn period texts selected for the analysis.

In the following example a rather strict prohibition according to rules is expressed. The verb is an agentive telic achievement verb, the default verb selected by *wèi*, in a passive construction, the subject is [-human] and assumes the role of patient, no agent is specified. In both examples presented here, the situation is located in the past, and the modal is counterfactual.

- (26) 山東雖亂，秦之地可全而有，宗廟之祀未當絕也
(*Shǐjì* 6,276)
 shān dōng suī luàn, Qín zhī dì kě quán
 mountain east even.if chaos, *Qín* SUB land can complete
 ér yǒu, zōng miào zhī sì wèi
 CON have, ancestor ancestral.temple SUB sacrifice NEG_{asp}

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dāng jué yě
 DANG cut.off SFP

‘And even if there was chaos east of the mountains, the territory of Qín could have been kept entire, and the sacrifices of the ancestral temples should not have been interrupted (yet).’

In the following example (27), the modal expresses root necessity according to the prediction of destiny. The verb is telic with an experiencer subject, *i.e.* a verb that is typically selected by *wèi*.

- (27) 謂伯有命未當死而人殺之邪? (Lùnhéng 63.12.18)
 wèi Bó Yǒu mìng wèi dāng sǐ ér rén shā zhī yé
 mean Bó Yǒu destiny NEG_{Asp} DANG die CON man kill OBJ FIN
 ‘Does it mean that Bó Yǒu according to his destiny should not have died yet, but someone killed him?’

The difference between negation with *bù* and with *wèi* is evidently temporal. *Wèi* locates the negated situation in the past and thus renders it counterfactual, since *DANG* in past contexts always expresses a situation that should have taken place, contrary to fact. According to Coates (1983:62), this is the predominant meaning of truly objective examples of English *SHOULD*. With *DANG*, however, the counterfactual is evidently merely the default reading in predicates negated by the aspectual negative marker *wèi*, whereas it is rather the exception in affirmative predicates. In the affirmative, objective meanings with *DANG* are predominantly not counterfactual, since past tense examples are in general relatively infrequent. In contrast to many other modal auxiliary verbs, in combination with *DANG* the negative marker *wèi* retains its basic aspectual notion.

(c) *DANG* expressing epistemic modality

The already mentioned universal diachronic development from root (or deontic) to epistemic modal meanings mentioned

above has been claimed to be due to a semantic bleaching of the element Force (Heine 1995:42), Jespersen's 'element of will' (1924: 320f), in the meaning of the modal.¹¹ However, some problems with regard to this general hypothesis have been noted in Traugott (2006: 119). She notes that the change from agent-oriented/deontic to epistemic meanings appears "to be largely irrelevant" in relation to languages that do not possess particular markers of strong obligation, such as Japanese. She also claims that the hypothesis that the epistemic reading develops from the deontic one is to a great extent based on the history of well-known languages, which happen to display this development (Traugott 2006:119). For Chinese, it has not been determined yet to which category of languages it belongs, since studies on modal markers in general, and particularly those on their diachronic development are few. However, as has been demonstrated in an earlier study on modality (Meisterernst 2008b, c), it is difficult to claim such a development for the verb *kě* 可 / *kěyǐ* 可以 in the earlier stages of Chinese, and the same seems to apply to the auxiliary verb *DANG*. As evident from the examples presented, in Hàn period Chinese, the period in which *DANG* is first regularly attested as a modal auxiliary verb, both concepts, the root and the epistemic meaning, seem to exist simultaneously with the root meaning as 'core' meaning and the epistemic meaning as 'peripheral'. The latter is usually dependent on a particular syntactic context, and some fuzzy cases remain which do not unambiguously express either of the two modal meanings.¹² In the following example, the root reading of the modal

¹¹ Heine (1995:42) in his article on German modals, states that the metaphorically structured change from the agent-oriented (root) concept to the epistemic concept involves a transfer from the "socio-physical world" to the world of knowledge and belief.

¹² This agrees well with general assumptions presented in Traugott (2006) that changes in modal meanings are constrained by their synchronic syntactic context, more precisely by "the subject (first, second, or third person, animate or inanimate), the meaning of the complement verb, the tense and the aspect of the complement verb, and by adverbs (especially negation markers, modal adverbs)" (2006:112).

appears more evident, at the same time, an epistemic reading cannot be completely excluded. If the modal were analysed here as expressing root modality, the ordering source would be ‘the rules of succession’. If, on the other hand, it were analysed as an epistemic modal, the ordering source would be the ‘belief’, *i.e.* a prediction on the side of the speaker induced by his knowledge about the cultural context of the situation. The verb here is the impersonal existential verb *yǒu* 有 ‘to have; there is’ with an impersonal non-agentive subject.

- (28) 古公曰：「我世當有興者，其在昌乎？」 (Shiji 4,115)
 Gǔ gōng yuē: wǒ shì dāng yǒu xīng zhě,
 Gǔ duke say: I succession DANG have rise NMLZ,
 qí zài Chāng hū
 MOD be.at Chāng SFP
 ‘Duke Gǔ said: ‘Among my successors there should be one who will rise; will it not be Chāng?’

