
The Semantic Development of *sollen* and *wollen*

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All six German modal verbs – *dürfen*, *können*, *mögen*, *müssen*, *sollen*, and *wollen* – serve two main functions. One of these is to denote the state or condition of the subject (e.g., obligation, volition, ability, etc.) in relation to the remainder of the proposition, as is shown in (1) and (2):

- (1) *Axel soll seine Großmutter besuchen.*
'Axel is supposed to visit his grandmother.'
- (2) *Axel will den Kuchen essen.*
'Axel wants to eat the cake.'

In (1), *soll* indicates Axel is under some sort of obligation to visit his grandmother, while *will* in (2) signifies that Axel has a strong desire to eat the cake. This use of the modal verbs is commonly referred to as “lexical” (Jäntti 172) or “deontic” (Diewald, *Grammatikalisierung* 24). The other use, labeled “grammatical” (Jäntti 172) or “epistemic” (Diewald, *Grammatikalisierung* 24), focuses more on the speaker’s relation to the entire proposition:¹

- (3) *Axel soll seine Großmutter besucht haben.*
'Axel supposedly visited his grandmother.'
- (4) *Axel will den Kuchen gegessen haben.*
'Axel claims to have eaten the cake.'

Soll in (3) and *will* in (4) do not link the subject to the remainder of the proposition as they do in (1) and (2); instead, they indicate that the speaker is attributing the truth of the statement to someone other than himself. In (3), *soll* points to an unspecified third party as claiming Axel visited his grandmother. *Will* in (4) points to the subject—Axel himself—as the source of information. A more typical use of the epistemic modals, as attested by *muss* in (5), is to signify the speaker’s assessment of a proposition (i.e., the likelihood of a statement being true or false):

- (5) *Axel muss krank sein.*
'Axel must be sick.'

Here, the speaker concludes—with a high degree of certainty—that Axel is sick. *Sollen* and *wollen* are unique, as already pointed out, in that they allow the speaker to attribute the source of a proposition to someone other than himself. *Sollen* and *wollen* are also unique in their deontic use because they can provide different perspectives of the same scenario (Duden 98):

- (6) *Axel soll sein Zimmer aufräumen.*
 ‘Axel is supposed to clean up his room.’
- (7) *Sabine will, dass Axel sein Zimmer aufräumt.*
 ‘Sabine wants Axel to clean up his room.’

Soll in (6) indicates that Axel is under some sort of obligation to clean up his room, and in (7), the source of this obligation is identified (via *will*) as Sabine’s desire. This juxtaposition of obligation and volition need not explicitly be stated, but it nonetheless exists.

Deontic and epistemic uses of the modal verbs have not always existed in German. Rather, they are the result of grammaticalization—a process in which lexical items assume grammatical meaning, sometimes causing an item’s original lexical meaning to vanish completely (Hopper and Traugott 1-17; Diewald, *Grammatikalisierung* 1-20). For example, *haben*, in its most lexical use, indicates possession (as in *Wir haben vier Kinder* ‘We have four children’). But *haben* has developed a more grammatical(ized) use, that of indicating the perfect (as in *Ich habe gegessen* ‘I have eaten/ate’). This use of *haben* is a more recent innovation in German (Diewald, *Grammatikalisierung* 4-7). The process of grammaticalization affecting the modal verbs has been one of semantic change with subsequent syntactic alterations (Diewald, *Die Modalverben* 31ff.; Whitt 15ff.). The epistemic use of modal verbs, as attested in (3)-(5), is more grammaticalized than the deontic use of modals in (1) and (2) because, rather than indicating a tangible, real-world relationship between the subject and a proposition, they signify the speaker’s relationship to the entire proposition as one of abstract logical reasoning (cf. Sweetser 49-75): the speaker assesses, with varying degrees of certainty, the truth of the proposition. Similarly, lexical items such as nouns and adjectives can be defined in concrete terms and provide the core of a sentence’s meaning, while grammatical items like prepositions and conjunctions indicate more abstract relationships between the lexical items. This is why the epistemic modal verbs are considered more grammaticalized than their deontic counterparts.

