

Chapter 10: *Rather* – On a Modal Cycle

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The goal of this chapter is to contribute to the issues of the grammatical cycle and economy in the context of grammar change through (A) focus on an exponent of modalized meaning (which is distinct from the theoretically better-studied modal auxiliaries); (B) the recognition of a corresponding type of change as an essentially cyclic development from an original meaning including a temporal component to its currently modalized semantics; (C) an initial analysis of such cyclic developments in relationship to grammatical theory and centered on logical forms.

1. Introduction ¹²

The immediate aim of this chapter is to propose an account of the development of the word *rather* which gave rise to resulting meanings such as the one illustrated in (1).

- (1) She heard Spanish and Korean, Russian and Chinese, Arabic and Greek, Japanese, German, and French, but **rather** [_q **than feel intimidated ...**], [_p **she exulted in this variety of human sound**]. (P. Auster, *The Brooklyn Follies*)

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² The following abbreviations are used: BNC: British National Corpus; CGEL: *Cambridge Grammar of the English Language* (Huddleston & Pullum 2002); GGL: web-search based on the search engine *Google*; LF: logical form; QR: quantifier raising; RTS: *rather-than* structures. Examples retrieved from the Penn-Helsinki corpora of historical English are given with the standard token IDs used in the sources from which they have been extracted. Typically, Middle English examples are prefixed with the notation ‘CM’ in the sources; Old English examples are prefixed as ‘co’. (Cf. Kroch & Taylor 2000; Kroch, Santorini & Delfs 2004; Taylor, Warner, Pintzuk & Beths 2003 for full notational conventions and further philological information regarding the files included in the corpora).

While a somewhat larger overview of the distribution of *rather* will be given in section 2 below, the non-finite complement of *rather* in (1) is modalized and compared with an alternative on a scale, more specifically against a salient doxastic background. In view of the facts given (e.g. hearing a variety of languages around her), the natural expectation for the protagonist girl in Paul Auster's piece of fiction cited above would be to feel intimidated. But instead, what holds true in the same situation is that she exulted in the context she was placed in. (We will discuss additional, frequently available modal backgrounds below).

The major concern of this paper will be the key historical and grammatical developments at the syntax-semantics interface. By assumption, I will make crucial use of the level of logical form represented at all synchronic stages (LF; see, for example, Heim & Kratzer 1998 for motivating discussion of this component in a version including the notational variant of movement in the computation of meaning). The developments will be investigated by tracking down the semantically most relevant changes that led from a transparent form-meaning correspondence involving temporality and the comparative morpheme applied to a scale-sensitive item (for contrast, cf. the currently opaque *-er* obligatorily attached to *rath-*) towards a modalized meaning in which alternatives are compared. Synchronically, today, *rather* appears less transparent at least from a purely morphological point of view than in the original input structure to the cycle. But in fact it still compares, if in a less direct way, namely by establishing an ordering relationship between propositions. I will argue that the semantic development is a crucial ingredient in capturing this change. At the same time, as we will see, the linguistic change is only explained in grammar-theoretic terms if we let the semantics operate compositionally in a structure-sensitive manner, i.e. ultimately on tree structures – in our present case, those that are fit for interpretation. Expanding on these ideas, the immediate empirical focus of the chapter is the cyclic development of *rather*, which will be illustrated from a number of perspectives. Somewhat more specifically, the chapter is structured as follows. In section 2, I sketch the inventory of relevant forms, meanings and changes. Section 3 gives the analysis and illustrates the developments from the perspective of the cycle. In section 4, I discuss how this particular cycle may relate to economy and additional considerations on cycles. Finally, section 5 provides a conclusion.

2. *Rather* in current and earlier English

In this section, I introduce the main meanings and forms of *rather* in current English, that is, the present *explanandum*. I then consider the relevant facts that become visible from the diachronic trajectory of the word together with its category, meaning, and grammatical distribution.

2.1 *Rather* in current grammars

According to the *Cambridge Grammar of the English Language* (CGEL; Huddleston & Pullum 2002) *rather* can function as a less central governor in scalar inequality. There are four major types of meaning-structure correspondence in present-day English (PDE), cf. (2a-d).

- (2) a. The idiom *would rather*
- b. With bare infinitival and “in preference” meaning
- c. Contrastive link, meaning “not, instead of”
- d. Pleonastic use, with *rather than* equivalent to *than* alone

The examples in (3) exemplify the four types given by the CGEL in correspondence with (2).

- (3) a. She would rather live in danger than die of loneliness and boredom.
- b. Many of them went to jail rather than pay the fine.
- c. Care rather than skill is all you need.
- d. These people are more likely to be referred to courts rather than to aid panels.

My main focus lies on the type given in (2b) and exemplified in (3b), i.e. the independent modal meaning, which plays a key role in understanding the grammaticalization process. Most typically, this meaning involved in bare-infinitives is indeed bouletic (just as in (3b)), that is, expressing a preference, but other more subtly modalized nuances can obtain as well (cf., e.g., (1) above). In terms of the form involved, we can extend the observation. Such modal meanings can be expressed not only by a bare infinitive, but also with further non-finite complementation;

cf. the patterns with a present-participle form constructed with a null subject, shown in (4), as well as the less frequent distribution with an overt subject, as in (5).

- (4) If you want to download any of these eBooks directly, **rather than using the regular search system** you may utilize the following addresses and just download by the e-text year. (GGL)
- (5) In a way **rather than us reading the parables**, the parables end up reading us. (GGL)

While this type of distribution is language-specific, it is interesting nonetheless in the context of English syntax that when a subject appears at all in the nonfinite pattern, it gets a default case (and not nominative). This suggests that the complement of such *rather than* constructions is roughly speaking a reduced VP or vP. (But crucially not a TP; cf., e.g., Pesetsky & Torrego 2001 for an account of assignment of nominative case through T.)