In the following examples, the epistemic reading is induced by particular epistemic or evidential verbs that take a VP with *DANG* as their complement. In example (29), this is the epistemic verb *yǐwéi* 以為 ‘to think, to assume’. Without this verb, which explicitly indicates the belief of the speaker, the modal would express a necessity according to the general rules of succession. The matrix verb, which embeds the modal VP, expresses habituality in the past, accordingly the embedded predicate has to be represented by a past tense.

- (29) 常以為吾父兄弟四人，當傳至季子 (Shiji 31,1461)
 cháng yǐwéi wú fù xiōng dì sì rén,
 always think I father older.brother younger.brother four man,
 dāng chuán zhì Jì zǐ
 DANG hand.on arrive Jì zǐ
 ‘I always thought that among the four brothers of my father it should have been passed on to Jì zǐ.’

Example (30) is more problematic, since it does not express the knowledge or belief of the speaker, but quotes the knowledge that the speaker assumes another individual has. This ‘quotative reading’, although not identical to an epistemic reading, follows similar principles as the latter (Maché 2009:41). In these examples, the modal VP is embedded by the epistemic verb *zhī* 知 ‘to know’, and the evidential verb *dǔ* 睹 ‘to see’, which quotes sensory, *i.e.* auditory evidence (Palmer 2001:22). Both express knowledge due to inference or due to external evidence and can — at least in the latter case — be assumed to express a kind of evidential modality. Evidential modality is usually grouped together with epistemic modality (but see Portner 2009:167f for an alternative view). According to Palmer (2001:8), both express ‘Propositional modality’. Epistemic modality expresses the speaker’s judgement about the proposition, whereas evidential modality expresses the evidence the speaker has for the proposition. Both are distinct from deontic and dynamic modality.

Both verbs select a complement with the existential state verb *yǒu* ‘to have, there is’ as its matrix verb in a construction with a personal subject. The subject assumes the role of experiencer. In the first case, the modal expresses the knowledge of the subject about future events based on facts not related in the utterance. In the second case, the subject relies on some unrelated evidence in his knowledge about a future event.¹³ Again, the event is presented as a past time event by the speaker.

- (30) 周公治魯，太公知其後世當有削弱之患；太公治齊，周
公睹其後世當有劫弑之禍 (Lùnhéng 78.3.6)
Zhōu gōng chí Lǔ, Tài gōng zhī qí hòu shì
Zhōu duke rule Lǔ, Tài duke know his after generation

¹³ Contrary to English *MUST*, which as an epistemic modal is problematic in future context, this is not the case with *SHOULD* (see Coates 1983:65).

dāng yǒu xiāo ruò zhī huàn;
DANG have pare weak SUB trouble
 Tài gōng chí Qí, Zhōu gōng dǔ qí hòu shì
 Tài duke rule Qí, Zhōu duke see his after generation
 dāng yǒu jié shì zhī huò
DANG have rob murder SUB calamity
 ‘When Duke Zhōu was governing Lǚ, Duke Tài knew that his descendants would have the misfortune of being reduced and weakened; when Duke Tài ruled Qí, Duke Zhōu saw that his descendants would endure the calamity of being robbed and murdered.’

As the examples show, the predominant function of *DANG* in Hàn period Chinese is to express root obligation. In most cases, the obligation is induced by laws, rules, by natural laws, or by what is predicted by destiny.¹⁴ In other words, the obligation is rather induced by objective sources than by subjective evaluations, although subjective cases also occur.¹⁵ Purely epistemic or evidential values are in general quite rare and, unless explicitly marked by an epistemic or evidential verb, usually not entirely unambiguous. The root modal meanings vary from requests, *i.e.* performatives, as the strongest form of obligation with *DANG*, to demands, which can be strong or weak, and to predictions. Demands are most frequently attested and seem to represent the core meaning of *DANG*, whereas requests and predictions are comparatively infrequent. A demand is often characterised by an unspecified addressee in an impersonal construction, by passive constructions, or relative clauses. *DANG* is specifically employed in contexts in which the speaker for various

¹⁴ This is particularly the case in the *Lùnhéng*, which is a more philosophical and speculative text than the *Shìjì* as a historiographical text. However, predictions according to destiny also occur in the latter text.

¹⁵ The distinction between objective sources and subjective evaluations is sometimes difficult to draw and always has to account for the norms provided by the cultural context of an utterance.

reasons cannot presuppose that the demanded or requested situation will be executed. A typical case would be that the agent of the requested situation is someone in a hierarchical higher position than the speaker who utters the demand or request. In this case, the indirect way of expressing a demand often with an unspecified agent or with a patient or experiencer subject and an only implied agent, is most appropriate. In the Late Archaic and the Hân period literature, there seems to be a tendency to express strong deontic modality, *i.e.* performative modality, rather indirectly according to the social context in which the modal expressions occur. But this hypothesis can only be confirmed by more profound studies on modal expressions during these periods. However, one of the strongest expressions of deontic modality is indirect and thus provides some evidence for this hypothesis. This is the modal auxiliary verb *kě* in a construction with double negation. The root modal function still prevails in pre-Medieval Chinese while a new function develops besides the strictly modal values; this is the marking of a situation which is supposed to happen in the future *i.e.* a prediction (see Anderl 2004:411 for the use of *DANG* in *Zūtángjī* 祖堂集 [Collection from the Patriarchs' Hall] (10th c. CE), as well as Meisig, 1987:550 and 1988:215 for *DANG* in Buddhist Chinese). This will be discussed in §3.

