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## **The clausal complementation of deontic-evaluative adjectives in extraposition constructions: a synchronic-diachronic approach<sup>1</sup>**

### **Abstract**

This article develops a functional synchronic-diachronic description of the clausal complementation of deontic-evaluative adjectives in extraposition constructions (ECs). It does so on the basis of qualitative and quantitative corpus-based analyses of the importance adjectives *important*, *essential*, *crucial* and the appropriateness adjectives *appropriate*, *proper*, and *fitting*. All six adjectives can currently take either mandative complements expressing desired action (coded by *to*-infinitives or *that*-clauses) or propositional complements describing arguable claims (typically coded by *that*-clauses). In reference grammars these have tended to receive incomplete coverage without elucidation of the constructional polysemies involved. We argue that a better understanding of the present system can be arrived at by investigating the diachronic developments by which it was fashioned. The ECs with these adjectives started off as mandative constructions and this continues to be their current unmarked use. They also developed patterns with propositional complements, but in this area the importance and appropriateness adjectives followed different diachronic paths, leading to distinct pragmatico-semantic readings of the pattern with single proposition in Present-day English.

**Keywords:** Extraposition, complementation of adjectives, mandative, factive, synchronic-diachronic description

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## 1. Introduction

In this paper we set out to elucidate the clausal complementation of deontic-evaluative adjectives in extraposition constructions (henceforth ECs) both from a synchronic and a diachronic perspective. In ECs the clausal complement occurs at the end of the matrix clause, as in (1), rather than as its ‘non-extraposed’ subject (Huddleston & Pullum 2002: 960).

- (1) It was **important** that in the midst of the triumphalist Holy Year Montini should be thinking of an alternative style of papacy. (CB)<sup>2</sup>

Extraposition constructions are more frequent than non-extraposed ones and tend to carry the less marked patterns of information distribution (Kaltenböck 2000). This is why we chose to concentrate on ECs for this exploration of adjectival complementation, a domain which has been rather neglected so far.

The sets of adjectives that we will be concerned with are three adjectives assessing importance, *important*, *essential*, and *crucial*, and three evaluating appropriateness, *appropriate*, *proper*, *fitting*. Corpus data show that all these adjectives can currently take either *to*-infinitives or *that*-clauses as complements. This dual complementation pattern has received little attention so far, and if it has been remarked on, it has mostly been described as a purely formal distribution pattern (e.g. Quirk et al. 1985: 1224).

In this paper, however, we will approach these constructions functionally, that is, aiming to account for how the forms are used and what they mean. Semantically, the complement clauses can be either (i) *propositional*, i.e. refer to a state of affairs (henceforth SoA) situated vis-à-vis the speech event in terms of tense (example (2)) or epistemic modality (example 1), or (ii) *mandative* (Huddleston & Pullum 2002: 996), i.e. assess the desirability of a potential SoA (example (3)).

- (2) And what they look at are things like the er medium in which the first of all ... the ... the egg matures ... and ... and that the embryo grows in before it's implanted. ... In in ... in this case ... it ... it is **essential** that it is human embryos which are researched on rather than for example mice which are er one of the common research materials because it's already been found that the human embryo has quite different growth requirements than those of other mammals. (CB)
- (3) The Cowboys believe it is **important** to have licensed premises at a central location in addition to their headquarters. (CB)

Importantly, the semantic distinction between proposition and mandative does not correlate with the formal distinction between *to*-infinitives and *that*-clauses. Mandative complements may be conveyed not only by *to*-infinitives as in (3), but also by *that*-clauses with a subjunctive (4), deontic modal (5), or indicative (6).

- (4) It is **important** that the woman *be* the one who is in charge of the entire process. (CB)

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<sup>2</sup> The synchronic data were extracted from the COBUILD corpus via remote log-in and are reproduced (in each case marked with CB) with the kind permission of HarperCollins Publishers.

- (5) The paper recalls what it describes as the hundreds, perhaps thousands, of political prisoners still detained in Chinese jails, and says it's **important** that Western governments *should* not now pretend that the present Chinese government behaves any better than other authoritarian regimes. (CB)
- (6) It is **important** that the information we collect *is* as accurate as possible. (CB)

Propositional complements, by contrast, are typically expressed by *that*-clauses as in (2), but can exceptionally also be coded by a *to*-complement as in (7).

- (7) However important the business, it was not **proper** of her to have called on him. (CLMET 3)<sup>3</sup>

The adjectives of importance and appropriateness thus belong to the relatively small set of adjectives that take both propositional and mandative complements,<sup>4</sup> and, because of this, they raise a number of interesting questions. Do the adjectives have the same meaning when complemented by propositions and mandates? Which complement type currently predominates? How did these two semantically different complement types come to be associated with the adjectives historically? Did one type develop from the other and, if so, through which mechanisms?

As we will see in section 2, we find only rather restricted and one-sided treatments of the complementation of these adjectives in reference grammars of Present-day English. This is why we will first, in section 3, present a SYNCHRONIC corpus-based description of the semantic and formal types of complements found with these adjectives, also indicating their relative frequencies. An important point that will be added to the whole picture is the occurrence of complex complementation patterns, as in (8), in which a primary mandative complement, *to realise*, itself takes a propositional complement.

- (8) It is **important** *to realise* that in these times of fast change it can be dangerous to let things drift. (CB)

Pragmatically, this example bears a close resemblance to example (2) which has just a propositional complement. In both, the hearer is urged to give his attention to the proposition put forward by the speaker. This pragmatic link between mandative-propositional complementation and propositional complementation raises the question of a possible diachronic link between the two. In sections 4 and 5, we will report, then, on the DIACHRONIC corpus-based study we carried out to trace the development of the functional and formal distribution of the complements. In section 4, we will focus on the development of the mandative complements and in section 5, on that of the propositional

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<sup>3</sup> The Late Modern English data are taken from the extended version of the *Corpus of Late Modern English Texts* (CLMET) (De Smet 2005, 2008). The CLMET covers the period 1710-1920, subdivided into periods of 70 years each, i.e. 1710-1780 (CLMET 1), 1780-1850 (CLMET 2), and 1850-1920 (CLMET 3). It has been compiled on the basis of texts from the *Project Gutenberg* and the *Oxford Text Archive*. It consists of text samples from a great variety of authors, mostly male but including some women authors, from different social backgrounds.

<sup>4</sup> Most adjectives take either only mandates, e.g. *imperative, obligatory, compulsory, mandatory, necessary, suitable, desirable, critical, vital*, or only propositions, e.g. *likely, surprising, ironic, tragic, odd, unfortunate, sad*, etc.

complements. In section 6, we will summarize our main findings and propose some questions for further research.

## 2. Existing literature

In the literature on complementation, much more attention has gone so far to the complementation of verbs than of adjectives.<sup>5</sup> Moreover, the literature on adjectival complementation has mainly focused on the interaction between adjectives and *to*-infinitives in constructions with referential subjects such as *she is eager to find a new job*, *the book is tough to read*.<sup>6</sup> Extraposition constructions with adjectives tend to get a mention in reference works on Present-day English, but often only some of the formal complement types are listed and semantic characterizations remain rather limited (e.g. Quirk et al. 1985: 1224, Hunston & Francis 1999: 59, Herbst et al. 2004: 278, 408, 540, 926). Kaltenböck (2000) systematically compares the formal complement types found in extraposition and non-extraposition constructions, but pays less attention to their semantics. More extensive functional discussions are offered by Biber et al. (1999) and Huddleston & Pullum (2002), but each focuses on only one of the two semantic complement types found with importance and appropriateness adjectives.

Biber et al. (1999) mainly discuss adjectival predicates taking extraposed *that*-clauses. They point out that “importance adjectives *essential, important, necessary* and *vital*” and “evaluative adjectives”, which presumably include our appropriateness adjectives, express a stance or attitude towards the proposition in the *that*-clause (Biber et al. 1999: 673). In most cases, the adjective represents the attitude of the speaker/writer, although it is not overtly attributed to him. They briefly observe that “necessity or importance adjectives also control extraposed *that*-clauses usually with *should* or an uninflected subjunctive verb form, reflecting the writer’s belief that a *proposed course of action* [italics ours] is essential or important” (Biber et al. 1999: 674), i.e. mandatives. However, they do not go any further into the semantic differences between ECs with finite mandative and propositional complements. When they discuss extraposed *to*-clauses with importance adjectives, they state that the adjectives “mark an impersonal stance or attitude towards the proposition in the *to*-clause” (Biber et al. 1999: 720), failing to note that most of these constructions are in fact mandative.

Huddleston & Pullum (2002: 995-997) concentrate on adjectives such as *important, essential, necessary* used in their mandative sense with their complements expressing the required actions, even though they (2002: 996, 997) note that the adjectives *important, crucial, appropriate* and *fitting* can also select either a non-mandative complement (2002: 996). Mandatives are said to invoke the concept of compliance, whereas with non-mandatives the truth of the proposition is presupposed, i.e. treated as a fact (Huddleston & Pullum 2002: 996).

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<sup>5</sup> For diachronic accounts of verbal complementation, see Warner (1982), Rohdenburg (1995), Fanego (1996, 2004), Rudanko (1998), Los (2005), and De Smet (2008); for synchronic accounts, see Wierzbicka (1988), Mair (1991), Rohdenburg (1999), and Noël (2003); and for typological accounts, see Givón (1980) and Noonan (2007).