The type in (2a) is important both synchronically and diachronically, but in terms of its meaning it falls under the same rubric, namely of (bouletic) modality. It may in fact instantiate a modal harmony effect, from which the modal itself has later been removed. One possibility, then, would be to say that the originally reinforcing adverb *rather* has taken over the earlier modal function in the examples without the overt modal *would* (or another equivalent modal element; cf. below).

The contrastive type mentioned in (3c) can be directly linked to metalinguistic comparatives. In fact, metalinguistic comparatives are arguably modalized as well (cf. also Giannakidou & Stavrou 2008 with a different focus). In terms of the distribution of the two types in English, an interesting test can be noted between the *rather-than* structures (RTSs) of primary interest here and the metalinguistic ones, drawing here on Dieterich & Napoli (1982). Consider first (6a) vs. (6b).

- (6) a. Harry walked to work **rather than drive**.
b. Harry walked to work **rather than drove**.

While a RTS such as (6a) is typically followed by a non-finite main-verb form (in English), the metalinguistic comparative in (6b) takes the finite form in the language.³ The preference or bouletic reading for the non-finite form can be made to fail by leaving the sentence without a logical subject, cf. the weather-verb expletive in (7a) and, by contrast, the lack of such an effect with the metalinguistic placed in the same context in (7b).

- (7) a. #It snowed rather than rain.
b. It snowed rather than rained.

Finally, the pleonastic type is marginally interesting from a descriptive take on grammaticalization since it seems to instantiate a bleached meaning. (I use this term descriptively; see, for example, von Stechow 1995, Traugott & König 1991, on some pitfalls and paradoxes related with the term ‘bleaching’ if taken to literally mean void of meaning in the general case). While the pleonastic type is fully outside of the concerns about modality addressed in this paper, we can offer an additional syntactic diagnostic that confirms the classification by the CGEL as a separate item. The diagnostic relies on comparative inversion, a relatively restricted possibility already by itself, optionally arising in certain clausal comparatives in English (cf. Culicover & Winkler 2008, Emonds 1970, Gergel 2008, Merchant 2003, among others). Comparative inversion (independently of *rather*) is illustrated in (8).

- (8) a. She hasn’t bought as many souvenirs as has her husband.
b. Harvard undergrads generally give the impression of being far more supportive of their president than is the faculty.

Unlike other *rather*-constructions, the pleonastic type can also appear in conjunction with inversion of the finite element with the subject, as the attested example in (9) shows.

- (9) Defined as monopolies that could deliver goods and services more efficiently **rather than could a host of competing entities**, natural monopoly utility companies would win state

¹ An investigation of metalinguistic comparatives falls beyond the scope of this paper. Notice that the contrastive or metalinguistic comparatives can also appear in reduced structures, as visible in the examples given in the main text.

sanction to operate in an environment that allowed expansion and use of ever-larger generation technologies. (The Electric Utility Industry in 1965: At the Pinnacle of Success before the Blackout, By Richard F. Hirsh, Virginia Tech, online)

To summarize the subsection, we have seen some of the major types of *rather* in current English. I will focus on RTSs, the structures followed by a non-finite form, such as the bare infinitive. In the next section, I discuss the major uses (precursor forms of) *rather* could have in Old and Middle English.

2.2 *Rather in earlier English*

This subsection offers a sample of the relevant uses of *rather* at earlier stages of the language. Observing lexical change surrounding *rather* is certainly not new. The origin of the word is well known in the literature on English and it has been noted in many scholarly sources concerned with the history of the language; cf. Jespersen 1949; *The Oxford English Dictionary*; Mitchell 1985; Rissanen 1999; Stern 1931, among others. What is new to the best of my knowledge, however, is the investigation of the cyclic nature of this change and its implementation as a systematic type of development in language change related to the level of LF. The key meaning change revolves around an adverb indicating temporally marked properties at the beginning which developed systematically towards a modal element. We next turn to the crucial uses of *rather*.

The origin of *rather* lies in the comparative form of the adverb *(h)ræþe* (and its numerous variants; cf. *OED*), derived from the adjective *(h)ræþ*, which could convey several properties, among which we find ‘soon’ ‘quick’, ‘swift’. Some OLD ENGLISH uses of *(h)ræþe* are illustrated in (10). (The sentences in (10), as most of the diachronic data here, have been extracted from the Penn-Helsinki-York corpora of historical of English; see in particular Kroch & Taylor (2000); Kroch, Santorini & Delfs (2004); Taylor et al. (2003). The data are given by way of reference to their standard corpus token identifications.)

- (10) a. *On Sunnandæge mon sceal **hraðor** arisan to uhtsange.*
‘On Sunday one shall earlier rise to morning song.’ (cobenrul, BenR:11.35.4.476)

- b. *Quirinus þa eode to ðam cwarterne hraðe,*
 `Quirinus then went to the prison quickly.’ (coaelhom, ÆHom 24:78.3806)
- c. *Forþon hi ne besceawiaþ no hu late hi on þysne middangeard acennede*
 therefore they not consider not how late they on this world born
wurdon, & hu raþe hi him eft of gewitan sceolan, ...
 were and how soon they him afterwards of depart shall
 `Therefore they didn’t consider how late they were born on this world and how
 soon they would depart from it.’ (coblick, HomS_17_[BIHom_5]:59.88.735)

Unsurprisingly, *(h)raþe* could appear either in the positive or the comparative. Example (11c) additionally illustrates the contrast of *raþe* as ‘soon’ with ‘late’ and the extraction of a degree argument through the implicit question; cf. *hu late/hu-raþe*, i.e. ‘how early/how late’. The wh-phrases orthogonally involve pied-piping, a language-specific process in degree questions (cf. Corver 1997, Grosu 1994).

The temporal component is available in the entry of *rathe* in the MIDDLE ENGLISH period as well, as we can see in (11), and it is still available, if decreasingly frequent, in the comparative forms, as shown in (12) below.