2.4. The syntax of the auxiliary verb *DANG*

In this small section, a few syntactic characteristics with regard to the position of *DANG* in relation to other syntactic elements modifying the verb will be discussed. Not much evidence can be provided for this analysis, since *DANG* only occasionally appears in combination with additional adverbs, prepositional phrases, the reflexive pronoun *zì* 自, interrogative pronouns, etc., which could provide some evidence for an analysis as an auxiliary verb or an adverb, respectively. The reflexive pronoun *zì* usually immediately precedes the verb in Late Archaic Chinese (Pulleyblank 1995:136, Wèi 2004:147), only a few manner adverbs

such as *fù* 復 ‘again’ can appear between *zì* and the verb (Wèi 2004: 154). Since modal adverbs, aspecto-temporal adverbs, and also auxiliary verbs usually precede *zì*, the position of *zì* with regard to the verb does not provide any evidence for the verbal analysis of *DANG*. However, it can be noted that according to the examples presented, a change of position with regard to auxiliary verbs can be observed in Hàn period Chinese (see also Wèi 2004:152f), *i.e.* *zì* starts to appear preceding auxiliary verbs instead of following them. According to Wèi (*ibid.*), this change of position also involves a change of function of *zì* from a reflexive pronoun to a modal adverb. In the *Shǐjì* and the *Hànshū* 漢書 [Book of the Hàn] (1st c. CE), examples for this change are still extremely rare (see also Wèi 2004:152). This may be due to the fact that in combination with the auxiliary verb *DANG*, instances of *zì* in either position are extremely infrequent.¹⁶ In example (32), *zì* precedes the auxiliary verb, and in example (33), it precedes the matrix verb.¹⁷ In example (33), a modal adverb precedes the auxiliary verb *DANG*. This is the default position of modal adverbs with regard to both auxiliary verbs and aspecto-temporal adverbs (see also example (38) with the modal adverb *bì* ‘certainly’).

(31=17) 自當給喪事服臨者，皆無踐 (Shǐjì 10,434)
zì dāng jǐ sāng shì fúlín
 self *DANG* provide mourning affair mourning.clothes.service

¹⁶ In the *Shǐjì*, there are altogether five instances of *zì dāng* 自當 (including those of *DANG* as a full verb). In the *Hànshū*, there are six instances of *zì dāng* 自當. In the *Shǐjì*, *dāng zì* 當自 is not attested, whereas four instances are attested in the *Hànshū*.

¹⁷ In the *Zhèngfǎ Huājīng* 正法華經 (the earlier translation of the Lotus Sutra from the late 3rd c. CE), both positions are attested. On the other hand, in the *Miàofǎ Liánhuājīng*, *zì* is only attested preceding *DANG*. In the *Fǎxiǎn*, a genuine Chinese text, composed around the beginning of the 5th c. CE, *i.e.* the combination of *zì* with *DANG* is not attested.

zhě, jiē wú jiàn
 NMLZ, all NEG_{Mod} unhemmed.mourning.apparel
 ‘For those who should (themselves) make the provisions for
 the mourning ceremonials, wear mourning clothes and
 perform the mourning services, all of them need not wear
 unhemmed clothes.’

- (32) 使日不附天，亦當自止其處 (Lùnhéng 32.12.13)
 shǐ rì bù fù tiān, yì dāng zì zhǐ qí chù
 if sun NEG attach heaven, also DANG self stop its place
 ‘If the sun were not attached to the heavens, it would still
 stay in its place.’

In example (33), a prepositional phrase appears between the modal auxiliary verb and V₂. This is the default position for prepositional phrases with regard to the modal auxiliary verb *DANG*, and it shares this position with aspecto-temporal adverbs.

- (33) 夫和陰陽，當以道德至誠 (Lùnhéng 80.10.60)
 fú hé yīn yáng, dāng yǐ dào dé zhì chéng
 PRT harmonise yīn yáng, DANG with way virtue reach truth
 ‘Well, in harmonising Yīn and Yáng one should [only] with
 the right way and with virtue achieve the true result.’