History also attests this reality, for in earlier periods of German, the deontic modals appeared prior to—or at least with greater frequency than—the epistemic modals, and the emergence of epistemic modals out of their deontic counterparts

is quite clear. A diachronic (historical) survey of the development of *sollen* and *wollen* would shed light on how the epistemic meanings of (3) and (4) arose out of the deontic meanings in (1) and (2). Attempts to explain the disparate uses of modal verbs in New High German that do not take history into account (Langacker; Fagan) fall short of a holistic explanation of *why* the current system is the way it is and *how* it became this way, while those who have examined the diachronic development of the German modal verbs (Diewald, *Die Modalverben*) do not fully account for the similarity between *sollen* and *wollen*. My goal in this paper is to fill in this gap.

I will begin my examination of *sollen* and *wollen* with Proto-Germanic, taking note of these verbs' oldest Germanic forms and meanings. Then, I will move into Old High German to show how, even though *sculan* and *wellen* are not as grammaticalized as their New High German counterparts, these two verbs already participate in the early stages of grammaticalization. Next comes Middle High German, a period in which the grammaticalization process moves into full swing. Finally, I will (re)examine the New High German *sollen* and *wollen* to see the full effects of these changes.

Proto-Germanic

Before discussing the semantic histories of *sollen* and *wollen*, it is important to understand these two verbs' original semantic make-up, and this is best achieved by examining *sollen*'s and *wollen*'s Proto-Germanic sources. With the exception of *wollen*, the German modal verbs are derived from a small-group of Proto-Germanic verbs known as Preterite-Presents: stative verbs (verbs that indicate a state of the subject rather than describe an action) whose preterite form signified present meaning, thereby necessitating the emergence of a second preterite form to indicate past meaning (Birkmann 62-66). The Proto-Germanic sources of the modal verbs are (the asterisk indicates linguistic reconstruction):

- (8) **þurban* 'to need, be in want of' for *dürfen*
- (9) **kunnan* 'to know, recognize, understand' for *können*
- (10) **magan/mugan* 'to be able to, to have power to' for *mögen*
- (11) **motan* 'to have space or opportunity to' for *müssen*
- (12) **skulan* 'to owe' for *sollen*

**skulan*'s sense of 'to owe' arose from a sense of decision making, which, Birkmann postulates, gradually assumed shades of obligation and indebtedness (85): 'I have decided for myself' to 'I have allotted for myself' to 'It is allotted to me, it is my part/share' to 'I am obligated to do (something), I owe.' This sense of obligation later

appeared as ‘I shall, must, will’ in the modal domain. *Wollen* finds its root in **waljan*, an Indo-European optative—a verbal mood that expressed wish or desire—which in Germanic came to be used as an indicative. Similar to the development of a second preterite form among the Preterite-Presents, this use required the emergence of a new optative form (Hennings 114-116).

Old High German (OHG)

OHG *sculan* signified obligation or necessity (Schützeichel 259; Diewald, *Die Modalverben* 321-322), and in its pre-modal form, it appeared as the only verb in the clause:

- (13) Tatian (ed. Sievers) 108,3: *uuio filu scalttû mînemô
hêrren?* (Diewald, *Die Modalverben* 322).
‘How much do you owe to my lord?’

Because it is the only verb in the clause, *scalttû* is not yet in the deontic (modal) domain because it does not modify the subject’s relationship with some other action (via an infinitive complement); instead, it is closer to **skulan*’s original stative meaning (Diewald, *Die Modalverben* 307-308; cf. Traugott 43). Of course, a deontic value is also attested in OHG because *sculan* frequently couples with an infinitive complement and signifies an obligation or necessity for some event to come to pass:

- (14) Tatian (ed. Sievers) 156,2: *Ob ih vvnosc iuuuere fuozzî
hêrro inti meistar, inti ir sulut ander anderes fuozzî uuasgan*
(Lühr 170).
‘If I, your Lord and Master, have washed your feet,
so you also have to wash each other’s feet.’
- (15) Tatian (ed. Sievers) 197,6: *uuir habêmês êuua, inti after
êuu sal her sterban, uuanta her sib gotes sun teta* (Diewald,
Die Modalverben 323).
‘We have a law and by the law he has to die, for he
has made himself to be God’s son.’