<sup>6</sup> For diachronic accounts, see Van der Gaaf (1928), Van der Wurff (1990), Fischer (1991), Miller (2002: 207-219); for synchronic accounts, see Lees (1960), Bolinger (1961), Mair (1987); for typological accounts, see Comrie & Matthews (1990).

We can conclude that no available description does justice to the complex complementation patterns found with importance and appropriateness adjectives and that many issues are left undiscussed. Moreover, no existing description demonstrates its exhaustiveness by making its descriptive heuristics fully explicit in relation to the data set. In the first part of our own study, we therefore aim at providing answers to these questions on the basis of qualitative and quantitative analyses of synchronic data extracted on the six adjectives studied.

### 3. Towards a synchronic functional description

In this section we will set out our functional and distributional description of the synchronic complementation of *important*, *essential*, *crucial*, *appropriate*, *proper*, and *fitting* in ECs. This description is based on the analysis of all the complement taking uses of the adjectives in exhaustive extractions from the British subcorpora of the COBUILD Corpus.<sup>7</sup> Central to our description is the distinction between primary complements, which depend immediately on the adjectival matrix (sections 3.1, 3.2), and secondary complements, which are complements of clauses that are themselves complements of the adjectival matrix (section 3.3).

In section 3.1, we will give arguments for distinguishing between mandative and propositional complements, while in section 3.2, we will describe the subtypes of propositional and mandative complements. We will also discuss the quantitative instantiation of the complement types for each adjective in the synchronic data, which will give us an idea of what are at present marked and unmarked complementation options. In section 3.3, finally, we will offer a descriptive inventory of the different constructions with secondary complements found in the data.

#### 3.1 Primary complements: mandative versus propositional

Mandative and propositional complements typically<sup>8</sup> involve a difference in the meaning of the construction as a whole and also of the adjectival matrix. The following two examples with *proper* illustrate these basic differences.

- (9) He said: `Because of the information we got and the possibility of anybody armed being in the building we felt it was **proper** to protect anyone inside or outside from

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<sup>7</sup> The COBUILD corpus Wordbanks online consists of about 56 million words. It is geographically diversified, containing mainly British English subcorpora, but also some American English datasets and one Australian English subcorpus. It is also diversified in terms of register: its British and American subcorpora include texts from radio broadcasts, novels, and 'ephemera' such as advertisements and leaflets; samples of quality versus popular newspapers and spontaneous dialogue are provided only for British English. The British COBUILD data include 36,851,291 words from the following subcorpora: ukephem (3,124,354), ukbooks (5,354,262), ukmags (4,901,990), ukspok (9,272,579), bbc (2,609,869), times (5,763,761), and sunnow (5,824,476).

<sup>8</sup> Exceptions are formed by examples such as (8), with mandative + propositional complement, and (2), which has only a propositional complement but seems to imply a mandative one ('it's important to realise that'). The issue of the meaning of the matrix and the whole construction in examples like these will be discussed from a diachronic perspective in Section 5.

danger. There are a lot of things to be cleared up - we want to find out exactly what was behind this." (CB)

- (10) It may be known as the Royal Opera House but this was ballet's night. On February 20, 1946, it was the ballet that reopened Covent Garden after the war with a performance of *The Sleeping Beauty*. So it was right and **proper** that on Tuesday, 50 years to the day later, the historic reawakening of one of the world's great houses should be marked by the ballet again, and with *Sleeping Beauty*. (CB)

Example (9) has a mandative *to*-clause describing an as yet unrealized but desired action. The whole construction conveys the speaker's assessment of the SoA denoted by the *to*-clause as (morally) desirable: at that moment in the past, he felt it was desirable that they should protect anyone inside or outside from danger. As such, the construction has a deontic meaning as defined by Verstraete (2005: 1406): a modal source assesses the desirability or (moral) acceptability/necessity for an agent to carry out a certain action.<sup>9</sup> In terms of Noonan's (2007: 120-145) semantic classification of complement-taking predicates (henceforth CTPs), adjectival matrices combined with mandative complements belong to the type of desiderative predicates like *want* (2007: 132-137), or modal predicates like *ought*, *should*, *must* (2007: 137-139).

By contrast, the construction in (10) has a propositional complement. The whole construction expresses the speaker's evaluation of an event that has already actualized at the time of utterance.<sup>10</sup> In (10), it is irrelevant whether the speaker wanted the SoA to happen or not; he can only assess the fact that it did happen. The adjectival matrix does not have a deontic flavour, but is merely evaluative. In terms of Noonan's classification, the matrix in (10) belongs to the type of commentative predicates (2007: 127-128), which "provide a comment on the complement proposition which takes the form of an emotional reaction or evaluation (*regret*, *be sorry*, *be sad*) or a judgement (*be odd*, *be significant*, *be important*)".

The main difference between mandative and propositional complements lies in how they are framed modally, and how this relates in turn to their ontological status. Mandative complements express *desirable* actions or events, which, hence, are as yet unrealized. Ontologically, they are inherently potential, as in (9). Propositional complements, by contrast, may be realized, as in (10), or not, as in (8) above or (11) below. What is crucial to propositional complements is that their *truth value* is at stake (p.c. Jean-Christophe Verstraete). If the SoA referred to has already happened, as in (10), the proposition is presupposed to be true, that is, it is in Kiparsky & Kiparsky's (1971) terms 'factive'. If the SoA being described is situated in the future, as in (11), or is assessed on its likelihood of occurrence, as in (12), it is not factive, but it is framed with regard to its possibility of being or becoming true.

- (11) It would be nice if we it had been done and dusted by now, but it hasn't worked out that way. However, I always thought it would go down to the last game of the

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<sup>9</sup> Traditionally, deontic modality has been defined more in terms of specific subtypes such as permission and obligation, e.g. Lyons (1977: 823-841), Palmer (2001), Van der Auwera & Plungian (1998).

<sup>10</sup> Example (10) is taken from an article reporting on the re-opening of the Royal Opera House after that event.

season and it's only right and **fitting** that it will." Richardson knows his side cannot afford to take their foot off the gas on Friday. (CB)

This entails that, as noted in the introduction, propositional complements are situated vis-à-vis the speech event either in terms of time or epistemic modality.

This difference in the general modal value (desirability – truth) attaching to the two types of complements has an important semantic corollary: they also differ in semantic dependency (Noonan 2007). More specifically, mandative and propositional complements differ in terms of time-reference dependence. Firstly, a complement is time-reference dependent “if its time reference is a necessary consequence of the meaning of the CTP”, i.e. is “logically bound by the time reference of the CTP” (Noonan 2007: 102). The CTPs that combine with mandative complements in our data are desiderative and modal predicates. The element determining the logical relation between predicate and complement is the desire of the modal source that the SoA in the complement be realized. This desired realization is typically future-oriented (Noonan 2007: 102), but can also be present or pre-present (perfective) as in *it's important to be thinking about me* and *it is essential to have it planned* (cf. Bolinger 1967: 348-351). As explicitly noted by Noonan (2007: 104) “complements with DTR [dependent time reference] don't have to represent future events but may simply represent potential events”, which is reflected by their typological tendency to be coded by non tense-marked verbal forms such as the infinitive and subjunctive. In our view, it is the intrinsically potential nature of mandates which determines their dependence on the desiderative matrix.<sup>11</sup> By contrast, there is no time reference dependence between propositional complements and their commentative matrices. Propositional complements have their own “independent time reference” (Noonan 2007: 102).

In the constructions with the different complement types we also find different uses of the adjectival matrices. Combined with a propositional complement, they are merely evaluative (just like commentative predicates), while with a mandative complement, they have a deontic flavour (just like desiderative and modal predicates). The evaluative meaning of the importance and appropriateness adjectives is close to their original qualitative sense. As illustrated by (10), and as we will further see in section 5, the meaning of adjectives such as *proper* and *important* in constructions with propositional complements often boils down to a general positive evaluation, evoking qualities such as ‘good’, ‘natural’, ‘logical’, ‘significant’, etc. In their deontic use, by contrast, these adjectives have (weaker or stronger) ‘necessity’ as a central meaning component (Van linden et al. 2008: 228).<sup>12</sup> For instance, in example (9) the adjective *proper* expresses the necessity to protect people inside and outside because of information received about armed people possibly being in the building. In short, the semantic difference between ECs with mandative complements and ECs with propositional complements can be summarized as follows: in the former a modal source assesses the deontic necessity of an

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<sup>11</sup> Cristofaro (2003: 112) formulates this point very radically: “Whether and when the dependent SoA takes place is completely irrelevant to the condition of desire expressed by the main predicate.”

<sup>12</sup> Van linden et al. (2008) reconstructed how the two importance adjectives *essential* and *crucial* developed a deontic meaning from their original descriptive meaning. They first acquired the semantic components of ‘relationality’ and ‘potentiality’, which gave rise to ‘dynamic (situational) necessity’, which in turn enabled deontic meaning to emerge.



agent carrying out an action, while in the latter, the speaker, or a third party, comments on a SoA presupposed to be true.