In Late Archaic Chinese, interrogative pronouns precede auxiliary verbs, but follow modal and aspecto-temporal adverbs.¹⁸ In the following example, a *wh*-word referring to the object appears in the position below *DANG*. In Late Archaic Chinese, this would strongly

¹⁸ In Late Archaic Chinese, this is the default position for those *wh*-words that refer to the inner argument, the object. According to Aldridge (2010), adjunct *wh*-words (of the *why*-type) precede modal and aspecto-temporal adverbs. However, in his discussion on adjunct *wh*-words, Unger (e.g. 1989:68ff) provides several examples for adverbial (adjunct) *wh*-words following aspecto-temporal adverbs in Classical Chinese. Meisterernst (2004) presents examples for the same word order in relation to a study on Hàn period Chinese.

argue for an adverbial analysis of *DANG*.¹⁹ However, since the example dates from the Hàn period when the position of object *wh*-words starts to change from obligatory preverbal to post-verbal, *in-situ* position, it does not necessarily provide evidence for an analysis of *DANG* as an adverb due to syntactic constraints.

- (34) 即宮車一日晏駕，非大王當誰立者！ (Shǐjì 118,3082)
 jí gōng jū yī rì yànjià, fēi
 if palace carriage one day quiet.yoke, be.not
 dà wáng dāng shuí lì zhě
 great king *DANG* who enthrone NMLZ
 ‘If the emperor has to leave this world one day, unless it was you, who would one enthrone?’

Due to the lack of additional adverbial markers in combination with *DANG*, the arguments for an adverbial analysis are not altogether conclusive. The only possible evidence for an adverbial analysis is not sufficiently reliable, since it involves a syntactic rule that is in the process of changing during the Hàn period. Nevertheless, it has to be stated that syntactic constraints do not argue against a reanalysis of *DANG* as a marker of the future in the same position.

3. THE FUTURE MEANING OF *DANG*

The new function indicating futurity appears occasionally already in Hàn period texts, but only in Wèi Jìn Nánběi cháo Chinese does it occur more frequently as in the following example (13), repeated here as (35). In this example, *DANG* appears in the

¹⁹ There is one example in the supposedly Late Archaic text *Guǎnzǐ* 管子 [Master Guan] that shows the same position of a *wh*-pronoun with respect to *DANG* (<http://hanji.sinica.edu.tw/index.html?>, accessed on April 21, 2011). The *Guǎnzǐ* is one of those texts that were apparently composed at different times by different authors and which were redacted during the Former Han period by Liú Xiàng 劉向 (79-6 BCE).

last of a succession of predicates referring to the past, the present and the future. Past and present are indicated by an aspecto-temporal and a temporal adverb respectively, whereas the future tense is marked by *DANG*.

(35=13) 我所說經典無量千萬億，已說、今說、當說，而於其中
(Taisho 9, no.262, p.31b)

wǒ	suǒ	shuō	jīng	diǎn	wú	liàng
I	REL	tell	classic	scripture	not-have	measure
qiān	wàn		yì,			
thousand	ten-thousand		hundred thousand,			
yǐ	shuō,	jīn	shuō,	dāng	shuō,	ér yú qí zhōng,
already	tell,	now	tell,	<i>DANG</i>	tell,	CON at its middle,

‘Of all the immeasurable thousands, ten-thousands, hundred thousands of sūtras I have recited, which have already been recited, are recited now and will be recited, among all these, ...’

This new function apparently develops from the basic function of modal *DANG* to indicate the strong or weak (objective or subjective) root meaning of obligation (necessity): the modal situation has to be realised necessarily in the future world. This also includes the counter-factual readings of *DANG* that refer to an obligation in the past temporally located following reference time. The function to refer to future contexts in a more neutral way apparently develops from this function to express an obligation or a necessity in the future. This agrees well with the hypothesis that the future tense is closely related semantically to the category of modality, and that modal markers of obligation belong to the lexical sources that have the capacity to develop into markers of the future (Bybee *et al.* 1994:263). A similar path of grammaticalization has been proposed in the semantic map approach in van der Auwera & Plungian (1998: 111), who assume that “postmodal meanings can come from either

possibility or necessity” with FUTURE belonging to these post-modal meanings (cf. Li 2004:27).

According to Gurevič, who presents the most comprehensive analysis of *DANG* to date, in the texts from the 3rd to the 5th century, the future function of *DANG* is more frequently attested than the modal function (Gurevič 1974:119).²⁰ In this period, it gradually replaces the future marker *jiāng* 將 of Late Archaic Chinese (*ibid.* ch. XXI, 110). However, she concedes that it cannot be confined to this function, but evidently displays a wider semantic range, *i.e.* it is still employed in its original modal functions (1974:110, 120). Although *DANG* is one of the possible future markers in the early Buddhist literature and evidently served the purpose of translating future morphology in the Middle Indian and Sanskrit sources of the Buddhist Chinese translation texts, it need not be assumed that this caused its functional extension. The arguments which can so far be presented against this assumption are: (1) future meanings are already occasionally represented by *DANG* in the Hàn period literature, (2) the future meaning of *DANG* is by no means confined to Buddhist translation texts, (3) in the translation text *Miàofǎ Liánhuājīng* future meanings are also regularly represented by the Late Archaic aspecto-temporal adverb *jiāng*.²¹ It appears that in the Buddhist texts, a future (prediction) reading of *DANG* is often induced in those cases, where the subject is represented by a first person, whereas the modal reading is often induced when the subject is an addressee (either in the second or third person), with regard to whom the obligation or suggestion is expressed (see Gurevič 1974:112, 114, 120).²² It can at the same time be noted that

²⁰ Gurevič focuses on the employment of *DANG* in the early Buddhist literature and does not provide any diachronic data on the development of modal *DANG*.