- (11) a. *Why ryse ye so rathe, ey, benedicite!*
 `Why do you rise so early...?’ (Geoffrey Chaucer, The Miller’s Tale)
- b. *and al so raþe he was iwarisd of his maladie.*
 `and all so soon he was cured of his sickness.’ (CMKENTSE, 218.108)
- (12) a. *for þat Sondag was of þe raþer 3ere, and nou3t of þe newe 3ere þat ...*
 `because that Sunday was of the earlier year and not of the new year that...’
 (CMPOLYCH, VI, 101.709)
- b. *þe kyng blamede hym for he warned hym nought raþer;*
 `the king blamed him because he warned him not earlier.’
 (CMPOLYCH, VI, 437.3207)

The so-called contrastive link mentioned by the CGEL (cf. section 2.1) is also observable in Middle English texts, clearly with antonymic contrasts as in (13a) and (13b). But the alternatives

introduced can be more diverse as well, as illustrated in (13c). While this reading may not be crucial for the development from temporal to modal meanings, it illustrates the range of possibilities in terms of alternatives that *rather* could compare. (The possibility of the contrastive link is certainly continued towards the early modern period, as illustrated in (14) for EModE.)

- (13) a. *I rede thee, certes, that thou, Lord, werke in swich wise with thy cherles that they rather **love** thee than **drede**.* (CMCTPARS, 314.C1.1112)
- b. *for he wold rapen gon **bakward** þan **forward**.* (CMKEMPE, 10.179)
- c. *for a 3enst an hondred of Egbert his kny3tes, þat were pale men and lene, come a þowsand þat were rody and fat, and were rapen i-stuffed wiþ **swoot** þan with **blood*** (CMPOLYCH, VI, 289.2128)
- (14) a. *ffor many Shippys and galyes **towche ther rather thanne at Parence**.* (TORKINGT-E1-P1, 16.234)
- b. *and rost him, basted often with **Vinegar, or rather verjuice and butter**, with good store of salt mixt with it.* (WALTON-E3-P1,218.19)

But turning to the Early Modern English period from the perspective of the intensional readings, namely the temporal and modal ones, we can easily observe that the overall availability of temporal interpretation of *rath(er)* virtually disappears. The other readings persist: the contrastive link, the modal readings joined by auxiliaries (for example, *had* is frequently found with a modal meaning from this time on; cf. (15a)), and also the bare infinitive with a distant selector (that is, not yet one that is necessarily adjacent to the *than*-clause), cf. (15b). Example (15c) with a temporal interpretation seems to be already a relic by the early ModE times.

- (15) a. he had **rather** be unknown and obscure (BOETHPR-E3-H,126.44)
- b. and chuseth **rather** to withdraw from himself many natural Pleasures, than run the hazard of losing that Money which he hath gathered. (BOETHPR-E3-H, 126.45)
- c. All the stocke thou cost of **later or rather**, From thy first fathers grandfathers fathers father, Nor all that shall come of thee to the worldes ende, Though to three

score generations they descende, Can be able to make me a iust recompense, For this
trespasse of thine and this one offense.

(UDALL-E1-P2,L1209.382)

Moving, then, from a temporally meaningful element to a characteristically modalized item, we need to answer the question what precisely happens in terms of the semantic representation involved. The most important facts to be explained in the remainder of this chapter are the following: (a) How did the change develop – Is there a systematic characterization in this connection? (b) What motivated the change? (c) What is the LF-role of the comparative morpheme *-er*?

3. The analysis

In this section, I present the analysis of the main developmental stages of *rather* couched in terms of LF structure. In the first subsection, I discuss the formal tools required. In the second part, I illustrate how the change can be characterized in terms of logical forms. While the section requires some minimal semantic formalism, all of the tools introduced here are independently motivated.

3.1 *Introducing the semantics used*

In this first subsection, I introduce the basic ingredients of the analysis that are necessary for a formal account of RTSs. To achieve that, I briefly discuss the issue of compositionality in language change; then I present the essentials in the semantics of quantifier raising (QR), comparatives and modality, respectively, that will be used further.

To begin, there is a first sense of compositionality involved in language change which is usually formulated along the following lines. Developments in terms of meaning change can only be fully understood if we consider them at the propositional level. This first step is a departure from restrictions of the traditional research on semantic (alias lexical) change and is adopted here. While it is one word, the change of which is most conspicuously noticed when

inspecting diachronic data, there are a series of other factors that change in relationship with the visible culprit in many interesting cases. Alongside potential morphological and phonological change, both the surrounding tree geometry of the word (including LF for the purposes of interpretation) and the way its lexical entry combines with the other nodes of the clause can thus typically change; cf. Eckardt (2007) for a perspicuous illustration of the latter based on *going to*. The idea that meaning change is more than lexical change or pragmatic conventionalization of single items is not new, but its more systematic exploitation is relatively recent (cf. Eckardt 2007 and Traugott & Dasher 2001, among others). What I would like to add to the picture is how a semantically motivated (and realized) movement such as the type observed in QR may effect a language change phenomenon. Overall, I would like to adopt a Fregean version of compositionality here and apply it to the diachronic case study at hand. This means in updated terms that a clear sense of the structure on which the interpretation principles can apply at every node in an LF tree needs to be addressed.

To achieve that, we can next introduce a prerequisite, namely the standard version of QR based on movement (cf. May 1977; Heim & Kratzer 1998). Later in the chapter, we will see that the changes involved in *rather* will make use of the same types of mechanisms as QR transferred to degrees and times instead of individuals. But first things first: A classical topic in semantic theory is the issue of quantifiers in object position; cf. *every park* in (16).

(16) Sue liked every park.