### 3.2 Primary complements: mandative and propositional subtypes

#### 3.2.1 Functional description

Having discussed the fundamental semantic distinction between mandative and propositional complements in the previous section, we will now discuss the various possible codings they can receive. In accordance with our functional approach, we will relate the basic semantic components of mandates and propositions to their different grammatical realizations. At the same time, the usage-based aspect of the relative frequencies of sub-types of complements as attested in our data set will also be brought into the picture. Table 1 represents the overall absolute and relative frequencies of the semantic subtypes, cross-classified with their formal codings. The normalized frequencies (per 100,000 words) have been rounded up to two decimal places, or, in the case of figures with larger decimals, to at least two significant digits. The abbreviations used in this and all the following tables are: n: absolute frequency; N: relative frequency per 100.000 words; %: relative share.

COBUILD		6 adjectives				
		n	N	%	% of semantic type	% form per semantic type
prop	<i>that</i>	89	0.24	5.17	5.28	97.80
	<i>to</i>	2	0.0054	0.12		2.20
prop/ mand	<i>that</i>	17	0.046	0.99	1.04	94.44
	<i>to</i>	1	0.0027	0.06		5.56
mand	<i>that</i>	531	1.44	30.82	93.67	32.90
	<i>to</i>	1083	2.94	62.86		67.10
total		1723	4.68	100	100	-

Table 1: The overall distribution of propositional and mandative complements with the adjectives of importance and appropriateness in PDE

MANDATIVE complements express potential SoAs, whose actualization is desired by the speaker or a third party. As shown by Table 1, *to*-infinitives are a common coding form of mandates (67.10%), but not of propositions (2.20%).

- (12) Taking such an approach was entirely necessary because of the growing extent of the problem. And because of the enormous damage which the overall claims bill could do to the Irish economy - and to the reputation of the Defence Forces. It was also **important** to raise the public awareness of the claims situation. Remember at the end of the day it is the taxpayer who foots the bill. (CB)

Bolinger (1967: 351-352) has pointed out the close analogy between an infinitive coding a mandative complement and an imperative, which expresses mandatoriness in the independent clause. Both are non-finite, lacking deictic tense marking, and both typically

have no subject expressed with them.<sup>13</sup> According to Bolinger, the mandative infinitive is functionally and formally the closest counterpart of the imperative. It expresses the desired action as an intrinsically virtual SoA, whose realization is dependent on the willingness of the agents appealed to by the modal source (Davidse 1999: 358).

Table 1 also shows that 32.90% of mandates are coded by finite clauses. As noted in the introduction, finite mandates may contain a subjunctive, a deontic modal, or an indicative form of the verb.<sup>14</sup> The first two coding forms, illustrated by (13) and (14), mark the desired and non-realized nature of the situation. With the latter means of coding, illustrated by (15), these two elements have to be inferred on the basis of contextual clues. In (15) the preceding discourse makes it clear that the collecting of information at some future point relative to the time of utterance is at stake. The context also makes it clear that the EC with *important* expresses a recommendation, viz. the moral desirability of collecting information about child vaccination which is as complete as possible. In other words, contextual elements activate the potential reality status of the action and its moral desirability.

- (13) ... the Trust made representations during the Water Bill's passage through Parliament which were successful in strengthening the safeguards for conservation and public access on land to be retained by the newly privatised companies, though less so on land to be disposed of. In the latter case, it is **essential** that the Secretary of State *exercise* his discretionary power to require land within designated areas to be offered to a conservation organisation, and elsewhere to insist on adequate protection from development and provisions for free public access. (CB)
- (14) Moreover, if one party does not want to divorce, and sees themselves as the innocent party, it is extremely **important** that they *should* not be penalised. To this extent at least, it is **essential** that immoral or unjust conduct *should* be taken into account. These, then, are some of the concerns I have about the Bill as presently drafted. (CB)
- (15) Accurately measuring vaccination levels in young children will ultimately prevent outbreaks of disease. ... When the interviewer calls, you will be asked a few questions to determine whether or not your household is eligible for participation in this survey. ... This study is authorized by the Public Health Service Act, and by law, information you provide during the interview will be kept strictly confidential. ... It is **important** that the information we collect is as accurate as possible. (CB)

PROPOSITIONAL complements, then, are typically and in the overwhelming majority of cases coded by finite clauses (97.80%), and only marginally by non-finite ones (2.20%). Propositional complements involve, as Halliday (1994: 71) puts it, arguable claims. To put this differently, making a claim about the truth value of a proposition implies that this claim can be challenged. The propositions found in the ECs we are

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<sup>13</sup> As pointed out by Bolinger (1967: 362), the English imperative even has the form of the infinitive.

<sup>14</sup> Our corpus data contradict Huddleston & Pullum's (2002: 995) claim that 'covert' mandates with indicative are fairly rare. Of the 394 mandative *that*-clauses found with *important* in CB, for example, no fewer than 142 (36.04%) are in the indicative mood, and another 192 cases (48.73%) are ambiguous between indicative and subjunctive mood. In fact, only 7 instances (1.78%) contain unambiguous subjunctive finites. Modal *should*, finally, is found in 49 examples (12.44%).

concerned with present the SoAs in them as true or possibly true, but can in principle still be challenged. What is essential to a propositional complement is that it is a circumscribed claim about a SoA that can be agreed with or not. For this, it needs to have a reference point in the deictic centre shared by speaker and hearer (Halliday 1994: 75; Langacker 1991: 195). Finite tensed or epistemic VPs give the proposition such a reference point that makes it arguable, e.g.

- (16) Ministers and MPs would much rather the onus of accepting or rejecting planning applications or proposals for development fell on local councillors. So if planning is indisputably a local function, it is perhaps **appropriate** that what is certainly local government's key job during the next five years has just been given to a chartered town planner. (CB)
- (17) This book presents a balanced and sensible self-help programme for bulimia. It is particularly **important** that it is written by a woman, since nearly all those with bulimia are women, and that it is written by someone who has experienced the syndrome herself. (CB)

Moreover, the finite VP is intrinsically related to the subject, in terms of which the truth of the proposition is asserted (Halliday 1994: 75-77). Note that the propositions in (16) and (17) can be challenged by interrogatives replaying the subject and the finite in terms of which the claim in the original declarative was asserted: (16) Has it really been given to a chartered town planner? (17) Has it really been written by a woman?

It is extremely rare for a propositional complement to be expressed by an infinitival complement in ECs in Modern English. Just a few instances were found in our Late Modern English and COBUILD data, such as (7) above, and only with adjectives evaluating appropriateness (see Table 3 below). As just noted, propositions require the meanings expressed by the finite element of a tensed or epistemic VP. A finite VP gives the proposition a reference point in the speech exchange and has an intrinsic relation to a subject. In order for an infinitive to code a proposition, it must somehow convey these elements by different means. The cases in our data typically express the subject in a prepositional phrase like *of her* (7) in the matrix, from which the infinitive presupposes its subject. The temporal anchoring of the proposition is brought about indirectly, viz. by the temporal relation of the infinitive to the finite VP in the matrix. In (7), the perfect infinitive *have called* is anterior vis-à-vis the past expressed by *was* (Declerck 1991: 118). Most of the infinitival propositional complements in our data have perfect infinitives, locating the situation referred to before the time of orientation of the matrix, i.e. in the background to the discourse, as is characteristic of propositional complements. However, a few examples have present infinitives as in (18), which raises the question of how the temporal anchoring of the proposition is brought about in these.

- (18) Behind the youth and maiden was a tempting alcove and seat, formed naturally in the beetling mass, and wide enough to admit two or three persons. Elfride sat down, and Stephen sat beside her. 'I am afraid it is hardly **proper** of us to be here, either,' she said half inquiringly. 'We have not known each other long enough for this kind of thing, have we!' (CLMET 3)

In (18), the locative adverb *here* indirectly indicates that the actualization of the situation in the *to*-complement is simultaneous with the moment of speaking, as it deictically locates the proposition in the here-and-now of the speech event. Again, note that the subject of the infinitive is expressed by an *of*-PP. Finally, there are also a few cases in which the subject of the infinitive is expressed by a *for*-PP, as in (19), which, in contrast with the *of*-PP in (18), is structurally part of the complement clause (Huddleston & Pullum 2002: 1178).

- (19) [about the cosmological associations of the Northern Palace] The Sun never reaches the North, so it is **proper** for the North to be associated with Winter; the ice, rain, and snow which are frequent in Winter makes Water the appropriate element. (CB)

The present infinitive in (19) is simultaneous with the time of utterance of the matrix clause in the sense that it expresses a permanent truth (Declerck 1991: 90).

Having discussed the distinct coding tendencies of mandative and propositional complements, we have to point out that in a small number of cases (see Table 1) the contexts do not disambiguate the two possible readings of *to*-clauses or *that*-complements. Instead, they form bridging contexts (Evans & Wilkins 2000: 550), which contextually support both a mandative and a propositional reading, as is the case with *that a club should have its history and traditions* in (20).

- (20) Reluctant though he is to succumb to the pressures which have left Cloughie physically and emotionally scarred, Bassett is still happy to follow in the great man's footsteps. But he knows he will never be able to emulate his predecessor's achievements. ... Bassett said: 'Let's face it - he's an impossible act to follow. He did for Forest what Herbert Chapman did with Arsenal, but he did it at a much smaller club. Though we don't see him at Forest nowadays there are reminders everywhere of what he and his team did during that remarkable 18 years. I don't mind that. I've never wanted to rip the pictures of Cloughie off the walls. It's **important** that a club should have its history and traditions. I don't want to get rid of the ghosts of the past. I don't find them a burden, but all the success Forest had has built up false expectations around the place. (CB)

From the context, we can infer that in the club in question, Nottingham Forest, this sense of history is very much present. This supports a propositional reading of the *that*-complement. However, as suggested by the indefinite NP *a club*, the interviewed speaker, Bassett, can also be understood to say that it is desirable for clubs in general to recognize their history, in which case the *that*-complement is given a mandative reading.