An epistemic *sculan* is not attested in OHG, but wide-scope readings—readings in which the modality applies not only to the subject, but to the entire proposition—are sometimes possible:

- (16) Tatian (ed. Sievers) 14,2: *ib scal fon thir getoufit uerdan inti thû quimist zi mir* (Diewald, *Die Modalverben* 420).
‘I have to be baptized by you, and you come to me.’
- (17) Tatian (ed. Sievers) 4,11: *Antlingôta thô sîn muoter inti quad: nio in altare, ûzar sîn nam scal sîn Jôhannes* (Diewald, *Die Modalverben* 420).
‘Then his mother answered and said: never, rather his name has to be John.’

The alternate wide-scope readings are ‘It is necessary that I be baptized by you’ (16) and ‘It is necessary/must be that he be called John’ (17). These wide-scope readings are certainly not mandatory, but their mere existence points to increased grammaticalization because wide-scope uses can be more grammaticalized than narrow-scope uses (Lehmann 305-310; Whitt 59-60). Among the modal verbs, wide-scope is typical of epistemic meaning because the entire proposition falls within the scope of the modality, whereas deontic meaning usually has narrow scope because only a portion of the proposition is modified (Diewald, *Die Modalverben* 2-3, 21). These wide-scope, deontic uses consequently hint at the emergence of epistemic meaning.

OHG *wellen* ‘to wish, want, intend’ (Schützeichel 314), as with *sculan*, attests pre-modal and deontic values. In its pre-modal form, it appears as the only verb in the clause, taking a nominal (rather than infinitival) complement:

- (18) Tatian (ed. Sievers) 56,4: *ib ûnili miltida, nalles bluostar* (Diewald, *Die Modalverben* 328).
‘I want compassion, not sacrifice.’

Deontic *wellen* is also quite frequent in OHG, whereby the modality of volition is associated with another action:

- (19) Tatian (ed. Sievers) 154,1: *uuaꝥ uuollet ir mir geban?* (Diewald, *Die Modalverben* 327).
‘What do you want to give to me?’
- (20) Tatian (ed. Sievers) 128,6: *Her uuolta thô rebtfestiûgôn sih*

selbon . . . (Diewald, *Die Modalverben* 327).
 ‘He wanted to justify himself then . . .’

Whereas *sculan* does not attest any epistemic value, *wellen* has one epistemic use: indicating future time, a function never free of other modal meanings (Bybee, Pagliuca, and Perkins 22ff.). In fact, OHG *wellen* was often employed to indicate futurity (Braune 251; Diewald, *Die Modalverben* 329). It was also often associated with a sense of volition (Krooks 41), and this is why signifying future time is weakly epistemic because the speaker not so much comments on the truth value of the proposition, but rather makes a prediction about an upcoming state of affairs, and other modal meanings (such as the subject’s volition) generally are also present:

- (21) Williram von Ebersberg, *Exposito in Cantica Canticorum* (Breslau Manuscript, Bartelmez’ Critical Ed.) 60G1: *Ích uuil uáran ze démo mírre berge. unte ze démo uuîrôuch búbele. Ích uuil mih dén nában. qui terrene despiciunt. unte dîe der carnem suam cum uitiis et concupiscentiis mortificant. unte dîe der ôuh mîr ópfer bringent des diemúotigen únte des rêinen gébetes* (Krooks 36-37).
 ‘Now I want to/will go to the myrrh mountain and to the incense hill. I want to/will draw near to those who despise earthly things and who abuse their flesh with vices and carnal desires and who also bring to me the sacrifice of humble and pure prayer.’

Here, the speaker not only signifies future time with *wellen*, but also indicates a sense of volition in relation to the performing of this future action.

Middle High German (MHG)

In MHG, a pre-modal use of *suln/siiln* is not attested. On the other hand, *suln*’s meaning was expanded to include permission (Hennings 128). When used to express permission, *suln* was quite similar to New High German (NHG) *dürfen*:

- (22) Von Eschenbach, *Parzival* (ed. Lachmann) 12, 620,1ff.: *dô sprach er frouwe, tuot só wol, / ob ich inch*

des biten sol, / lát mînem namen unrekant (Diewald, *Die Modalverben* 323).

‘He said: “Lady, be so good, in case I therefore may ask you—do not reveal my name.”’

- (23) Das Nibelungenlied (trans. Bartsch & de Boor) 878,1: *Urluop si gewonnen, daz si für solden gân* (Diewald, *Die Modalverben* 324).
 ‘You received permission that you might step up.’