²¹ It rather seems to be the case that the translators of the Buddhist texts employed and extended grammatical means already present in the Chinese language for their translation purposes.

²² Gurevič also notes that the future reading with a second or third person subject is by far less frequent than with a first person subject.

this syntactic feature is not a necessary condition for a future reading of *DANG*, and it evidently does not apply to the earliest instances, which still seem to include some modal value as in the following examples from Hàn period Chinese. In example (36), which is one of a series of similar instances in the *Lùnhéng*, *DANG* is evidently ambiguous between a modal and a future reading. These examples are very similar to those discussed above in that they express a root necessity according to destiny in the future and consequently, also a prediction.

- (36) 命當溺死，故相聚於歷陽；命當壓死，故相積於長平
(*Lùnhéng* 6.1.30)

mìng dāng nì sǐ, gù xiāng jù yú Lìyáng;
destiny *DANG* drown die, therefore mutually gather at *Lìyáng*;
mìng dāng yā sǐ, gù xiāng jī yú Chángpíng
destiny *DANG* crush die, therefore mutually collect at *Chángpíng*
'If their destiny was that they were going to (should) drown
and die, they therefore gathered at *Lìyáng*; and if their
destiny was to be crushed and die, they therefore came
together at *Chángpíng*.'

The following examples from the *Shǐjì* display future prediction. The prediction is explicitly marked by a verb of saying; the speaker utters his confidence in a future situation. In these examples, *DANG* rather expresses epistemic than root modal values; they are ambiguous between a modal and a future reading. In example (37), the matrix verb is again the existential verb *yǒu* 'to have; there is'. In example (38), it is the state verb *dà* 大 'to be big' in its inchoative reading. In the latter, future certainty is explicitly expressed by the modal *bì*. No kind of mand is involved in these examples, and the subject is always a third person subject.

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- (37) 自吾先君太公曰『當有聖人適周，周以興』。(Shiji 32,1478)
 zì wú xiān jūn Tài gōng yuē dāng yǒu shèng rén
 from I earlier ruler Tài gong say DANG have wise man
 shì Zhōu, Zhōu yǐ xīng
 meet Zhōu, Zhōu accordingly rise
 ‘From our late ruler, my grandfather, there is a saying: ‘There
 should / will be a wise man who will meet Zhōu, and thus
 Zhōu will arise.’²³
- (38) 且吾聞箕子見唐叔之初封，曰『其後必當大矣』，晉庸
 可滅乎！ (Shiji 39,1654)
 qiě wú wén Jī zǐ jiàn Tángshú zhī chū fēng,
 furthermore I hear Jī zǐ see Tángshú SUB ASP enfeoff,
 yuē qí hòu bì
 say his descendant certainly
 dāng dà yǐ, Jìn yóng kě miè hū
 DANG great SFP, Jìn hardly can destroy SFP
 ‘Furthermore I heard that when Jī zǐ saw that Tángshú was
 just being enfeoffed, he said: “‘His descendants will/should
 certainly become great, Jin can hardly be destroyed!’ ”

The following example (39) contains the epistemic verb *zhī* with a [-human] subject, the subject of the DANG-phrase is [+/-human] and the verb is a telic verb, nevertheless the future meaning of DANG simply expressing a predication is less ambiguous than in the preceding examples. In example (40), the temporal reading of DANG is supported by the temporal adverbial *hòu bǎi nián* 後百年 ‘afterwards (= after) a hundred years’.

²³ Note that Nienhauser *et al.* (2006:38) translate DANG by ‘will’, that is, indicating future without any modal overtones.

- (39) 非魚聞武王之德，而入其舟；烏知周家當起，集於王屋也
(*Lùnhéng* 51.8.9)
fēi yú wén Wǔ wáng zhī dé, ér rù qí zhōu;
not.be fish hear Wǔ king SUB virtue, CON enter his boat;
wū zhī Zhōu jiā dāng qǐ, jí yú wáng wū yě
crow know Zhōu house DANG rise, gather at king roof SFP
'It is not the case that the fish, having heard about King Wǔ's
virtues, entered his boat and that the crows, knowing that the
house of Zhōu was about to rise, gathered on the king's roof.'
- (40) 東望君子，西望吾夫，後百年，旁當有萬家邑
(*Lùnhéng* 78.3.41)²⁴
dōng wàng jūn zǐ, xī wàng wú fū,
east look.at prince son, west look.at I husband,
hòu bǎi nián, páng dāng yǒu wàn jiā yì
after hundred year, side DANG have ten.thousand family city
'In the west I will look at my son, in the east I will look at
my husband, and after a hundred years, there will be a city of
ten-thousand families beside it [my tomb].'