### 3.2.2 Quantitative instantiation in the data

After this functional description of the primary complements found in the data, we turn to their quantitative instantiation.

COBUILD		<i>essential</i>			<i>crucial</i>			<i>important</i>		
		n	N	%	n	N	%	n	N	%
prop	<i>that</i>	2	0.0054	0.93	2	0.0054	4.65	29	0.079	2.19
	<i>to</i>	0	0	0.00	0	0	0.00	0	0	0.00
prop/ mand	<i>that</i>	0	0	0.00	0	0	0.00	8	0.022	0.60
	<i>to</i>	0	0	0.00	0	0	0.00	0	0	0.00
mand	<i>that</i>	111	0.30	51.63	19	0.052	44.19	394	1.07	29.78
	<i>to</i>	102	0.28	47.44	22	0.060	51.16	892	2.42	67.42
total		215	0.58	100	43	0.12	100	1323	3.59	100

Table 2: The distribution of propositional and mandative complements with the importance adjectives in PDE

COBUILD		<i>appropriate</i>			<i>proper</i>			<i>fitting</i>		
		n	N	%	n	N	%	n	N	%
prop	<i>that</i>	27	0.073	28.72	2	0.0054	11.76	27	0.073	87.10
	<i>to</i>	0	0	0.00	1	0.0027	5.88	1	0.0027	3.23
prop/ mand	<i>that</i>	6	0.016	6.38	2	0.0054	11.76	1	0.0027	3.23
	<i>to</i>	1	0.0027	1.06	0	0.00	0.00	0	0	0.00
mand	<i>that</i>	4	0.011	4.26	3	0.0081	17.65	0	0	0.00
	<i>to</i>	56	0.15	59.57	9	0.024	52.94	2	0.0054	6.45
total		94	0.26	100	17	0.046	100	31	0.084	100

Table 3: The distribution of propositional and mandative complements with the appropriateness adjectives in PDE

As Tables 2 and 3 show, ECs with the six adjectives studied have both mandative and propositional clausal complements in Present-day English. However, there are considerable differences within the distribution of the two complement types, which for the PROPOSITIONAL complements cluster in terms of the two subsets of adjectives. With the importance adjectives *essential*, *crucial*, *important*, propositional complements account for only a few percentages, with *crucial* reaching the highest relative frequency, viz. 4.65%. The propositional complements of the appropriateness adjectives *appropriate*, *proper*, and *fitting*, by contrast, constitute 28.72% (or 36.16%), 17.64% (or 29.40%), and 90.33% (or 93.56%) respectively.<sup>15</sup> On the assumption that high frequency reflects unmarkedness (Halliday & James 1993), we can draw two main conclusions. Firstly, it is mandative complements that are generally the unmarked complementation type with importance and appropriateness adjectives, with the exception of *fitting*. Secondly, propositional complements are a much more marked and peripheral option with importance adjectives than with appropriateness adjectives.

If we regard this synchronic constructional variation as a reflection of diachronic processes of change, it raises a number of questions. Seeing that the mandative complements predominate, did they come first diachronically? Did the propositional complements develop from the mandative ones, and if so, how? Did the propositional pattern of the importance adjectives branch off from the mandative path in a different way from that of the appropriateness adjectives?

<sup>15</sup> The percentages between brackets add bridging contexts to the unambiguous cases.

The general distribution of the MANDATIVE complements mirrors the clusters of the propositional ones inversely: mandative complements form a considerable majority with *appropriate* and *proper* and an overwhelming majority with the importance adjectives. However, the distribution of the non-finite versus finite subtypes of mandative clauses does not correlate in any clear way with the importance and appropriateness adjectives. With *important*, *crucial*, *appropriate*, *fitting*, and *proper*, infinitival ones predominate, while with *essential to*-infinitives and *that*-clauses occur in very comparable proportions. This fluctuation also suggests diachronic questions, mainly whether the predominance of *to*-infinitives results from an increase of this coding form over time.

In this section it has become clear that the mandative complements, and hence also the deontic meanings, of the adjectives in ECs generally constitute the unmarked option in Present-day English, except for *fitting*. The synchronic distribution of the subtypes of complements suggested a number of research questions about their diachronic development, which we will take up in sections 4 and 5.

### 3.3 Secondary complements

The adjectives under investigation are attested also with combined patterns of complementation, which will be surveyed in this section.

In the data, the primary complement is invariably of the mandative type, but the secondary complement may be either mandative or propositional. In most cases, the primary mandative complement is expressed by a *to*-infinitive, which may be followed by a mandative *that*-clause, as in (21), or a propositional *that*-clause, as in (22).

- (21) Moreover, it is **important** *to ensure that* the economic conditions under which the enterprise functions agree with the independent productive functioning of the collectives under contract. (CB)
- (22) Berliner reports that a 20-year veteran of New York City schools described their impact as nothing short of a miracle" (ibid., 96). However, before becoming too excited about such knowledge, it is **essential** *to remember that* most of the research has been conducted in one particular country, namely in the USA, mainly in primary school classrooms, in various grades, often involving White or principally White pupils, who generally come from higher socio-economic status backgrounds. (CB)

It should be noted that the secondary complement dependent on a primary mandative one can also be an indirect question, as in (23) and (24). These indirect questions are ranged with propositional complements (Halliday 1994: 241), because they pertain to SoAs tied to the deictic centre in terms of tense or epistemic modality. They are concerned with arguable truth-claims: indirect polar interrogatives (23) inquire about the actualization of a SoA, while indirect *wh*-interrogatives (24) presuppose actualization of the SoA but represent the *wh*-element as a variable (Huddleston & Pullum 2002: 902)

- (23) When looking at the deeds, it is **essential** *to see whether* your land and your neighbours' land were ever owned by the same person at the same time. (CB)

- (24) His group's 32,000 members were satisfied with their £ 276 million out-of-court settlement last year when, he said, City institutions `finally responded to more than three years of pressure. Mr Trench said it was **essential** to know what had gone wrong with the regulatory system so that action could be taken to stop anything like it happening again. (CB)

Exceptionally, we also find primary mandative complements being expressed by a finite clause, which can in turn be complemented by a mandative or a propositional *that*-clause, as in (25) and (26) respectively. The infrequency of this pattern with two successive finite (*that*)-clauses can be explained by the *horror aequi* principle, “the widespread (and presumably universal) tendency to avoid the use of formally (near-)identical and (near-)adjacent grammatical elements or structures” (Rohdenburg 2003: 236).

- (25) However the benefits payable towards the cost of your treatment may vary from insurer to insurer. It is therefore **essential** you check that your level of cover provides full reimbursement of the charges you will incur. (CB)
- (26) It is **important** that all clinicians remember that it is not their pride in being right about a diagnosis at any level which makes them therapeutic, but rather their ability to aim the diagnosis at the correct level to be helpful to the patient. (CB)

Tables 4 and 5 show the absolute and relative frequencies of the combined complementation patterns discussed above.

COBUILD	<i>essential</i>			<i>crucial</i>			<i>important</i>		
	n	N	%	n	N	%	n	N	%
<i>to</i> -mand + prop	13	0.035	59.09	2	0.0054	28.57	185	0.50	65.14
<i>that</i> -mand + prop	2	0.0054	9.09	2	0.0054	28.57	44	0.12	15.49
<b>total prop</b>	<b>15</b>	<b>0.041</b>	<b>68.18</b>	<b>4</b>	<b>0.011</b>	<b>57.14</b>	<b>229</b>	<b>0.62</b>	<b>80.63</b>
<i>to</i> -mand + mand	5	0.014	22.73	3	0.0081	42.86	46	0.12	16.20
<i>that</i> -mand + mand	2	0.0054	9.09	0	0	0.00	9	0.024	3.17
<b>total mand</b>	<b>7</b>	<b>0.019</b>	<b>31.82</b>	<b>3</b>	<b>0.0081</b>	<b>42.86</b>	<b>55</b>	<b>0.15</b>	<b>19.37</b>
total	22	0.060	100	7	0.019	100	284	0.77	100

Table 4: The distribution of combined complementation patterns with the importance adjectives in PDE

COBUILD	<i>appropriate</i>			<i>proper</i>			<i>fitting</i>		
	n	N	%	n	N	%	n	N	%
<i>to</i> -mand + prop	2	0.0054	66.67	1	0.0027	100	0	0	-
<i>that</i> -mand + prop	0	0	0.00	0	0	0.00	0	0	-
<b>total prop</b>	<b>2</b>	<b>0.0054</b>	<b>66.67</b>	<b>1</b>	<b>0.0027</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>-</b>
<i>to</i> -mand + mand	1	0.0027	33.33	0	0	0.00	0	0	-
<i>that</i> -mand + mand	0	0	0.00	0	0	0.00	0	0	-
<b>total mand</b>	<b>1</b>	<b>0.0027</b>	<b>33.33</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>-</b>
total	3	0.0081	100	1	0.0027	100	0	0	-

Table 5: The distribution of combined complementation patterns with the appropriateness adjectives in PDE

These figures show that, with 79.18% of the total, the combined pattern with secondary propositions is much more frequent than that with secondary mandatives (20.82%). In other words, in Present-day English the combined patterns are used mainly with the effect of associating a proposition with the adjectives. As we observed in the introduction, there is a striking pragmatic resemblance between complementation by proposition only (e.g. 17) and complementation by mandative + proposition (e.g. 22). The question thus arises whether this combined pattern played a role in the diachronic process that led to the single proposition complement. This hypothesis will be investigated in section 5.