This permissive use of *suln* probably derives from the Proto-Germanic sense of ‘it is allotted to me, it is my part/share’ (Birkmann 85): what is allotted to you is what you are able (i.e., what you are allowed) to work with. And given that metalinguistic contexts can play a large role in semantic change (cf. Traugott 34-35), the source of allotment could have been viewed as external to the subject, and therefore as a metalinguistic permission-giver, so that *suln* need no longer solely indicate modality exclusive to the subject. An epistemic *suln* emerges in MHG, most notably the signifying of future time (Paul 369-370):

- (24) Das Nibelungenlied (ed. Bartsch) 1452,4: *ir sult ir willekommen sîn* (Paul 369).
 ‘You shall be welcome here.’
- (25) Die Gedichte Walthers von der Vogelweide (ed. Lachmann) 77,1: *got sol uns helfe erzeugen* (Paul 369).
 ‘God shall show us help.’

Other modal meanings (e.g., volition in (25)) may still be present, but the indication of future time should be obvious. The quotative use of *suln*, which is epistemically stronger than the signaling of futurity because the focus of the modality falls solely on the speaker’s assessment of the proposition, begins to arise in MHG. Here, the speaker does not personally reflect on the truth value of the proposition (e.g., logical necessity, possibility, etc.), but only claims that someone else asserted a truth (Diewald, *Die Modalverben* 418ff.). It only appears, however, in restricted contexts:

- (26) Von Eschenbach, Parzival (ed. Lachmann) 4, 197,17f.: *sölch ellen was ûf in gezalt: / sebs ritter solter hân gevalt* (Diewald, *Die Modalverben* 420).

‘Such eagerness in battle was written about him: he supposedly killed six knights.’

- (27) Van Straßburg, *Tristan* (ed. Weber) 18833ff.:
*dannoch vor nacht do wart der schal / in dem lande vliiegend
 über al, / daz der stolze Kaedin / uz geritten solte sin / in
 offener reise* (Diewald, *Die Modalverben* 421).
 ‘For before night the news spread throughout the
 land that the proud Kadin in an open rebellion
 supposedly had ridden out.’

The reported speech indicated by *suln* is already introduced elsewhere in the construction (Diewald, *Die Modalverben* 420-421), e.g., *was . . . gezalt* in (26) and *do wart der schal* in (27). With the quotative epistemic use of *suln*, the deontic value of obligation becomes associated with the “obligation” to consider a stated proposition as true: we are “supposed to” believe the proposition is true because someone else has claimed that it is true. But since the speaker/writer only reports someone else’s assertion and personally distances himself from the actual truth value of the proposition (“The speaker/writer claims that someone else claims that the proposition is true”), this use of *suln* is epistemic because it signifies the speaker’s comments on the truth value of a proposition, and not on some condition placed upon the sentential subject (e.g., obligation).

Wellen in MHG does not significantly differ from OHG *wellen* in its possible uses: both can signify volition or be used epistemically to signal futurity (Hennings 114-116). *Wellen* can deontically signify the subject’s wish or desire:

- (28) Des Minnesangs Frühling (ed. Moster & Tevooren,
 36th ed.) 6,26.30: . . . *swie du wilt so wil ich sîn* (Paul
 370).
 ‘As you wish, so will I be.’
- (29) Das Nibelungenlied (trans. Bartsch & de Boor)
 1893,3: *si wolden Volkéren ze tóde erslagen hân*
 (Diewald, *Die Modalverben* 425).
 ‘They wanted to have Volker smitten to death.’

Wellen continues to epistemically denote future time, but as with all indications of futurity, a sense of prediction or volition is also present (Paul 370):

- (30) Kaiserchronik (ed. Schröder) 12320: *dû wilt von ir grôzen scaden gewinnen* (Paul 370).
‘You will gain from her great harm.’
- (31) Das Nibelungenlied (ed. Bartsch) 1031,4: *ir welt iuch alle vliesen, welt ir dir recken bestân* (Paul 370).
‘You will all be lost if you wish to challenge the warriors.’

Most notably, MHG *wellen* occasionally attests a strong epistemic use when it is coupled with a helping verb and past participle; much like *suln*, its strong epistemic function is to indicate reported speech (Diewald, *Die Modalverben* 424-426). The difference, however, is that *wellen* signifies that the subject— rather than some third party—asserts that the proposition is true:

- (32) Kaiserchronik (trans. Vollmann-Profe) 16995ff.: *si wolten dar in sîn geslichen: / dô was der snê sô michel, / si nehêten wek noch phat* (Diewald, *Die Modalverben* 426).
‘They claimed to have crept there, yet the snow was so high that they had neither way nor path.’