Most of the Hàn period examples presented still display a more or less evident modal reading, both root and epistemic readings are attested. Both agentive and state verbs follow *DANG*, and they do not show any syntactic differences to the purely modal examples of *DANG*. Mostly, the subject, which can represent the agent, the patient, or the experiencer of the situation expressed by the predicate, is a third and not a first person subject, as has been assumed as a characteristic of the future reading in the early Buddhist literature by Gurevič (1974:112, 114, 120). However, none of the examples involves either the strong obligation according to strict rules or an advice on the part of the illocutionary agent. They rather imply a simple prediction based on experience,

²⁴ This example is a quotation from (*Shiji* 85,2511).

or general cultural, or individual knowledge. Since *DANG* predominantly refers to situations in the future, the modal functions can gradually disappear, and only the implied future meaning can remain to the effect that the non-modal implications are strengthened.

The following examples represent the future reading of *DANG* in the early Buddhist literature. In example (41), it serves to predict that a situation will take place in the future. An additional temporal adverbial with *quèhòu* 卻後 ‘hereafter’ supports the future reading of *DANG*. The verb in this example is telic, the subject is a first person pronoun and *DANG* expresses subjective knowledge on the side of the speaker.

- (41) 問訊已佛語目連。吾卻後七日當下閻浮提
 (Taisho 51, no.2085, p.859c)
 wèn xùn yǐ fó yǔ Mùlián, wú quèhòu qī rì
 greet ASP Buddha talk Mùlián, I hereafter seven day
 dāng xià Yánfóutí
DANG descend Yánfóutí
 ‘After they greeted each other, the Buddha said to Mùlián (Maudgalyāyana): “After seven days I will come down to Yánfóutí (Jambudvīpa) again.”’

In the following example, the subject of the *DANG*-phrase is a third person subject. The sentence includes an additional temporal adverbial referring to speech time. Here again, the speaker conveys her subjective knowledge.

- (42) 今日國王臣民皆當迎佛。我是女人。何由得先見佛
 (Taisho 51, no.2085, p.859c)
 jīnrì guó wáng chén mǐn jiē dāng yíng
 today state king minister people all *DANG* welcome

fó. Wǒ shì nǚ rén, héyóu dé xiān jiàn fó
 Buddha. I COP female person, how can first see Buddha
 ‘Today all the kings of the states, the ministers, and the
 people will welcome the Buddha. I am a woman, how could I
 meet him first?’

In example (43), a temporal adverbial in sentence initial position supports the future reading of *DANG* even without the employment of *hòu* (which refers to a situation posterior to reference time). The subject of the telic complement of *DANG* displays the feature [-human]. In this example, *DANG* again expresses future prediction according to subjective knowledge or belief.

- (43) 若干百年當至于闐國。住若干百年當至屈茨國
 (Taisho 51, no.2085, p.865c)
 ruògān bǎi nián dāng zhì Yútiàn guó,
 certain.amount hundred year *DANG* arrive Khotan country,
 zhù ruògān bǎi nián dāng zhì Qūcí guó
 stay certain.amount hundred year *DANG* arrive Kucha country
 ‘After several hundred years it (the Buddha’s almsbowl) will
 arrive in the country of Khotan; after staying there for several
 hundred years it will arrive in the country of Kucha.’

In example (44), *DANG* appears in a temporal clause within a conditional sentence which again supports the future reading. It has a first person subject who expresses his intentions. The verb is an agentive activity verb.

- (44) 如其下此沙門。吾到漢地當向國王言汝也
 (Taisho 51, no.2085, p.866a)
 rú qí xià cǐ shāmén, wú dào Hàn dì
 if MOD put.down this Shramana, I arrive Hàn region

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dāng xiàng guó wáng yán rǔ yě
 DANG to country king tell you SFP
 ‘If you put this Shramana down [from the boat], I will, as soon as I arrive in Hàn, talk to the king of the country about you.’

In example (45), *DANG* appears in the apodosis of a conditional sentence. Modal or temporal markers referring to the future frequently appear in this position. The subject in the third person displays the role of experiencer and the verb is a state verb.

- (45) 若說是事，一切世間諸天及人皆當驚疑
 (Taisho 9, no.262, p.6c)
- ruò shuō shì shì, yīqiè shìjiān zhū tiān jí
 if talk this matter, whole world PL deva and
 rén jiē dāng jīng yí
 man all DANG startle doubt
 ‘If I talk about this matter, the entire world, all the devas and human beings will be astonished and doubtful.’

In example (46), the agentive subject expresses its future intentions. A derivation from the obligation reading of *DANG* can be assumed in this case. The verb is telic.

- (46) 汝等於此火宅、宜速出來，隨汝所欲，皆當與汝
 (Taisho 9, no.262, p.12c)
- rǔ děng yú cǐ huǒ zhè, yí sù
 you PL PREP this fire house, appropriate quick
 chū lái, suí rǔ suǒ yù, jiē dāng yǔ rǔ
 go.out come, then you REL wish, all DANG give you
 ‘You must quickly leave this burning house, and then, whatever you want, I will give it to you.’