Simply put, the issue arises through the following paradox. On the one hand, an object needs to saturate the first of the individual slots in the logical type of the transitive verb, namely $\langle e, \langle e, t \rangle \rangle$. So, the object must be of the type of the required individual for functional application to apply, that is $\langle e \rangle$. On the other hand, however, there is a large body of evidence that quantifiers yield very distinct truth-conditional effects from those obtaining with individual-denoting DPs (in tautologies, contradiction scenarios etc.; cf. Heim & Kratzer 1998 for an overview). A way to solve the dilemma then, which we adopt here, is to move the quantifier phrase to a sister position of a truth-value denoting node (typically at the level of the IP/TP-adjunction), introduce a movement index via the process of predicate abstraction and give the moved quantifier phrase its rightful and independently expected logical type, namely $\langle \langle e, t \rangle, t \rangle$, which can now moreover

combine with the rest of the clause. In the low position, from which the quantifier started out the derivation, a trace of type <e> now saturates the object slot of the transitive verb and is bound by the movement index. This solves the paradox. The process is schematized in (17).

(17) [every park [1 [Sue [likes *t*]]]]

It is possible to apply the same mechanics to other domains, in particular the comparative morpheme *-er*, which is the equivalent of a quantifier over degrees (see, for example, Beck 2008 and Heim 2000). In logical terms, this morpheme takes the *than*-phrase as an argument and is raised with it at LF, just like a quantifier with its first-argument sister NP. Notice that in its original (in outdated speech D-structure) position a gradable adjective requires saturation by a degree argument. This is parallel to the individual-type argument observed with a regular quantifier above. The comparative *-er* thus ends up, in this case also via movement, operating on two sets of degrees, paralleling the relation on sets of individuals that a run-of-the-mill generalized quantifier operates on.

(18) Tempe is larger than Tübingen (is).

(19) a. [[-er [1 [than Tübingen is *t* large]]] [1 [Tempe is *t* large]]]

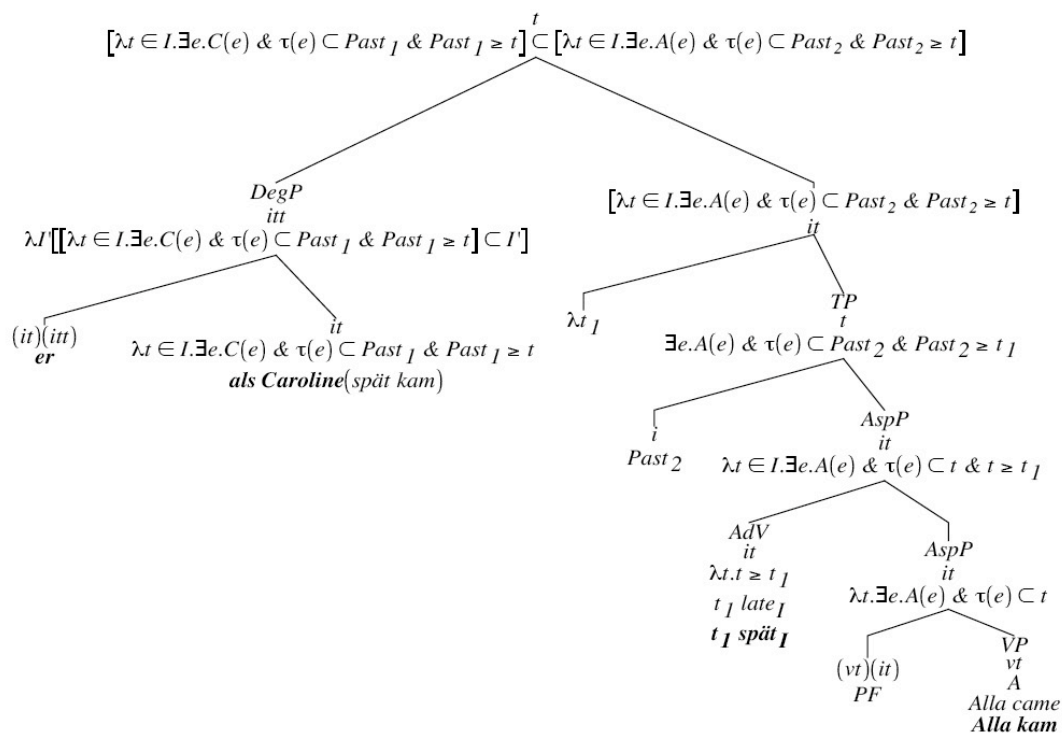
b. [[-er]] ($\lambda d \in D_d$. Tübingen is d-large) ($\lambda d \in D_d$. Tempe is d-large)

The degree *d* to which *Tempe* is large exceeds/is greater than (e.g. on the population or surface scale) the degree *d'* to which *Tübingen* is large.

Closely related to the degree semantics illustrated above comes the notion of temporal comparison for which I draw on von Stechow's (2006) approach to comparative adverbs of the *sooner/later* type (and some of their German equivalents e.g. *früher/später*). For a relevant sentence such as (20), von Stechow proposes the LF in (21).

(20) Alla came later than Caroline.

(21) von Stechow's Logical Form for temporal comparatives



While not all the details of this LF are relevant to the diachronic change, let me mention its basic features. First, a temporal adverb such as *late* or *early* is originally merged to a position adjoined to an AspP, which denotes a property of times, $\langle i, t \rangle$, (equivalently: a set of times, or a characteristic function of such a set). Following usual practice, the adverb then intersectively combines with the AspP yielding another AspP (of the same logical type, but now restricted by the additional condition that the set of times in question fulfill the condition imposed by *late/early*). Since the adverb comes as a comparative, it behaves as a quantifier, and it undergoes QR. In fact, it does so with its argument, the *than*-clause.