Such a development should come as no surprise when the semantic similarities between *suln* and *wellen* are considered. The obligation denoted by (deontic) *suln* originates from someone other than the subject, i.e., external to the subject. *Wellen*, on the other hand, signifies volition internal to the subject (Diewald, *Die Modalverben* 165). This distinction also appears in the epistemic domain (Whitt 73): quotative *suln* points to someone external to the subject as the source of the original proposition, but quotative *wellen* indicates that the sentential subject himself is the source of the proposition. The sense of obligation to believe the proposition to be true metaphorically signified by quotative *suln* contrasts with the sentential subject’s desire for everyone to believe that the proposition is true (‘The sentential subject wills the proposition to be true’) that is hinted at by quotative *wellen*.

New High German (NHG)

In NHG, indicating obligation or necessity is *sollen*’s deontic function:

- (33) Veit Dietrich, *Etliche Schriften für den gemeinen*

man (ed. Reichmann) 97,23: *Aber du solt jm nicht folgen* (Diewald, *Die Modalverben* 324).
 ‘But you are not supposed to follow him.’

- (34) *Hunde sollen an der Leine geföhrt werden* (Duden 98).
 ‘Dogs are supposed to be lead on the leash.’

Sollen could occasionally signify permission in early NHG, but such attestations are ambiguous because the sense of obligation can still be understood:

- (35) Veit Dietrich, *Etliche Schriften . . .* (ed. Reichmann) 95,8ff.: *Förchten sollen wir jn / vnd vns für jm demütigen / darumb das wir arme sündler sind / Widerumb sollen wir vns freuen / Denn Got hat vnsere sünde von vns genommen* (Diewald, *Die Modalverben* 325).
 ‘We are supposed to fear him and humble ourselves before him because we are poor sinners. On the other hand, we may/are supposed to be happy, for God has taken our sins from us.’

During the sixteenth century, when *dürfen* became the primary way to indicate permission, *sollen* was relegated to denoting only obligation/necessity (Diewald, *Die Modalverben* 324-325). In the epistemic domain, NHG *sollen* can occasionally signify futurity, but only the preterite form *sollte* may be used in this function (Duden 101):

- (36) *Wir sollten nichts mehr von ihm hören oder sehen* (Duden 101).
 ‘We should hear or see nothing more of him.’

On the other hand, the quotative use of *sollen* has greatly increased since MHG. And in NHG, quotative *sollen* is not as contextually restricted because it need no longer be directly linked to reported speech: an explicit introduction to the indirect discourse—as in (26) and (27)—is no longer necessary, and as with the other modal verbs, the syntactic co-occurrence of *sollen* with a helping verb and past participle ensures a quotative, epistemic interpretation (Diewald, *Die Modalverben* 421-423):

- (37) Veit Dietrich, *Etliche Schriften . . .* (ed. Reichmann) 85,21: *Da sol Benedictus gesagt haben . . .* (Diewald, *Die Modalverben* 423).

‘There Benedictus supposedly said . . .’

- (38) Fürther Nachrichten (Jan. 21 & 22, 1995): *Der Arzt und die Kosmetikerin sollen 1993 noch zwei Morde geplant haben* (Diewald, *Die Modalverben* 282).
 ‘The doctor and the beautician supposedly planned two additional murders in 1993.’

As we already discussed, the speaker does not comment on the truth value of the proposition with the quotative *sollen*, but rather just reports that some third party claims that the proposition is true. Most other epistemic modals signify the speaker’s direct assessment of a proposition’s truth (see (5), for example).

Wollen in NHG can still appear in its pre-modal meaning, whereby a direct object, rather than an infinitive complement, is taken:

- (39) *Axel will das Auto.*
 ‘Axel wants the car.’

Deontically, *wollen* takes an infinitive complement and signifies the subject’s volition:

- (40) Veit Dietrich, *Etliche Schriften . . .* (ed. Reichmann) 90,22ff.: *Aber er antwortet jr kein wort / das ist / er wil sie nicht hören* (Diewald, *Die Modalverben* 329).
 ‘But he answered her no word, that is, he does not want to hear her.’
- (41) *Hanna will Peter ein Buch schenken* (Duden 101).
 ‘Hanna wants to give Peter a book.’