According to the examples above, *DANG* apparently develops its purely future reading rather on the basis of its epistemic than its root modal functions. This is particularly obvious in the earliest

instances of a future reading of *DANG*. In particular, sentences with a first person subject express the subjective knowledge or belief of the speaker that the facts he/she relates will be true in the future world and not her obligation to perform a future situation. However, in example (46), *DANG* expresses a future intention that is closely related to an obligation. While *DANG* develops its new future reading, the modal values particularly of root obligation are still regularly attested with *DANG* in the Buddhist literature (see Meisterernst 2011). This function is represented by the following, rather typical example, which contains an addressee subject referring to the agent/experiencer of the required situation. The verb in (47) is an atelic mental state verb. Besides cases like this, many fuzzy cases exist that are ambiguous between a modal and a temporal reading. In example (47), the modal reading is enforced by the deontic negative marker in the parallel clause.

- (47) 諸族姓子，悉當信佛誠諦至教，勿得猶豫
 (Taisho 9, no.263, p.113a)
- | | | | | | |
|---------|---------------------|--------------------|-------------|---------|--------|
| zhū | zúxìng | zǐ, xī | dāng | xìn | fó |
| all | good.family son, | completely | <i>DANG</i> | believe | Buddha |
| chéngdì | zhìjiào, | wú | dé | yóuyù | |
| truth | excellent.teaching, | NEG _{Mod} | get | doubt | |
- ‘All you sons of good families should believe in the Buddha’s truthful and most excellent teaching, and should not have any doubts.’

Sometimes the modal reading of root obligation is unambiguously expressed by the combination *yīngdāng* 應當, as in the following example. This combination is still attested as a disyllabic modal auxiliary in Modern Chinese (see Alleton 1984:195, Li 2004:175f). In this example, the speaker is at the same time the agent of the modally marked situation.

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- (48) 我有如是七寶大車，其數無量，應當等心各各與之，不宜差別
 (Taisho 9,no.262, p.12c)
 wǒ yǒu rú shì qī bǎo dà chē, qí shù wú
 I have like this seven jewel great carriage, its number not.have
 liàng, yīngdāng dèngxīn gè gè yǔ zhī,
 measure, YINGDANG equal.minded each each give OBJ,
 bù yí chābié
 NEG appropriate difference
 ‘I have carriages like these adorned with the seven jewels,
 their number is measureless, I should be even-minded and
 give them one each, and I should not make any distinction.’

4. CONCLUSION

Four different functions of *DANG* are attested in in Pre-Táng Chinese:

- (a) as a full verb with the basic meaning ‘to match, to correspond’,
- (b) as a temporal and local preposition ‘at’,
- (c) as a modal auxiliary verb expressing necessity: predominantly expressing root (or deontic) modal values, roughly corresponding to modal *SHOULD* in English,
- (d) expressing future tense.

Whereas all four functions are attested in the later literature simultaneously, the function as full verb can obviously be taken to be the basic function from which all other functions derive. As a full verb, *DANG* can be either intransitive or transitive. As a transitive verb it originally takes a nominal complement. Its function as a modal auxiliary verb only develops with the additional licensing of a verbal complement. The prepositional and modal functions are regularly attested from the Hàn period on. The future reading only appears more frequently after the Hàn period.

Table 1: The different functions of *DANG* (excluding the prepositional function)

Function	Late Archaic Chinese	Hàn period Chinese	post-Hàn period Chinese
full verb	+	+	+
root modal aux	+(rare) ²⁵	+(frequent) ²⁶	+(frequent)
epistemic aux	?	+(rare), context	+(rare), context
future	–	+(rare)	+(frequent)

Two possible sources for the development of the future reading can be assumed:

- (a) The future reading is the result of a semantic bleaching of the root modal meanings and the strengthening of former non-referential implicatures, namely, the future meaning implied in the original root meaning.
- (b) The future reading develops from the marked epistemic readings of *DANG* often induced by the employment of epistemic verbs.

In the epistemic examples, a prediction according to knowledge or belief is expressed and the same applies to many of the future examples discussed in this paper, in particular to those with a first person subject which comprise the majority of examples (according to Gurevič). Since other modal markers (such as the predominantly epistemic *bi*) precede *DANG*, and since the verbal

²⁵ I do not intend to provide exact statistics here. In my estimation, between 30 and 40 instances (out of over 500) of *DANG* followed by a VP complement occur in the Academia Sinica database of Pre-*Shiji* Archaic (*shànggǔ* 上古) literature (<http://hanji.sinica.edu.tw/index.html?>, accessed April 20, 2011). Most occurrences are restricted to late Warring States texts or to texts for which the exact date of origin is difficult to determine.