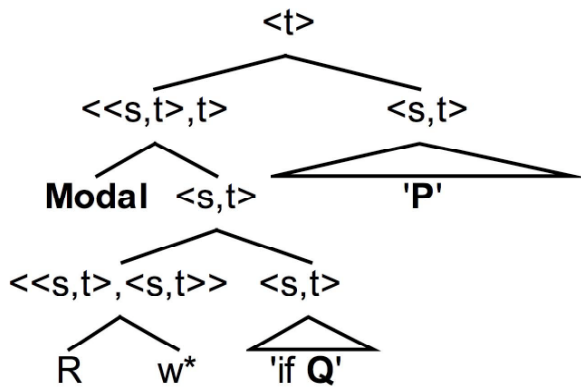
The final ingredient required is modality. The appropriate interpretable structure for modality is closely tied to the research history of the conditional. While different bracketing options for the conditional have been proposed, Kratzer (1981, 1991, *et seq.*) has argued that a particularly suitable LF-structure is the one in which (semantically) the modal brackets with a restrictor first, and only then takes its nuclear scope, i.e. the “modalized” proposition. The restrictor can be either just the implicit contextual one providing the background (e.g. whether it is “deontic”, “bouletic”, “epistemic” etc.) or it can be enriched by a conditional clause. This

yields the schema in (23) below, following von Fintel & Heim 2007, or in a more basic version the one in (22). I use the usual type-theoretic conventions, in which *s* stands for the type of possible worlds, *t* for truth values, *v* for events (and, largely equivalently, situations), *i* for times, *e* for individuals (or “entities” in the Montagovian tradition) and *d* for degrees. If *a* and *b* are types, then $\langle a, b \rangle$ is also a type. In particular, it is useful to think of a denotation of type $\langle v, t \rangle$ as a set of possible events/situations, $\langle i, t \rangle$ as a set of times (or, equivalently, characteristic functions of such sets) etc.

(22) Main Scopal Relationships for Modals (cf., e.g., Kratzer 1981 *et seq.*)

[Modal [Restrictor]] [Proposition P]

(23) Logical Form for Modality (cf. von Fintel & Heim 2007)



Two notational amendments will be made to this. First, since I will not include contextual information in the logical trees, a simpler version will suffice for my purposes. But I will be explicit about the logical forms involved even in the simple versions since they are important for the current argument. The simplification will consist in having the restrictor (e.g. “if Q” in (23) above) directly as an argument of the modal, without *R* and *w**. A second amendment has to do with the types involved. Following Kratzer (2007), among others, I will use possible situations/events to represent modality instead of the classic possible worlds. Plainly put, this will amount to representing the types of propositional sub-trees such as *P* and *Q* above as sets of situations/events rather than sets of possible worlds, i.e. of type $\langle v, t \rangle$ instead of $\langle s, t \rangle$, cf. the implementation in section 3.2 below.

3.2 *Change from temporal to modal meaning*

By capitalizing on the research in semantics reviewed above, this subsection establishes the input and output grammars in the change of *rather* and offers an explanation of its basic developments in terms of logical forms. A key role will thus be played by the structural make-up of the interpretable clausal structure in which *rather* participates before and after the change. The starting point of the change is pragmatic.

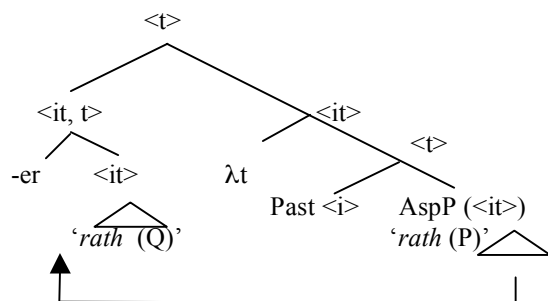
We make the general inertia assumption of diachronic syntax, namely that grammatical systems and in particular phrase-structures are mapped from their predecessors restrictively, if not perfectly (cf. e.g. Kroch et al. 2000, Roberts 2007). While the present claim is that the tree-geometry in terms of LF is significant in the dynamics of the change, notice that it can thus also hardly be expected to be an initiating factor of a semantic change. What is frequently the case, however, is that semantic change is pragmatically induced (cf. Eckardt 2006 and references cited there). We will adopt this motivation for the inception of the RTS change, too. But the question will be raised whether the pragmatic factor also fully explains the change.

To place the discussion on a concrete footing, I next divide it into three parts tied to specific developments affecting logical forms. In terms of the LF structure involved then, the main stages were as follows:

Main stage 1: Borrowing time scales for comparisons

Earlier English *rath(er)* induced a temporally related scale, which could be exploited for degree constructions including comparatives, as seen in section 3.1. This step involves a minimal adaptation from tense to a standard degree scale. It is one that can be accounted for synchronically (adopting von Stechow's 2006 approach introduced above). Under such a view, the LF that has incorporated times as degrees and serves as the input to the change looks essentially as (24).

(24) Pre-Reanalysis main comparative-temporal structure



Main stage 2: Pragmatic Overload

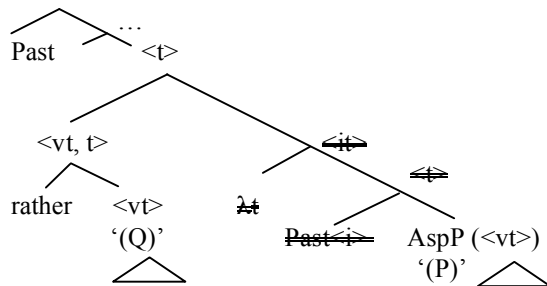
Cross-linguistically, modalized situations which are preferred or more likely, are frequently communicated through expressions originally meaning *earlier*, *faster* etc. To implement the observation, we can use, for instance, Eckardt's (2006) notion of *side-message*. This is, in essence, nothing but an implicature at the beginning. The next point of the change is the one at which a side-message incorporates to the next-generation semantic entry. The net result here is that (the characteristic function of) the set of times in (24) denoted by the $\langle i, t \rangle$ denotations ("Asp-phrases") are not sets of times any longer, but sets of situations, now in a contextually given modal ordering (e.g. with respect to desires). Regarding the latter, we draw on e.g. Heim's (1992) possibilistic account for desire predicates, but with two amendments: (i) the alternative to p is not necessarily $non-p$; cf. Villalta (2006) for scenarios independent of *rather* which make this extension plausible, and we note that RTSs are a cheap way to order distinct p and q ; (ii) propositional subtrees denote sets of situations/events here.