It can also be noted that the two sets of adjectives differ markedly among each other as to the frequency of the pattern with mandative and proposition. This combined pattern is more common with the importance adjectives than with the appropriateness adjectives, with which it is extremely rare (*appropriate, proper*) to non-occurring (*fitting*). This suggests again that the diachronic paths leading up to the present situation will partly differ for the two sets of adjectives, but in what way precisely will be established in section 5.

#### 4. Diachronic development of mandative complements

To arrive at an overview of how the functional and formal distribution of the complements developed over time, we supplemented the synchronic data discussed in section 3 with diachronic data from several corpora. As the earliest attestations of clausal complements with the adjectives, viz. with *proper*, date from the period 1570-1640, we will discuss data from that period onwards. Table 6 indicates the corpora used for each period.

Subperiod of English	Time span	Corpus	Number of tokens
Early Modern English (EModE)	1570–1640	<i>Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME)</i>	652,799
	1640–1710	<i>Corpus of Early Modern English texts (CEMET)</i>	1,943,392
Late Modern English (LModE)	1710–1780	<i>Corpus of Late Modern English texts (Extended version) (CLMET 1)</i>	3,037,607
	1780–1850	CLMET 2	5,723,989
	1850–1920	CLMET 3	6,251,804
Present-Day English (PDE)	roughly 1990–1995	<i>Collins COBUILD Corpus (CB)</i> (only British subcorpora)	36,851,291

Table 6: The corpora used for each subperiod with their number of tokens

Tables 7 to 12 represent the distribution of primary propositional and mandative complements, cross-classified with their formal realization as *to*-infinitive or finite clause, throughout these periods.



<i>essential</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	2	40	94	174	285	293
		N	0.31	2.06	3.09	3.04	4.56	0.80
prop	<i>that</i>	n	-	0	0	0	0	2
		N	-	0	0	0	0	0.0054
		%	-	0.00	0.00	0.00	0.00	0.93
mand	<i>that</i>	n	-	1	1	2	7	111
		N	-	0.51	0.033	0.035	0.11	0.30
		%	-	100	100	40	77.77	51.63
	<i>to</i>	n	-	0	0	3	2	102
		N	-	0	0	0.052	0.032	0.28
		%	-	0.00	0.00	60	22.17	47.44

Table 7: The diachronic distribution of primary propositional and mandative complements of *essential*

<i>crucial</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	0	0	0	0	6	94
		N	0	0	0	0	0.096	0.26
prop	<i>that</i>	n	-	-	-	-	-	2
		N	-	-	-	-	-	0.0054
		%	-	-	-	-	-	4.65
mand	<i>that</i>	n	-	-	-	-	-	19
		N	-	-	-	-	-	0.052
		%	-	-	-	-	-	44.19
	<i>to</i>	n	-	-	-	-	-	22
		N	-	-	-	-	-	0.060
		%	-	-	-	-	-	52.16

Table 8: The diachronic distribution of primary propositional and mandative complements of *crucial*

<i>important</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	1	29	346	691	776	1393
		N	0.15	1.49	11.39	12.07	12.41	3.78
prop	<i>that</i>	n	-	-	0	0	1	29
		N	-	-	0	0	0.016	0.079
		%	-	-	0.00	0.00	2.33	2.19
prop/ mand	<i>that</i>	n	-	-	0	0	0	8
		N	-	-	0	0	0	0.022
		%	-	-	0.00	0.00	0.00	0.60
mand	<i>that</i>	n	-	-	0	20	15	394
		N	-	-	0	0.35	0.24	1.07
		%	-	-	0.00	55.56	34.88	29.78
	<i>to</i>	n	-	-	1	16	27	892
		N	-	-	0.033	0.28	0.43	2.42
		%	-	-	100	44.44	62.79	67.42

Table 9: The diachronic distribution of primary propositional and mandative complements of *important*

<i>appropriate</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	4	1	0	110	70	189
		N	0.61	0.051	0	1.92	1.12	0.51
prop	<i>that</i>	n	-	-	-	0	0	27
		N	-	-	-	0	0	0.073
		%	-	-	-	0.00	0.00	28.72
prop/ mand	<i>that</i>	n	-	-	-	0	0	6
		N	-	-	-	0	0	0.016
		%	-	-	-	0.00	0.00	6.38
	<i>to</i>	n	-	-	-	0	0	1
		N	-	-	-	0	0	0.0027
		%	-	-	-	0.00	0.00	1.06
mand	<i>that</i>	n	-	-	-	0	0	4
		N	-	-	-	0	0	0.011
		%	-	-	-	0.00	0.00	4.26
	<i>to</i>	n	-	-	-	2	2	56
		N	-	-	-	0.035	0,32	0.15
		%	-	-	-	100	100	59.57

Table 10: The diachronic distribution of primary propositional and mandative complements of *appropriate*

<i>fitting</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	4	9	6	35	40	62
		N	0.61	0.46	0.20	0.61	0.64	0.17
prop	<i>that</i>	n	0	0	0	0	2	27
		N	0	0	0	0	0.032	0.073
		%	0.00	0.00	0.00	0.00	0.00	28.57
	<i>to</i>	n	0	0	0	0	0	1
		N	0	0	0	0	0	0.0027
		%	0.00	0.00	0.00	0.00	0.00	0.00
prop/ mand	<i>that</i>	n	0	0	3	3	2	1
		N	0	0	0.099	0.052	0.032	0.0027
		%	0.00	0.00	100	30	28.57	3.23
mand	<i>that</i>	n	0	0	0	2	2	0
		N	0	0	0	0.035	0.032	0
		%	0.00	0.00	0.00	20	28.57	0.00
	<i>to</i>	n	1	2	0	5	1	2
		N	0.15	0.10	0	0.087	0.016	0.0054
		%	100	100	0.00	50	14.29	6.45

Table 11: The diachronic distribution of primary propositional and mandative complements of *fitting*

<i>proper</i>		Fr	PPCEME	CEMET	CLMET1	CLMET2	CLMET3	CB
		n	25	332	908	896	552	123
		N	3.83	17.08	29.89	15.65	8.83	0.33
prop	<i>that</i>	n	0	0	0	0	1	2
		N	0	0	0	0	0.016	0.0054
		%	0.00	0.00	0.00	0.00	0.00	5
	<i>to</i>	n	0	0	0	0	2	1
		N	0	0	0	0	0,032	0.0027
		%	0.00	0.00	0.00	0.00	0.00	10
prop/ mand	<i>that</i>	n	0	0	1	1	2	2
		N	0	0	0.033	0.017	0.032	0.0054
		%	0.00	0.00	0.51	0.63	10	11.76
	<i>to</i>	n	0	1	0	2	1	0
		N	0	0.051	0	0.035	0.016	0
		%	0.00	9.09	0.00	1.26	5	0.00
mand	<i>that</i>	n	0	0	10	19	5	3
		N	0	0	0.33	0.33	0.080	0.0081
		%	0.00	0.00	5.10	11.95	25	17.65
	<i>to</i>	n	2	10	185	137	9	9
		N	0.31	0.51	6.09	2.39	0.14	0.024
		%	100	90.91	94.39	86.16	45	52.94

Table 12: The diachronic distribution of primary propositional and mandative complements of *proper*

The first main point emerging from these figures is that mandatives generally predominate. The skew (between 61% and 99%) towards mandative complements found in the synchronic data turns out to be preceded by even stronger skews in the historical data. Propositional complements emerge later than mandatives, and at first in extremely low frequencies. *Fitting*, the only adjective to have a predominance of propositions in Present-day English, also skewed strongly towards mandatives in all the preceding stages. We can conclude that mandative complements constitute the original complementation pattern of both importance and appropriateness adjectives. As discussed in section 3.1, these complements correlate with the deontic meaning of the adjectives in the matrix clause.

The second main question pertaining to the historical development of mandative complements is how their formal coding evolved. Los (2005: 171-190) found that the mandative complements of desiderative and manipulative verbs developed from a predominance of *that*-clauses to a majority of *to*-infinitives in Middle English. With regard to the adjectives studied here the question can therefore be asked whether they too manifest a similar tendency to increased *to*-complements, and this in a similar way for all adjectives. In general, *to*-infinitives do seem to predominate as the most common coding form of mandatives throughout the various stages. They predominate with *appropriate*, *proper*, *fitting*, *crucial*, and the very frequent *important*, but not with *essential*. However, this is not really the result of *to*-infinitives taking over from *that*-clauses. Apart from a few exceptions, adjectives which currently favour mandative *to*-infinitives basically have done so from the beginning. The short-lived deviations from this homogeneous

development all occurred in Late Modern English, for instance in CLMET 3 with *essential* and in CLMET 2 with *important*. It can also be noted that the distinction between importance and appropriateness adjectives does not appear to play any role in the distribution of the formal subtypes of mandative complements.

