THE DEVELOPMENT OF ADJECTIVES USED AS NOUNS IN THE HISTORY OF ENGLISH

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This paper investigates the development of adjectives used as nouns (N-adjectives) in the history of English, and its relation to the loss of adjectival inflection and the rise of the prop-word *one*. The correlation among these historical events is confirmed by an investigation based on historical corpora, and it is shown to be explained in terms of the DP structure which contains a phonologically null pronominal, the availability of which depends on the interpretability of ϕ -features on adjectives, under the Agree system proposed within the recent Minimalist framework.*

Keywords: *N-adjective, prop-word one, adjectival inflection, E(llipsis)-pro, Agree system*

1. Introduction

This paper aims to clarify the development of adjectives used as nouns in the history of English, paying special attention to its relation to the loss of adjectival inflection and the rise of the prop-word *one*. As illustrated in (1), adjectives can be used as nouns in Present-day English (PE), where the sequence *the* + adjective is interpreted as a plural nominal expression denoting a certain social group of people.¹

- (1) a. *The poor* are often generous to each other.
b. *The old* are more frequently ill than the rest of the population.

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¹ In what follows, examples may contain words or phrases which are italicized to indicate that they are directly relevant for the discussion.

Similarly, adjectives can be used as nouns in Old English (OE) in nominal expressions like (2).²

- (2) a. þætte *ða cwican* no genihtsumedon þæt hi
 that those quick.PL no longer sufficed that they
ða deadan bebyrigdan
 those dead.PL bury
 'the living no longer sufficed to bury the dead'
 (cobede,Bede_1:11.50.3.448: o2)
- b. *Se blinda* him ondswerede
 that blind.SG him answered
 'the blind man answered him.'
 (coblick,HomS_8_[BIHom_2]:15.23.198: o2)
- c. *halige* gongað of mægene in mægen;
 holy.PL go of virtue in virtue
 'The saints shall go from virtue to virtue,'
 (cobede,Bede_3:14.212.7.2148: o2)

The examples in (2a, b) indicate that adjectives used as nouns are interpreted as either singular or plural in OE, depending on their inflectional endings. Furthermore, such adjectives do not have to occur with a determiner, as shown in (2c). As we will see below, OE widely allowed adjectives used as nouns (N-adjectives), but their frequency decreased in the course of Middle English (ME), so that they are restricted to fossilized plural expressions in PE.

It is generally assumed that the decline of N-adjectives is attributed to the loss of the inflectional system of adjectives, and the prop-word *one* began to be used instead of N-adjectives in examples like (3) (Rissanen (1997: 99), Fischer (2000: 176), Haumann (2003)).

- (3) a. I'd like a cake. *A big one* with lots of cream.
 b. Green apples often taste better than *red ones*.
 (Swan (2005: 369–370))

Haumann (2003) tries to explain the correlation among the loss of adjectival inflection, the decline of N-adjectives, and the rise of the prop-word *one*, by postulating a phonologically null pronominal *pro* within DP involving

² In what follows, morphological information on OE adjectives is provided in glosses if it is necessary for the discussion. The following abbreviations are used for this purpose: SG = singular, PL = plural, M = masculine, F = feminine, NOM = nominative, ACC = accusative, and GEN = genitive.

N-adjectives. Although this paper also assumes the presence of an empty category associated with N-adjectives, it is pointed out that Haumann's analysis is problematic in that she only discusses one subset of constructions involving N-adjectives where postnominal adjectives are preceded by the coordinate conjunction *and*, which she refers to as "postnominal '*and* adjective' constructions." Moreover, the analysis and the syntactic structure of DP she proposes face some serious empirical and theoretical problems, especially because they involve some theoretical devices that are no longer available within the recent Minimalist framework.

Assuming the recent Minimalist framework since Chomsky (2000), this paper is organized as follows. Section 2 discusses Haumann's (2003) analysis of postnominal "*and* adjective" constructions, pointing out some empirical and theoretical problems. Section 3 investigates the distribution of N-adjectives in the history of English by using historical corpora, and tries to account for the result of the investigation within the recent Minimalist framework, by relating it to the loss of adjectival inflection and the rise of the prop-word *one*. Section 4 provides empirical evidence for the proposed analysis from the availability of genitive N-adjectives and the distribution of the prop-word *one* in PE. Section 5 is the conclusion of this paper.