Main stage 3: Misguided interpretation function

The change from sets of times to situations in the AspP becomes fatal for compositionally interpreting a temporal structure. Without the set of times, *Past* can serve no function, no interpretation principle can apply (a standard temporal reference, is introduced structurally higher-up, to the newly formed structure, but it is irrelevant for the node merging *Past* with AspP in post-change grammars). As a consequence, one is then stuck with two sets of situations and the *rather* predicate in what was a dependency originally created through movement. The latter is re-interpreted as being a first-merged relation, rather than a moved generalized quantifier and,

finally, the (syncategorematic) movement index has no application either (no compositional rule can use it) and is erased. The derivation of this output is schematized in (25) below.

(25) Post-Reanalysis Modal Structure



The diachronic development is thus given a specific merge-over-move implementation that pertains to the semantic developments addressed here. This makes a good prediction in that it correlates with the cyclical character and the unidirectionality of the change. While changes of the *rather*-type are frequent cross-linguistically (perhaps precisely due to the easy availability of the starting implicature), the reverse does not seem to happen (even though an implicature that Jones does *P* faster because he utters that he prefers to do it would not be, *per se*, unimaginable).

4. More on cyclicity and economy

In this section, I investigate how some additional considerations pertaining to linguistic cycles and economy carry over to the semantic cycle induced by *rather*. The first subsection gives some more details coming from diverse empirical areas (clause-type and interaction with modality in particular). The second part notes similar developments to *rather*. The final subsection explores to what extent “narrow-syntactic” and other economy constraints carry over to the LF-development.

4.1 *More towards modalizing rather*

In this subsection, I address certain issues in the developmental stages of *rather* with particular focus on the Middle English and the Modern periods, which I take to be the crucial span for its grammaticalization. These issues include the transition towards independent modal meanings and the clausal patterns that chronologically preceded the bare-infinitive RTSs available in PDE. A central role is played by the developments towards modalized meanings. While this type of transition is observable at all attested stages of the language, it gains particular momentum in Middle English. (Only very few relics are left of the earlier temporal meaning in ModE.)

Various modal constructions, including modal verbs or premodals, can be found in particular in the *rather*-clauses of Middle English.⁴ This is illustrated in (26a-c) with examples in which the modal is left-adjacent to *rather*, and in (26d) with the modal taking scope over both main and *rather*-clause. The *rather*-clause in the latter case is an infinitive, which is still selected by the modal, but due to the greater distance, it gives the effect of a quite modern complementation pattern, namely the “bare-infinitive” one appearing in the *rather* clause. (We return to the types of clauses involved in Middle English *rather* constructions below). Multiple modals used distributively over matrix and subordinate as in (26e) are also quite possible.

- (26) a. *certes youre wyf **oghte** rather to be preised than yblamed.*
‘Surely your wife ought rather to be praised than blamed.’
(CMCTMELI,221.C1.153)
- b. *For peraventure the nature of som man is so overthrowynge to yvel, and so for perhaps the nature of some man is so turned over to evil and so uncovenable, that the nedy poverte of his houshold **myghte** rather egren hym to inappropriate that the needy poverty of his household might rather provoke him to don felonyes*
commit misdeeds (CMBOETH,453.C2.541)

⁴ Other means of introducing modal meanings and related LFs are possible, but are less clearly detectable from what I have seen. For example, an important factor in the distribution of non-temporal *rather* is the idiom *þe rapþer*, available abundantly in OLD ENGLISH and still found in Middle English. This includes an original instrumental that also gave rise to the so-called correlative comparative of PDE (*the more, the better*). An analysis of such constructions views them as conditionals (Beck 1997). Recalling that a modal LF is in essence the LF of a conditional (the latter serving as restrictor), there is thus a possibility that the two developments have a common origin and a related LF.

- c. *and wolde rather dye than lese þe right thereof.*
 ‘and would rather die than lose the right thereof.’ (CMEDMUND,172.280)
- d. *And so **sall** gude dedis owtewarde noghte hyndire thi deuocyone, bot rap̄er*
 and so shall good deeds on the outside not hinder your devotion but rather
make it mare.
 make it greater (CMROLLTR,33.699)
- e. *but rather than I **sholde** be dishonoured, there **wolde** som good man take my*
 but rather than I should be dishonored there would some good man take my
quarell.
 side (CMMALORY,36.1144)

An additional comment is in order regarding the modals. While the originally volitional *would* (together with variants) is particularly frequent, we can see from the above examples that other premodals such as *ought*, *might* and in particular *shall* co-occurred with *rather* as well.

In terms of distribution, we have already noted that the *rather* structures of earlier English functioned distinctly from those of PDE, in that we do not find unselected bare infinitives but rather tensed full-fledged clauses. This is not to say that we do not find tensed clauses of various sorts in PDE as well (in particular the metalinguistic type comes to mind in this connection). We could claim that the cases in which the complement of *rather* is phrasal on the surface (and hence not clausal) is a full clause underlyingly, with mechanisms of ellipsis including comparative deletion at work (cf. Lechner 2004 for such derivations of comparatives in general). But the point is a different one. It seems that the grammaticalized patterns that are *possible* have changed, resulting in the new possibility of having tighter syntactic structure as well, specifically the bare forms. Infinitives at earlier stages were generally governed by an additional element that required them on independent grounds, as shown with the modals above.

Without an independent governor (where the term is used in a descriptive sense as a selector), the most productive pattern is the one with full-fledged tensed clauses, and the possibility of having **overt** (and distinct) subjects in each of them.

- (27) Yet seye I nat that ye shul **rather** pursue to youre adversaries for pees than they shuln to yow. (CMCTMELI, 235.C2.725)

The possibility illustrated in (27) cannot be blamed entirely on parallelism requirements that would have imposed an overt subject in the embedded clause because of the overt subject in the matrix. It is possible to have non-overt subjects such as PRO in a potential superordinate and overt subjects in a subordinate clause, as in (28).