Wollen could still signal futurity in early NHG, and if the subject were living, a sense of volition would also be indicated; if the subject were nonliving, a sense of prediction would be present:

- (42) Lutherbibel, Matt. 4-19: *Ich wil euch zu den Menschen fischern machen* (Kudo 113).
 ‘I will make you fishers of men.’
- (43) Veit Dietrich, *Etliche Schriften . . .* (ed. Reichmann)

107,23ff.: *Vnd weyl wir alle gebrechlich sind / vnd sebr vil in vns finden / das siind / vnd strefflich ist / so will von nöte sein / das wir alle tag solche gebrechen in vns fein erkennē* (Diewald, *Die Modalverben* 332).

‘And because we are all infirm and find much in ourselves that is sinful and punishable, so it will be necessary, that we always recognize clearly such infirmities in ourselves.’

This use of *wollen* has died out because *werden* took over the role of indicating futurity in the seventeenth century (Diewald, *Die Modalverben* 329), although some traces of future *wollen* are still attested:

- (44) *Wir wollen uns Mühe geben, damit wir das gesteckte Ziel erreichen* (Duden 102).
‘We will take great pains so we reach the arranged goal.’

The strong epistemic, quotative *wollen* has increased in usage since MHG times because, as with *sollen*, the helping verb and past participle environment mandate such a reading (Diewald, *Die Modalverben* 427-428):

- (45) Veit Dietrich, *Etliche Schriften . . .* (ed. Reichmann) 114,28f.: *Das dritte ist die verantwortung / das er nit wil vnrecht gethan haben* (Diewald, *Die Modalverben* 427).
‘The third is the excuse that he claims not to have done wrong.’
- (46) *Sie will schon dreimal in Amerika gewesen sein* (Duden 102).
‘She claims to already have been in America three times.’

Quotative *wollen* can also appear outside of the helping verb + past participle context, but only if another helping verb (e.g., *sein*) or modal verb is also present:

- (47) *Mein Freund Ewald will schneller laufen können als der Landesmeister* (Duden 102).
‘My friend Ewald claims to be able to run faster than the state champion.’

Conclusion

Both *sollen* and *wollen* attest a similar history of semantic change and grammaticalization. In OHG, *sollen* and *wollen* could appear in their pre-modal forms, taking a direct object rather than an infinitive complement. *Sollen* and *wollen* could also appear in their deontic values, signifying obligation/necessity and volition, respectively. And already in OHG, they display tendencies towards increased grammaticalization: *sollen* does so by allowing wide-scope readings in some instances; *wollen* by signaling future time, even though notions of volition are still present. In MHG, the epistemic uses are more apparent and they occur more regularly. Futurity has also become part of the epistemic value of *sollen*, no doubt due to the association of present obligation with future action (even though the former is not necessarily implied). A stronger epistemic use, the quotative, has also emerged. Its use, however, is textually restricted. *Wollen* continues to signify futurity, but it too has developed a stronger epistemic, quotative use. It contrasts with *sollen* by indicating that the sentential subject is the source of the proposition, rather than some third party. In NHG, we find both deontic and epistemic values of *sollen* and *wollen* well-developed and in full use among speakers of German. In the deontic realm, *sollen* indicates the obligation that the subject is placed under, while *wollen* signifies the subject's volition, and the obligation denoted by *sollen* is usually the result of someone else's volition. Epistemically, *sollen* and *wollen* also display complementary behavior in their designation of the source of the proposition: subject external (*sollen*) or subject internal (*wollen*).

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Notes

I would like to thank Jared Klein for his comments on this essay. Any mistakes, of course, are solely mine.

¹I will adopt the terms “deontic” and “epistemic” for my discussion, even though these terms—especially the former—are not free of problems (Fagan 15-17; Diewald, *Die Modalverben* 93-162). Deontic modality, for example, refers only to obligation, while volitional modality encompasses the subject's intention, desire, or willingness relative to an action. And dispositional modality covers the subject's disposition in relation to an action (e.g., ability, permission). Following clarification, many have included all three of these modalities under the category “deontic” for purposes of simplicity (Traugott; Fagan; Diewald, *Grammatikalisierung* 24-30; Whitt), and I will do the same here.

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