2. An Overview of Haumann (2003) and Its Problems

2.1. Postnominal "*And* Adjective" Constructions and the Prop-word *One*

Haumann (2003) deals with postnominal "*and* adjective" constructions which were widely attested in OE.

- (4) a. *Sopfæstne man & unscyldigne ne acwele ðu*
 righteous person and guiltless not kill you
 þone næfre
 that-one never (LAW2,40.45 / Haumann (2003: 63))
- b. *se legfamblawenda seap & se fula ... wæs helle*
 that vomiting-fire hole and that foul was hell's
 tintreges muð
 torture's mouth (BEDE,13.432.7 / Haumann (2003: 63))

In examples like (4), the second adjective is related to the noun preceding the coordinate conjunction, and such adjectives have been analyzed either as a postnominal (or predicative) modifier or a prenominal (or attributive) modifier of the preceding noun (see Haumann (2003) and other works cited there).

Haumann argues that the second adjectives in postnominal "*and* adjective" constructions are N-adjectives contained within DP, whose structure is

shown in (5).

In (5), AP is base-generated in Spec, AgrP as a prenominal modifier of the phonologically null pronominal represented as *pro*. This is adapted from Lobeck's (1995) analysis in which ellipsis sites in VP-ellipsis, sluicing, and DP-internal ellipsis correspond to *pro*, which I will call "ellipsis *pro* (henceforth, E-*pro*)" in this paper. As for the licensing and identification of E-*pro*, she adopts the following conditions proposed by Rizzi (1986).

- (6) a. *pro* is governed by X^0_y (Rizzi (1986: 519))
 b. Let X be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of the features on X coindexed with it. (Rizzi (1986: 520))

Furthermore, it is assumed that E-*pro* is successfully licensed and identified if the licensing head is specified for strong agreement. The formulation in (7) proposed by Lobeck (1993) determines whether agreement is strong enough to license and identify E-*pro*.

- (7) An X-0 is specified for strong agreement iff
 a. the X-0 or a phrase or head coindexed with it is specified for agreement, and
 b. agreement is morphologically realized on X-0 or on the phrase or head coindexed with it. (Lobeck (1993: 784))

In the structure of postnominal "and adjective" constructions in OE, Agr is specified for strong agreement and licenses and identifies E-*pro*, because the head of AP, which is coindexed with Agr via a specifier-head relation, is inflected in OE for number and gender, as shown in (8).

coordinate structures, as discussed by Iwata (2006).³ If this is correct, it is wrong to link the loss of postnominal “*and* adjective” constructions with the rise of the prop-word *one* in terms of the licensing and identification of *E-pro*, at least for those analyzed as split constructions. This suggests that postnominal “*and* adjective” constructions may not provide a good clue to clarifying the cause of the loss of N-adjectives and its relation to the rise of the prop-word *one*.

Third, Haumann’s analysis based on the structure in (5) is problematic both empirically and theoretically. The empirical problem is that she does not provide evidence for the presence of *E-pro* associated with N-adjectives, as well as for the status of the prop-word *one* as Agr. The related theoretical problem is that she locates the prop-word *one* in Agr with only uninterpretable features, in spite of the fact that its number feature is clearly interpretable. Moreover, her analysis depends on concepts like Agr and government that have been abandoned within the recent Minimalist framework (Chomsky (1995, 2000)).

In the light of these problems, section 3 provides an investigation of the historical development of N-adjectives in general, including those in postnominal “*and* adjective” constructions, and a Minimalist analysis of the result of this investigation, which is in turn empirically supported in section 4, based on the availability of genitive N-adjectives and the distribution of the prop-word *one* in PE.

3. The Development of N-adjectives and the Rise of the Prop-word *One*

3.1. Historical Data

This section is devoted to investigating the development of N-adjectives and the rise of the prop-word *one* in the history of English, by employing *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), *The Penn-Helsinki Parsed Corpus of Middle English, Second Edition* (PPCME2), and *The Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME).