- (28) *Where is now so gret loue, zele, and fauour vn-to men of holy churche and to þe where is now so great love, zeal, and favor toward men of holy church and to the pepull as had þe gret emperour Constantyne, þe wiche chose **raþur** [PRO all is liff tyme to people as had the great emperor Constantine who chose rather all his life time to be smytte with a leper] þan [he wold suffure þe innocentes blod to be shed to saue hym]. be smitten with leprosy than he would allow the innocents blood to be shed to save him?*
(CMROYAL, 253.225)

Rather clauses have a clear propositional status. Their rich structure also becomes evident from an inspection of non-finite structures in ME. There are two immediate areas in which evidence can be gathered for this claim. First, *for-to* infinitives (that is, CP structures), are available in the complement position of *rather*, cf. (29).

- (29) *and bade hym holde vppe the right of Holy Churche with alle hys myght and asked him hold up the right of holy churche with all his might and **rather for to suffre dethe** than lese the fredome of the Churche, and rather for to suffer death than lose the freedom of the church*
(CMEDMUND, 172.273)

Second, another non-finite structure that appears larger than expected, at least from the chronologically backwards and grammaticalized perspective of the bare-infinitive RTSs, is generated by the appearance of *to* in examples of the type in (30).

- (30) *& saide þat þai wolde neuer faile Kyng Arture, and **raþere to** bene dede:*

'and said that they would never fail King Arthur and (would) rather be dead.'
(CMBRUT3, 82.2486)

All in all, historically there are then two corroborating facts: clause tightening in ModE compared to the preceding period and the possibility of modalization which developed from overt modals joined by *rather* in an adverbial function towards the additional possibility of modalization through *rather* itself.

Turning to current grammar, we can, of course, still witness *rather* with modals in the main clause, but it can appear as an independent modalizer as well, as mentioned. Further, modal iteration is also possible internally to the structure modalized by *rather*, another positive expectation for modality in general (cf. von Stechow & Heim 2007). The modal *rather* of RTSs itself, as expected, cannot iterate with actual core modals due to its non-finiteness requirement in English. But once we switch to periphrastic modal expressions, it becomes possible to find some corresponding examples generated, as the following attested examples with participles and bare-infinitives illustrate.

- (31) a. 'Let's try to be the first to create a network that opens a new window of distribution for us **rather than having to** go hat in hand to a USA or a Nick at Night or a TBS,'...
(*NY Times*, Nov14, 2005)
- b. Hospitals will receive a flat fee of \$350 for a series of seven clinic visits **rather than being allowed** to charge a fee for each visit. (*NY Times*, Dec 5, 1989)
- c. Most of the key members of the Department ... are resigning. In fact, just about a week ago one resigned **rather than come and have to** testify under oath. (*GGL*)
- d. Contrast this with 104, where I sit at a table with the students, and where discussions are much more organic, and I facilitate **rather than need to** direct. (*GGL*)

The interaction with the classical overt modal restrictors (recall that these were if-clauses) is harder to observe, but it is possible in some reduced cases:

- (32) Feedback is more useful if given soon after an event rather than if delayed.
(UC Davis, Faculty Handbook, online)

Further relics of the comparative nature of *rather* can be observed in examples such as (33) below; cf. modification by differentials of degree such as *much* and *far*.

- (33) a. I'd much rather be with the boys. (Rolling Stones)
b. I'd far rather tell political jokes than be one. (*The Independent* 06/10, 1999)

4.2 *Brief excursus into partially similar changes*

A similar change in progress is also observable in English: cf. *sooner* and *as soon* in (34) and (35) below.

(34) Anna would have cut off her hand **sooner than** have brought the girl to harm;
(Mary Roberts Rinehart, *The Street of Seven Stars*, retrieved online)

(35) Not what one expected of the wife of the senior partner, Tim observed, thinking smugly of his own immaculately turned-out Patrice, who would refuse to eat if she put on even an extra pound and who would **as soon** leave the house naked as without make-up. (*BNC*, AB9-2413)

Besides the transparency of *soon* itself, the fact that this is a change less fully developed from the perspective of the cycle can be quickly seen from two distributional requirements. First, it appears to express preference (to the detriment of temporality) primarily only joined by a modal and, second, it has a wider (less fossilized) distribution in terms of the comparative form, including the equative, as illustrated in (35) above.⁵

Other languages give rise to similar constructions, and I only mention German here, because the modal flavor arising with *eher* (lit. 'sooner', 'earlier') comes close to an epistemic, likelihood reading.

(36) a. [Context:] *Die Perspektiven im Dienstleistungsbereich... werden in Berlin*

⁵ Thanks to Jack Hoeksema for raising the issue of the equative at the workshop.

als gut eingeschätzt. (FHTW university memo, economic forecast)

‘The prospects in the service branch in Berlin are considered to be positive.’

- b. *Der Industriesektor wird eher nicht wachsen.*

the industry-branch will **rather** (lit.: sooner) not grow

‘For the industrial branch, it is more likely that it will not grow.’

Changes that led to elements similar to *rather* involving transformed comparatives and/or temporal elements are not hard to come by in other languages either. (Gergel in prep., for example, describes some of the apparently numerous cross-linguistic patterns.) But there is a caveat. The claim is not that everything that develops a semantics of modal ordering comes out of a movement or a comparative dependency. Such LF-based movement dependencies are rather one source of the construction.