## 5. Diachronic development of propositional complements

The flip side of the diachronic predominance of mandative complements discussed in section 4 is that primary propositional complements form a later development and a continuing minor option with all adjectives but *fitting*. However, we also have to take propositions occurring as secondary complement of a mandative into account here. Table 13 represents the distribution of propositional and mandative + propositional complements with the six adjectives, with primary complements symbolized by 1° and secondary ones by 2°. The numbers between square brackets represent bridging contexts, which contextually support both a mandative and a propositional reading (see section 3.2.1 above).

Adjectives	level	form	CEMET	CLMET1	CLMET2	CLMET3	CB
<i>appropriate</i>	1°	<i>that</i>	-	-	-	-	27+[6] 0.073+[0.016]
		<i>to</i>	-	-	-	-	[1] [0.0027]
	2°	<i>that</i>	-	-	1 0.017	-	2 0.0054
<i>fitting</i>	1°	<i>that</i>	-	[3] [0.099]	[3] [0.052]	2+[2] 0.032+[0.032]	27+[1] 0.073+[0.0027]
		<i>to</i>	-	-	-	-	1 0.0027
	2°	<i>that</i>	-	-	1 0.017	1 0.016	-
<i>proper</i>	1°	<i>that</i>	-	[1] [0.033]	[1] [0.017]	1+[2] 0.016+[0.032]	2+[2] 0.0054+[0.0054]
		<i>to</i>	[1] [0.051]	-	[2] [0.035]	2+[1] 0.032+[0.016]	1 0.0027
	2°	<i>that</i>	3 0.15	16 0.53	12 0.21	2 0.032	1 0.0027
<i>important</i>	1°	<i>that</i>	-	-	-	1 0.016	29+[8] 0.079+[0.022]
	2°	<i>that</i>	-	1 0.033	4 0.070	10 0.16	229 0.62
<i>essential</i>	1°	<i>that</i>	-	-	-	-	2 0.0054
	2°	<i>that</i>	-	-	-	1 0.016	15 0.041
<i>crucial</i>	1°	<i>that</i>	-	-	-	-	2 0.0054
	2°	<i>that</i>	-	-	-	-	4 0.011

Table 13: The diachronic distribution of primary (1°) and secondary (2°) propositional complements of *appropriate*, *fitting*, *proper*, *important*, *essential*, and *crucial*

As noted in section 4, all six adjectives originally took mandative complements. Interestingly, with all the adjectives, unambiguous propositional complements diachronically first appear as secondary complement of a mandative clause. That is, as a second step, they all acquired sooner or later the combined mandative-propositional pattern, in which the mandative complement contains a verb of cognition or verbalization such as *observe*, *notice*, *remember*, *show*, *inquire*, *point out*, etc., typically coded as *to*-infinitive. Below are given examples involving the appropriateness adjectives; examples involving importance adjectives can be found in section 3.3 above.

- (27) It is here **proper** to observe, that the father, according to the report of the passengers who came with him from Portugal to Mozambique, began to manifest that spirit of prophecy, which he had to the end of his days in so eminent a degree. (CEMET)
- (28) ... and there might be seasons when it would be equally **appropriate** to inquire, whether they prefer their appearance before the world, to the spiritual consolation of having made the injunctions of their blessed Saviour the rule of their conduct. (CLMET 2)
- (29) During His stay in London He visited Oxford (where He and His party--of Persians mainly--were the guests of Professor and Mrs. Cheyne), Edinburgh, Clifton, and Woking. It is **fitting** to notice here that the audience at Oxford, though highly academic, seemed to be deeply interested, and that Dr. Carpenter made an admirable speech. (CLMET 3)

Semantically, this pattern expresses the desirability (deontic modality) of ‘considering’ or ‘communicating about’ the secondary propositional complement.

However, this general picture is more differentiated if we take into account the bridging contexts, in which the possibility of a propositional reading besides the mandative one emerged. We then see that the primary complements of two of the appropriateness adjectives developed propositional readings (i) prior to the combined pattern or (ii) at the same time as the combined pattern. The bridging contexts of *fitting* in CLMET 1 and that of *proper* in CEMET illustrate the first and the second situation respectively. This is not the case with the importance adjectives, which do not manifest any bridging contexts in the historical stages and only develop them in PDE with *important* and *crucial*. Moreover, the distribution of the propositional complements in Present-Day English (see also Table 13) falls out differently for the two sets of adjectives. The APPROPRIATENESS adjectives are predominantly construed with PRIMARY propositional clauses. By contrast, the IMPORTANCE adjectives have relatively more propositional complements functioning as SECONDARY complements to a primary mandative complement than as primary propositional *that*-clauses. This suggests that the two sets of adjectives developed propositional complements in different ways. In what follows, we will reconstruct these two distinct paths of development.

The adjectives of IMPORTANCE followed a path that can be seen as an organic development of the mandative-propositional pattern. As shown by Table 13, the

predominance of the mandative-propositional pattern over the primary propositional pattern is found throughout their development and right into PDE, even though the combined pattern emerged at different stages with the different adjectives: with *important* in CLMET 1, with *essential* in CLMET 3, and with *crucial* only in Present-day English. As shown by the normalized frequencies, the combined pattern with *important* and *essential* increased systematically up to the present day, while keeping roughly a 10:1 ratio to the pattern with primary proposition. This suggests a development  $A > A + B > B$ , in which the link between two different constructions A and B, mandative and propositional complementation, is formed by a combination of the two complementation patterns, A + B. Of the resulting construction B with primary propositional complementation two distinct pragmatico-semantic uses could be observed.

A first use, illustrated by (30) and (31), has pragmatically a close correspondence to the combined pattern. In these examples it is not the SoA as such that is evaluated as important, but the speaker asks the hearer to focus mentally on a specific proposition or claim.<sup>16</sup>

- (30) I mean ... it ... it's **crucial** as well that he's pissed it's **crucial** that ... he's he's ... he's a drunk because a girl like Rita would walk through the door see that and know that there was another insecurity and another victim there right and that would give her the strength (CB)
- (31) Lastly, I believe it is **important** that the NEC is now dominated by members of the Shadow Cabinet. In my election address last year for the NEC I said 'The Liberals are not our allies but our competitors'. Subsequent events in Tower Hamlets and our success in the South in the European Elections has reinforced this. Yet Walworth Road still have not developed a strategy for this. (CB)

For instance, in (30) the speaker does not evaluate the SoA 'he's pissed' as 'crucial'; rather this example means 'it's crucial to note that he's very drunk'. Likewise, in (31), the speaker from the Labour party asks his audience to attend to – and accept – his claim that the NEC is now dominated by the Labour Shadow Cabinet, and he argues further for it in what follows, amongst others by referring to a recent success of the Labour party. These ECs with *essential*, *crucial* and *important* have roughly the same pragmatic effect as the ones in which the instruction to 'note' a SoA is explicitly coded. What seems to have happened is that the mandative cognition or verbalization predicate was dropped from the combined pattern, while still being implied in some sense. This phenomenon can perhaps be thought of as 'pragmatic persistence', in analogy with Hopper's (1991: 20) notion of lexical persistence,<sup>17</sup> i.e. the persistence of the pragmatic value associated with the original construction. As a consequence of this, the adjectives in examples like (30) and (31) are not used in a purely evaluative sense with regard to the following SoA. Rather, a matrix like *It's crucial* in (30) has the deontic pragmatic value of the speaker instructing the hearer to 'note that' the following proposition is the case.

<sup>16</sup> According to Biber et al. (1999: 673), ECs with importance adjectives always assess the significance of the proposition. This general semantic gloss does not cover examples such as (30) and (31).

<sup>17</sup> Hopper (1991: 20) speaks of "lexical persistence" when the original lexical features of a grammaticalizing construction remain present in it to a certain degree.

However, in a number of PDE examples with *important* such as (32) and (33), the SoA referred to is itself judged to be important.

- (32) It has been said that ‘gender is different more fundamental’. But even if this is the case, it is still less **important** that Jesus was a male, than that he was a human being - that he was of our flesh - our human flesh, not specifically male flesh. (CB)
- (33) The show at The Works had a lot of coverage from the mainstream press ... I felt it was very **important** that they chose to feature Lesbian Arts Network, as it meant that the mainstream was readily accessible. Such results are the driving force behind Sadie's work. (CB)

In (32) the SoA that Jesus was not a male is evaluated as ‘less important’ than the fact that he was a human being. This example can hardly be paraphrased with a mandative-propositional construction such as *it is less important to note that Jesus was a male, than (to note) that he was a human being*. Likewise, in (33) the fact that The Works featured Lesbian Arts Network is evaluated as important from the point of view of visibility to the general public. Examples like (32) and (33) show that ECs with *important* have developed a more general commentative reading in which the significance of a SoA as such is evaluated.

Can this purely evaluative use of the construction with single propositional complement also be seen as the outcome of the  $A > A + B > B$  path? We think that this is the most plausible hypothesis in view of the prior emergence and continued strong dominance of the combined pattern over the propositional pattern throughout the diachronic stages. Presumably, once, as a result of the  $A > A + B > B$  path, ECs with *important* and single propositional complement were established, the pragmatic value of the hearer being made to focus mentally on the proposition faded away in some contexts.

The adjectives of APPROPRIATENESS followed a different path. Although all three adjectives are found – albeit infrequently – in the mandative-propositional pattern from a certain stage onwards (*proper* from CEMET, *appropriate* and *fitting* from CLMET 2 onwards), none of them develops a ‘mental focus’ use with a primary propositional complement similar to that in (30) and (31) above. Rather, a case can be made for the primary propositional complements having developed from primary mandative complements via bridging contexts.