First, the frequency of N-adjectives in these three corpora is summarized

³ Iwata (2006: 16) suggests that it was possible for a coordinate structure to be split apart by extraposition in OE and early ME, especially when its size is larger than that of the following phrase. His research shows that split constructions began to decline in late ME in most of their subtypes. See Iwata (2006) and other works cited there for more detailed discussion.

in the following Table, which represents the frequency of N-adjectives per a hundred thousand words in each period of English.^{4, 5}

Table 1 The Frequency of Adjectives Used as Nouns
(per 100,000 words)

Period	EOE	LOE	EME	LME	E1	E2	E3
Frequency	316.7	331.4	255.2	73.4	70.1	78.9	91.1

As we saw above, it is generally assumed that N-adjectives were widely observed in OE due to the presence of adjectival inflection, and the decline of the former was caused by the loss of the latter. The result in Table 1 indicates that N-adjectives were frequent in OE, but their frequency decreased in the course of ME. Given that adjectival inflection was lost during ME (Nakao (1972), Lass (1992), and Ukaji (2000)), the decline of N-adjectives roughly coincides with the loss of adjectival inflection, confirming the correlation between the two events.⁶ Here follow examples of N-adjectives taken from YCOE, PPCME2, and PPCEME.

⁴ I have collected examples of noun phrases without a head noun that involve at least one adjective, regardless of whether there are determiners like articles or demonstratives within them. The investigation excludes idiomatic expressions which are available in PE as well, such as *the same*, *the first*, *the French*, *the other*, *to the contrary*, *at last*, and so forth.

⁵ The texts in YCOE, PPCME2, and PPCEME are distributed into the following periods: O1 (–850), O2 (850–950), O3 (950–1050), O4 (1050–1150), M1 (1150–1250), M2 (1250–1350), M3 (1350–1420), M4 (1420–1500), E1 (1500–1570), E2 (1570–1640), and E3 (1640–1710). Early Old English (EOE) includes O1 and O2, and Late Old English (LOE) O3 and O4. Similarly, Early Middle English (EME) includes M1 and M2, and Late Middle English (LME) M3 and M4.

⁶ I have investigated the distribution of adjectival inflection in ME by checking the forms of N-adjectives found in PPCME2: the percentages of N-adjectives carrying an inflectional ending are 82% (M1), 39% (M2), 62% (M3), and 42% (M4), respectively (the investigation includes ambiguous cases that involve adjectives ending with *-e*, so the precise percentages would be a little lower than those indicated). Apart from the lower percentage than expected in M2, this would be compatible with the result in Table 1, confirming the correlation between the loss of adjectival inflection and the decline of N-adjectives. Although some scholars suggest that once it was reduced to *-e* in EME, adjectival inflection lost its original function of expressing grammatical features (Minkova (1991)), the following examples will show that adjectival inflection was still functional in ME in that its presence/absence corresponds to the number distinction of the relevant noun phrases (at least for the ME texts showing the same pattern as in (i)).

- (15) a. *untrume* mid þinre trymenisse syn gestrongade
 weak.F.PL with your encouragement are strengthened
 ‘the feeble may be strengthened with your encouragement’
 (cobede,Bede_1:16.74.7.684: o2)
- b. Ne screnc ðu ðone blindan
 not deceive you that blind.M.SG
 ‘Don’t you deceive the blind.’
 (cocura,CP:59.453.1.3261: o2)
- (16) a. alle napeles ben departed in-to two spices: in-to
 all nathelless are departed into two spices into
ghostly and *bodily*
 ghostly and bodily (CMAELR3,32.184: m2)
- b. and hast no maner þynge to gyue to þe neody
 and has no manner thing to give to the needy
 (CMELR3,36.296: m2)
- (17) a. the might of *the wycked* were more vnhappye ...
 (BOETHCO-E1-H,99.604: e1)
- b. *the wise* wittely namde him Sotto, as one besotted, ...
 (ARMIN-E2-P1,5.17: e2)

Turning now to the rise of the prop-word *one*, the following is the only example attested in PPCME2.