In some cases it may also be interesting to investigate changes that did not take place. Elly van Gelderen (p.c.) presents a particularly striking type of example (with a morphological twist): Alongside *rabe*, in OLD ENGLISH we find the form *hrædlice*, which however never took off in the sense of the cycle presented here. A relevant example (with a temporal meaning only) is (37):

(37) *& syððon hrædlice wendon westweard on Oxnafordscire.*

‘and then soon turned westwards to Oxfordshire.’ (Peterborough Chronicle 1010.15)

One possibility might perhaps be that this adverb is already born in the wrong place in the syntax (i.e. merged too high) to be able to undergo the LF-movement from a low position that is necessary for the change. There is a range of possibilities here for further research.⁶ Another (non-disjunctive) possibility, is that this adverb did not get into the stage of pragmatic overload (recall that this typically creates the potential to trigger the type of change) because there were not enough instances of the two meanings (in a comparative form of it, that is, which is infrequently attested) that would have had to compete.

⁶ A somewhat different type of restriction may also be worth noting for potential contrasting purposes: For one relatively well-known type of arguably high adverbs in German, namely a class built with the ending *-weise*, a comparative form is lacking.

4.3 Cycle theory

In this subsection, I discuss to what extent regularities uncovered in the research on cycles in general and in particular of the type conducted in narrow syntax carries over to meaning-structural developments.

First, the development we have inspected in RTSs has the appearance of being cyclic in a simple intuitive sense which is reminiscent of other cycles: *rather*, the crucial ingredient in the change is added to certain intensional constructions and it comes to express the modal ordering by itself in the course of the change.

Second, in a more theoretical sense, the change is characterized by upward movement in the LF structure and the loss of a movement dependency to the detriment of an option relying on (First)-*Merge* (or in essence synonymously: external *Merge*). It should have become clear from the analysis above that Move dies and Merge is preferred. To name but one recent work, this is reminiscent, for example, of Roberts & Roussou's (2003) observation on the rise of certain functional categories from former movement dependencies. It in fact instantiates a general schema of a semantic counterpart (based on the core of QR) to such syntactic considerations.

But there are also additional, specific considerations regarding the cycle to be addressed. We can investigate, for example, in which respects the change in RTSs turns out to conform to cycle and economy principles observed for syntactic change. I will illustrate this based on van Gelderen's (2006) characteristics of cyclicity.

One way in which RTSs show an economy effect that has been observed in the specialized literature concerned with linguistic cycle is by adhering to a version of Late Merge. Consider van Gelderen's *Late Merge Principle* given in (38) below:

(38) Late Merge Principle

Merge as late as possible.

A case in point to illustrate the syntactic development would be the history of an adverb such as *actually* developing out of an adjective, first towards a low VP-adjoined adverb that was synchronically perhaps moved and later, via (external) merge alone, towards a sentential adverb. There can be little doubt that the case of *rather* reproduces a somewhat similar trajectory. Since I

focused on the semantic developments, let me recapitulate the major steps: namely temporal interpretation with a semantically bound trace low down and the step with a directly high-merged modal element after completion of the change, in which it was not possible to interpret the original element merged low down any longer. The similarity on an abstract level is striking and it perhaps raises the question of whether it would not be desirable to have just one explanation instead of two. But the real question is whether we are dealing with entirely the same phenomenon. Despite the abstract structural similarity, there are differences in the two classes. I don't see how a merger-site effect alone could derive the meaning change witnessed in *rather*, which relies on interpretability (and other factors). Nor do I think, conversely, that an explanation in terms of compositional applicability of principles of interpretation alone can (or should) derive the large body of evidence gathered for example from the research on adverbs. While there remains (also) syntactic work in the area of *rather* and a better understanding of semantic effects might enrich our understanding in language change, including adverbs, a more crucial point emerges, namely that alongside other better-known factors (pragmatics, morphological triggers etc.), both the narrow-syntactic and the LF component indeed make reference to structure.

Two other syntactic principles for which we can raise the question what kinds of correlates they yield in the realm of meaning change and in particular in the present case-study of *rather* are given in (39) and (40) below, also drawn from van Gelderen's work.

(39) Head Preference Principle (HPP)

Be a head, rather than a phrase.

(40) Specifier Incorporation Principle (SIP)

When possible, be a specifier (rather than an adjunct).

The two principles reproduced above make direct reference to specific assumptions in the well-known X'-schema. Meaning *per se* is not sensitive to the particular shape of the schema – for example either the node T' or its sister, the subject-denoting DP, can serve as a function taking the other constituent as an argument. The choice depends on whether the subject is individual-denoting or a quantifier. So the notation of the X'-schema does not affect meaning as such. But the computation of meaning is standardly calculated on the skeleton of a similar binary tree

structure and I would like to argue that something similar to the syntactic tendencies can be detected in the present case study when we transfer the core insight of the observations to the LF context. How does this then specifically relate to the aspects of the change of *rather*? One observation to be culled is this: while the pre-change LF had the temporal adverb merged low and interpreted it intersectively as a modifier via its trace (recall von Stechow's proposal on this), in the reanalyzed LF, *rather* participated in core argument-taking operations (functional application). The two arguments were the two propositions. Thus while the LF may not be able to talk about specifiers and heads, it nonetheless can talk about modifier vs. argument-structures, with *rather* developing towards the latter and thus paralleling the syntactic tendency observed above on the level of meaning. The fact that on the preference reading the *than*-clause must be right-adjacent to its selector (namely *rather*) in PDE offers additional evidence on the surface for this development toward argument-status from the perspective of functional application.

Whether the latter type of tendency holds more generally of LF changes is not easy to predict and I leave the generalization for future work on structure-sensitive semantic change, when more cases are studied from this perspective. All in all, the emerging observation seems to be that the economy of derivation in the computation of LF follows directly from the way interpretation applies to the syntactic tree.

5. Conclusion

This chapter has investigated the connection between structure and meaning change by focusing on the thus-far neglected level of logical form. I have argued that the changes that took place in the history of *rather* instantiate a cyclic development that led to a particular modal element expressing an ordering relationship between two propositions. While the research reported here is in its beginning, I hope to have offered an explanation at least to a part of the linguistic puzzle, namely why this particular type of change may be both frequent cross-linguistically and unidirectional. Clearly, this requires further investigation both in other languages and in English.

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