The earliest bridging contexts have an infinitival complement with *proper* such as (34) from CEMET and (35) from CLMET 2. As we saw in the synchronic description (section 3.2.2, Tables 2 and 3), infinitival propositions occur only with the appropriateness adjectives, not with the importance adjectives, in our data. Both bridging examples contain a perfect infinitive.

- (34) If there be any thing more in particular resembling the Copy which I imitate (as the Curious Reader will soon perceive) I leave it to show it self, being very well satisfy'd how much more **proper** it had been *for him to have found out this himself*, than for me to prepossess him with an Opinion of something extraordinary in an Essay began and finished in the idler hours of a fortnight's time. (CEMET)
- (35) Then it was that he felt the consequence of his pridefulness towards me; ... he came, and in a vehement manner cried to me for the love of heaven to come to his

assistance, and pacify the people. It would not have been **proper** *in me to have refused*; so out I went in the very nick of time: for when I got to the door, there was the soldiers in battle array, coming marching with fife and drum up the gait with Major Blaze at their head, red and furious in the face, and bent on some bloody business. (CLMET 2)

In (34) the state of affairs described by the *for...to*-infinitive is part of the apodosis of a conditional: should some further imitation become obvious to the reader, then the writer is satisfied that it was more proper *for him* (the reader) *to have found out this himself*. If we focus on the event ‘the reader found it out himself’ as preceding its evaluation as ‘proper’, then we read the *for...to*-clause propositionally. However, the last part of this sentence can also be read as a general moral assessment, meaning ‘it is better to let the reader find out for himself’, in which case the *for...to*-clause is read mandatively. Similarly, in (35) the matrix *it would not have been proper* can be understood as evaluating the hypothetical anterior SoA referred to by the *to*-complement, viz. ‘my having refused’. The matrix can also be interpreted as a modal prohibitive with in its scope the *to*-complement, which depicts the non-desirable action potentially. In both examples, the context thus supports both a mandative and a propositional reading.

The second type of bridging context with the appropriateness adjectives is constituted by *that*-clauses, typically with *should*, a modal that can receive either an epistemic or a deontic reading. Examples with *fitting* and *proper* are given below.

- (36) A Lawyer is an honest Employment, so is mine. Like me too he acts in a double Capacity, both against Rogues and for 'em; for 't is but **fitting** that we should protect and encourage Cheats, since we live by them. (CLMET 1)
- (37) It is quite right and natural that you should feel as you do except as regards one passage, the impropriety of which you will yourself doubtless feel upon reflection, and to which I will not further allude than to say that it has wounded me. You should not have said 'in spite of my scholarships.' It was only **proper** that if you could do anything to assist me in bearing the heavy burden of your education, the money should be, as it was, made over to myself. (CLMET 1)

The EC in (36) can be read as an ironic comment on the fact that all lawyers, as well as the speaker, protect and encourage cheats. The speaker thinks it is fitting they actually do so, as it enables them to make a living. In this reading, the form *should* is used epistemically, and the *that*-clause functions as propositional complement. However, (36) can also be read as a mandative construction: the speaker thinks it is fitting or morally desirable to protect and encourage cheats, as he owes them his living. In this interpretation, the auxiliary *should* has a deontic flavour. It can be noted that the SoA in the *that*-clause has an ambivalent ontological nature: the context indicates that it has been actualized or is being actualized, but at the same time the SoA is also still potential, as it is not certain that it will continue to be actualized. Example (37), then, allows for both a propositional and mandative reading as well. It can be inferred from the context (*as it was*) that the hearer received money for his studies from the speaker. Therefore, the expression can easily be read as a positive evaluation of an established fact. However, given the presumption manifested by the speaker in the whole context, a deontic reading



of the matrix followed by a mandative complement is also possible ('you were obliged to give me the money'). More generally, examples such as (36)-(37) and (34)-(35) confirm the points made in section 3.1 about the time-reference dependence between the matrix and mandative complements: they are typically, but not necessarily, future-oriented and can also be anterior to or simultaneous with the matrix. Often, these bridging contexts have complements involving hypothetical formulations or SoAs with an ambivalent ontological status.

*Fitting* and *proper* illustrate that it may take a few stages with only bridging contexts before we find unambiguous propositional complements. With both adjectives, bridging contexts are found from CLMET 1 on, but unambiguous examples such as (38) and (39) appear only in CLMET 3.

- (38) Her eyes were open, full of infinite pity and full of majesty, as if they discerned the boundaries of sorrow, and saw unimaginable tracts beyond. Such eyes he had seen in great pictures but never in a mortal. Her hands were folded round the sufferer, stroking him lightly, for even a goddess can do no more than that. And it seemed **fitting**, too, that she should bend her head and touch his forehead with her lips. (CLMET 3)
- (39) Gradually her brain, recovering from its obsession, began to grasp the phenomena of her surroundings, and she saw that she was on a yacht, and that the yacht was moving. [...] Nella all through her life had had many experiences of yachting. [...] She loved the water, and now it seemed deliciously right and **proper** that she should be on the water again. (CLMET 3)

In (38), the narrator describes a scene in which Miss Abbott chastely kisses Philip, an event that is evaluated positively. In (39), the fact that Nella is on the water has been explicitly mentioned in the preceding discourse, and the narrator evaluates it as right and proper (either from an omniscient point of view, or through the eyes of Nella). These examples comment on facts, and unlike in the cases of (36) and (37) it is hard to think of deontic interpretations in which these events are imposed. Neither are there clear links in terms of associated pragmatic inferences with the mandative-propositional pattern, which *fitting* and *proper* already manifested prior to the single propositional pattern (see Table 13). In Diewald's (2006) terms, (38) and (39) are 'isolating' contexts, in which the propositional reading has become associated with the construction as a distinct reading.

From the discussion above, it can be concluded that the path followed by the appropriateness adjectives basically fits the customary  $A > A/B > B$  schema proposed by Traugott & Dasher (2002), in which A is the original use, B the new use and A/B the transitional use with features of both A and B. Applied to the constructions studied here, A is the mandative *to-* or *that-*complement, B the propositional *to-* or *that-*complement, and A/B the *to-* or *that-*complement which bridges from a mandative to a propositional reading. As the appropriateness adjectives have all manifested the combined pattern from relatively early on, one could still speculate that, by associating a proposition with the appropriateness adjectives, the mandative-propositional pattern helped pave the way for the construction with single propositional complement at a very abstract constructional level. However, more than this sort of indirect influence cannot be ascribed to the combined pattern, which is numerically rather peripheral with the appropriateness

adjectives and has not led to a single proposition use in which the hearer is made to focus mentally on that proposition.

With regard to the single proposition construction, the most recent data suggest that a further development has taken place, viz. the emergence of a specialized use of B. In this specialized use, an aspect of the SoA in the complement is related to a contextually relevant precedent or analogue. This contextual link is invoked by the speaker to evaluate the temporal, spatial or sociocultural embedding of the current event positively. For instance, in example (10) above it is pointed out to the readers that the re-opening of the Royal Opera House with *Sleeping Beauty* was *proper* because Covent Garden was also re-opened with this ballet just after the Second World War. Comparable examples with *appropriate* and *fitting* are:

- (40) “It is great to see a symbol such as this, a proud product of Scottish shipbuilding return to a Scottish berth. We can all be proud today. Britannia will be a great centrepiece for Leith and for Edinburgh.” [...] Edinburgh's Lord Provost Eric Milligan brought cheers from the small but vocal crowd when he added: “It is most **appropriate** that a Scots-built ship is returned here to Scotland. We are bringing her to familiar water and a city that is proud of its royal connections.” (CB)
- (41) ... Mrs Atul Amersey's husband is one of these, from a prominent business family in Bombay, while the Chairperson Narindar Saroop is the First Asian Tory Parliamentary candidate to have fought a general election in this century. It was entirely **fitting** that the Appeal was launched in the Locarno Room of the Foreign & Commonwealth Office Building, formerly the India Office, where the East India Company directors functioned and held their board meetings. (CB)

Just as in all the previous developmental stages (i.e., A, A/B, and B), this recent specialized use is found with both *that*-clauses, e.g. (40) and (41), and *to*-clauses, as in (42) below. This example is taken from a letter to *The Times* about a special set of stamps celebrating the work of Robert Burns that will be issued soon. In it the writer explains why he thinks it is fitting that the song *Auld Lang Syne* will be featured on the stamp with an overseas postage rate.

- (42) Sir, Robert Burns, a prolific letter-writer, would surely have been delighted that the Royal Mail's special set of stamps being issued on January 25 to celebrate his work are prompting letters to *The Times* (January 23). The Royal Mail recognises the fact that Burns was not the originator of the song, *Auld Lang Syne*. Probably the earliest version of the song, *Auld Kyndnes foryett*, was published in 1568. However, no version that comes close to Burns's has ever been found, so it is generally agreed it should be attributed to him. ... By reworking a traditional song Burns created what has become a universal anthem, and we think it is **fitting** for the song to be featured on a stamp which has an overseas postage rate. (CB)

The CB data thus show that apart from the more general evaluative meaning as in, for instance, (38) above, ECs with appropriateness adjectives and propositional complements have developed a specialized use in which contextual links play a major part. In fact, this specialized use has become the predominant one with *appropriate* and *fitting*. However,

the micro-processes leading to the specialized semantics of this recent pattern still need to be unravelled.