²⁶ Of the more than 200 instances of the auxiliary verb *DANG* in the *Shiji*, around 80% express root modal values; the other 20% express either epistemic modal or future meanings.

complement of *DANG* is quite confined in its structure (that is, the verb is usually not further modified by *e.g.* aspecto-temporal adverbs or negative markers), no syntactic change has to be involved with its reanalysis as a future marker.²⁷

In Hàn period Chinese, modal *DANG* is basically employed to express the root modal values of obligation and necessity. Although it can be employed in direct commands and performatives, it predominantly appears in indirect suggestions uttered by the speaker with regard to the agent of a mostly telic agentive verb; the obligation is based on laws, rules and norms. A quite typical situation for the employment of root *DANG* would be one in which the speaker, a political advisor, proposes a particular action to an addressee superior to him in hierarchy and accordingly a more indirect modal marker to convey the obligation has to be employed. The speaker does not necessarily expect compliance on the side of the agent, which is frequently only implied (with experiencer and patient subjects of passivised telic verbs). Already in the *Shǐjì*, but more and more in the *Lùnhéng*, *DANG* also expresses root modal values according to destiny. This is certainly one of the possible sources of its development into a simple future prediction. As with *SHOULD* in English, with *DANG* too, the modal force of obligation is weaker than with *MUST*. The strength of obligation is induced by the strength of the ordering source for the modal. With strict laws, these ordering sources imply a stronger obligation than that predetermined by destiny. Those modals which express root obligation are usually objective, while those which express an obligation according to natural laws, destiny, or laws of fairness seem to be more subjective or ambiguous between a subjective and an objective reading. Contrary to English *SHOULD*, which in its

²⁷ Only *wh*-pronouns with argument status, the reflexive pronoun *zì*, and manner adverbs (see example 12) seem to appear preceding the matrix verb. In combination with modal *DANG* a future marker could be expected, as it occurs *e.g.* in combination with *bì*, but this combination is not attested.

objective meanings is mostly counter-factual, *DANG* is only counter-factual in past tense contexts, which are much less frequent than future tense contexts, but which are the default case when *DANG* is negated by the aspectual negative marker *wèi*.

Epistemic values are in general rare and are mostly additionally marked by an epistemic or evidential verb. Accordingly, they are strongly induced by a particular context, so that a development from root to genuine and independent epistemic meanings does not seem to be relevant in the development of *DANG*. However, there is a clear tendency of *DANG* to express simple predictions: in root contexts according to predetermination by destiny, without any ‘mand’ involved, and in epistemic contexts according to the speaker’s knowledge or belief. This function evidently licenses the development of the purely temporal function of *DANG* referring to the future. Not infrequently, a future meaning is supported by additional temporal adverbials referring to a point of time in the future, most frequently a combination of adverbials with *hòu* 後 ‘after, afterwards’.

In the Buddhist literature, there is a strong tendency to have a future reading with a first person subject and a modal obligation reading with a second or third person subject referring to the addressee and the specified agent of the required action. Accordingly, in the Buddhist literature, an obligation with *DANG* is more directly expressed than in the Hàn period literature (Meisterernst 2011). In the modal reading of *DANG* in general, speaker and agent of the requested action are not identical, whereas in the future reading with a first person subject they are. For the above-mentioned reasons, there is apparently no change of position involved with the functional reanalysis of *DANG* as a future marker, at least not in the texts studied here.

Table 2: Syntactic properties

Syntactic context	root	epistemic	future
Verb: diathesis	active, passive	passive, active (?)	active, passive
Verb: situation type	telic, state (impersonal existential verb) (rare)	state	usually telic
Subject: Semantics	[+human]; [-human] (rare); personal, impersonal	[+human], personal, impersonal	[+human], [-human] (rare)
Subject: deictic category	third person (addressee and non-addressee), second person (addressee), first person (rare)	third person	first person (frequent); third person
Subject: thematic role	agent, experiencer, patient	experiencer, patient	agent, experiencer
Additional syntactic means		epistemic, evidential verbs	temporal adverbials

All functions attested for *DANG* exist simultaneously in the early Buddhist literature. Accordingly, although it can be stated that *DANG* shows some typical features of grammaticalization, *i.e.* the

development from a full verb to the more functional category of a modal auxiliary verb and later additionally the development of the post-modal function as a future marker, this process cannot be directly compared to that of *e.g.* the English modals. The development of *DANG* can certainly not be considered unidirectional in the sense that the more functional categories gradually replace the lexical meanings, since both exist simultaneously during the last two millennia. Additionally, it is not the most abstract function as a future marker which prevails in history, but rather the full lexical, and the root modal functions, especially in compounds with other modal auxiliary verbs. Furthermore, in its history as studied so far, *DANG* does not show any real development from deontic to epistemic meanings. The latter ones are apparently at all times rare and highly context-dependent and even now modal auxiliary verbs containing *DANG* are analysed as expressing deontic modality. Consequently, the data presented provides some evidence to challenge the general assumptions about a universal grammaticalization path of modal auxiliary verbs, but a more comprehensive study is required to eventually present a coherent analysis of the diachronic development of the system of modal markers in Chinese.

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