It is interesting to note that *important*, which, like *fitting*, is found with a single proposition only from CLMET 3 on, seems to be manifesting this construction as well, albeit very marginally, in Present-day English, e.g.

(43) He advised Lombardi to temper his “combative optimism” with a sense of “gradualism” (the step-by-step approach). “It’s a good thing that such ideas should be spread around,” Montini concluded, “they will bear fruit in due course.” It was **important** that in the midst of the triumphalist Holy Year Montini should be thinking of an alternative style of papacy. (CB)

This suggests that there is also some interaction, allowing analogies to take effect, between the distinct developmental paths of propositional complements with the importance and appropriateness adjectives, which have been presented in this section.

## 6. General conclusions

In this article we have presented a data-driven study of the clausal complementation of deontic-evaluative adjectives in extraposition constructions (ECs), a topic which has been rather inadequately covered in the literature so far (section 2). It is based on qualitative and quantitative analyses of synchronic and diachronic corpus data with the importance adjectives *important*, *essential*, *crucial* and the appropriateness adjectives *appropriate*, *proper*, and *fitting*. As the diachronic part (sections 4 and 5) shed a fundamental light on the synchronic investigation (section 3), we will summarize our findings from a diachronic perspective.

Apart from *crucial*, all the adjectives studied in ECs started off taking mandative complements imposing desired action roughly from Late Modern English on. In these ECs, the matrix has a deontic value, expressing the desirability of the SoA in the complement being realized, e.g. *It is proper and agreeable to be conversant, not only in the transitory parts of good government: but in those acts also, which are in their nature permanent & perpetuall* (CEMET). In general, these mandative complements were and are typically coded by *to*-infinitives, but with a sizeable minority coded by *that*-clauses.

This original predominance of mandative complements was somewhat encroached upon by the gradual emergence of propositional complements. The diachronic data have shown that this new semantic type of complement has developed along different paths with the two lexical classes. With the IMPORTANCE adjectives, propositions appeared first as secondary complements of primary mandative complements containing cognitive or verbal predicates such as *observe*, *remember*, *inquire*, *point out*, e.g. *It is ... important to observe, that no similar resolution stands on the council-books for any previous year* (CLMET 2). These EC constructions still have primarily deontic meaning, expressing the desirability of ‘considering’ or ‘communicating about’ the secondary propositional complement. This path further continued as an organic development of the mandative-propositional pattern: in certain contexts the mandative predicate was dropped, but its value still pragmatically persisted, e.g. *it’s crucial as well that he’s pissed* (CB). We have argued that the pragmatic value of urging the hearer to mentally focus on the proposition

still characterizes many current examples with a primary propositional complement. A number of recent examples with *important*, however, merely evaluate the ‘fact’ as such described by the complement, e.g. *it’s still less **important** that Jesus was a male, than that he was a human being* (CB). We have interpreted this development of propositional complements with the importance adjectives in terms of the path  $A > A + B > B$ : the extension from primary mandative to primary propositional complement came about through the combined pattern. As to the overall relative frequency of the semantic types of complement, the importance adjectives are still predominantly construed with primary mandative complements in Present-day English.

The APPROPRIATENESS adjectives first appeared with primary mandative complements as well, and they also manifested the combined mandative-propositional pattern at some stage. This fact may have contributed at an abstract constructional level to their taking single propositional complements. More importantly, however, the diachronic data have shown that all appropriateness adjectives were first found with primary complements forming bridging contexts before they appeared with genuine propositional complements. They thus followed the well-established  $A > A/B > B$  path, with the two formal complement types (*that*-clauses and *to*-clauses) occurring at each stage.

Recently, the appropriateness adjectives have developed a specialized propositional use which relates the SoA in the proposition to an historical precedent or a contextual analogue, which is assessed as ‘fitting’, i.e. the matrix is purely evaluative, e.g. *I think it’s **fitting** that today, just hours before the anniversary of Iraq’s brutal invasion of Kuwait, we’re here talking about peace* (CB). In the present study it has not been possible to uncover all the shifts and mechanisms which led from the general propositional pattern to this specialized propositional use, which is now the main complementation pattern with *fitting*. More detailed work on more extensive data is necessary to fully reconstruct this recent development. In addition to propositional complements, the three adjectives studied here still combine with mandative complements in PDE, which indicates their polysemous nature. With *proper* and *appropriate*, mandative complementation even predominates, but less strongly so than with the importance adjectives.

The two paths summarized above can be visualized as in Figure 1. From the primary mandative complements, two pathways have branched off, associated with the two lexical classes of adjectives studied here. Apart from their common start as mandative complement-taking predicates, members of the two adjective classes continue to manifest constructional analogy, represented by the symbol  $\sim$ , between some constructions that are part of the distinct paths towards their taking propositional complements.

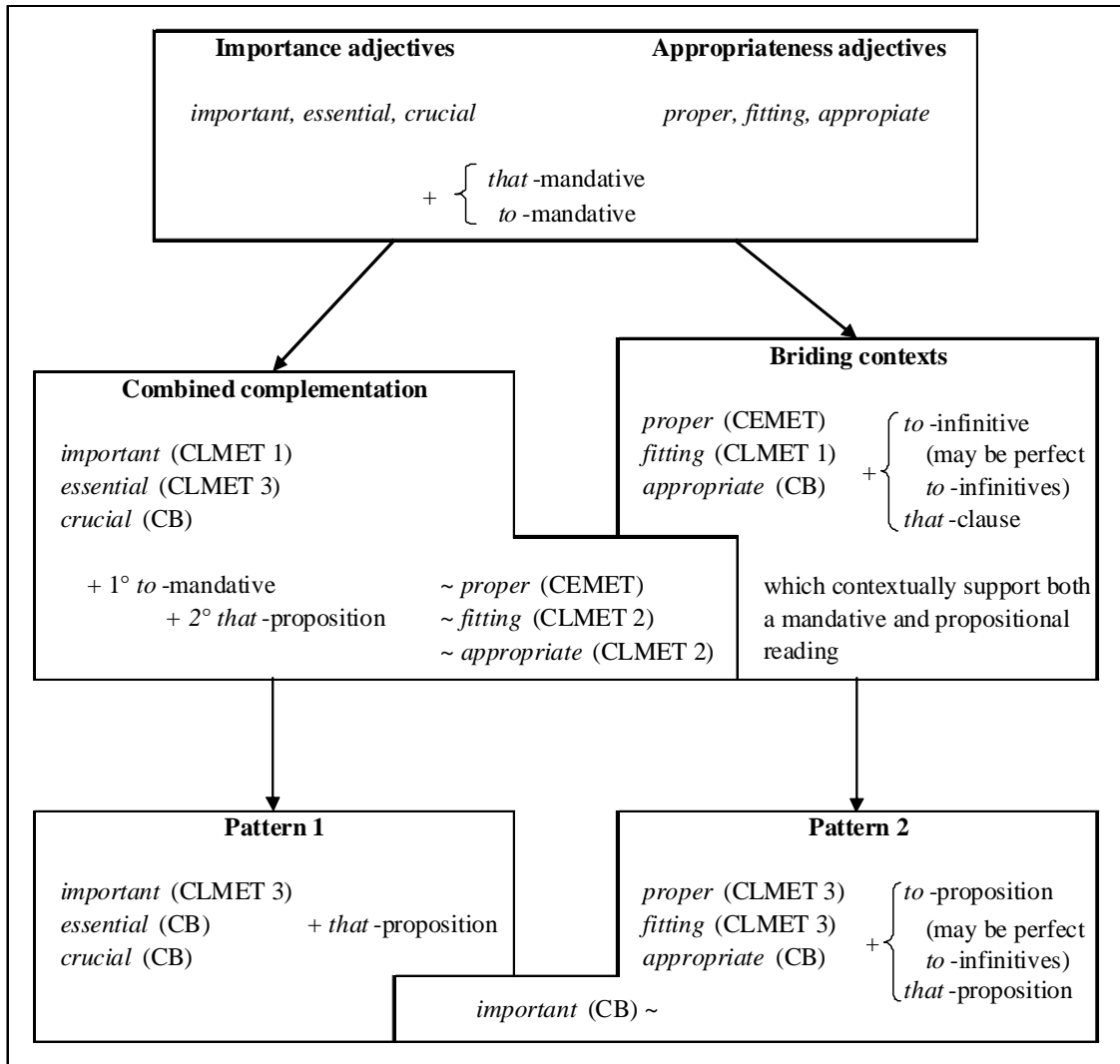


Figure 1: The development of propositional complements with the adjectives of importance and appropriateness

We believe that this study has charted the main lines of the diachronic development leading to the current synchronic system of complementation with importance and appropriateness adjectives. In the process, some diachronic mechanisms were looked at which warrant further theoretical reflection, such as pragmatic persistence and the developmental schema in which the combination of A + B rather than the more generally invoked bridging from A to B forms the crucial transitional step. The development of the complementation of these deontic-evaluative adjectives in ECs also clearly involves ‘interlocking’ paths (see Vandewinkel & Davidse 2008) linking importance and appropriateness adjectives, as manifested most clearly by their very similar pattern of mandative complementation. Interlocking of paths was also observed in their inclination to constructional analogy, as with the combined mandative-propositional pattern and the specialized ‘precedent/analogue’ propositional complements, which are associated mainly with one class but also found with the other. The general relevance to the study of

constructional change of multigenesis, or the existence of multiple paths, will have to be explored in future work.

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