- (18) thilke same *oon* is thilke that is good
 this same one is this that is good
 (CMBOETH,436.C2.319: m3)

Furthermore, *Oxford English Dictionary* cites the first example of the sequence adjective + *one* from the fourteenth century.

- (19) Quat es he? þat sua mightful *ane*?
 what is he that so mighty one
 (Cursor M. 17993 (Gött.) a1330)

- (i) a. þe *fals* ancre draʒeð al into hire hole
 the false anchor draws all into their hole
 (CMANCRIW,II.69.775: m1)
- b. þe *false* sikeleres ablendeð þeo þe ham hercnið
 the false sickles dazzle those that them listen to
 (CMANCRIW,II.69.775: m1)

See Fujiwara (2009) for the observation that the ending *-e* functioned as a plural marker on some kinds of adjectives in the LME texts he investigated.

This shows that the prop-word *one* began to appear roughly in the same period that N-adjectives were decreasing. Hence, it seems plausible to conclude that the loss of adjectival inflection led to the decline of N-adjectives, as well as the rise of the prop-word *one*.

3.2. A Syntactic Analysis of the Development of N-adjectives and the Rise of the Prop-word *One*

This section proposes a syntactic analysis of the development of N-adjectives and the rise of the prop-word *one* in the history of English. Along the lines of Haumann (2003), the proposed analysis postulates a phonologically null pronominal, i.e. *E-pro*, and links the decline of N-adjectives and the rise of the prop-word *one* with the loss of adjectival inflection. However, unlike Haumann (2003), the internal syntax of DP with N-adjectives is analyzed under the Agree system proposed within the recent Minimalist framework since Chomsky (2000), on the basis of the structure in (20) and the assumptions in (21).

- (21)
- a. Determiners have unvalued ϕ -features which function as a probe.
 - b. Adjectives in OE have lexically valued ϕ -features.
 - c. *E-pro* within DP does not have any ϕ -features.

Some comments are in order with regard to the structure and assumptions just introduced. First, I follow Allen (2003), Haumann (2003), Pysz (2006), Wood (2007), and Ibaraki (2009) in assuming that nominal phrases have been DP headed by a functional category D throughout the history of English. Under the Agree system, the unvalued ϕ -features on D function as a probe and search for a goal, in the same way as other functional categories such as T and v^* .

Second, as for the feature specification of adjectives in OE, since they have the rich inflectional system just like nouns in OE, it would be plausible that they bear lexically valued ϕ -features just as nouns do. Then, both AP and NP can function as goals for probing in (20).

Finally, the present analysis also postulates *E-pro* within DP involving N-adjectives, where it is generated in the position of NP as in the case of DP-internal ellipsis discussed by Lobeck (1993, 1995, 1999). Furthermore,

although it has the status of NP, *E-pro* does not bear any ϕ -features, because it is an ellipsis site whose properties including ϕ -features are determined by the preceding adjective and/or the antecedent.

In the remainder of this section, it is argued that the structure in (20) and the assumptions in (21) conspire to account for the development of N-adjectives and the rise of the prop-word *one* in the history of English.

3.2.1. The Development of N-adjectives

Before discussing the internal syntax of DP with N-adjectives, let us consider an ordinary DP in OE whose NP position is lexically filled. Under the present analysis, the structure of (22a) will be as in (22b).

- (22) a. *se halga papa*
 this holy.M.SG pope.M.SG (cobede,BedeHead:1.10.1.26: o2)
- b.
-
- ```

graph TD
 DP --> D
 DP --> NP1[NP]
 D --> se[se]
 se --- u_phi[u-φ]
 NP1 --> AP
 NP1 --> NP2[NP]
 AP --> halga[halga]
 halga --- phi_MSG1[φ[M.SG]]
 NP2 --> papa[papa]
 papa --- phi_MSG2[φ[M.SG]]

```

In (22), the determiner *se* bears unvalued  $\phi$ -features and the adjective *halga* bears lexically valued  $\phi$ -features. Since unvalued  $\phi$ -features have to be valued by the time a syntactic object is sent to the semantic interface, the unvalued  $\phi$ -features on D search its complement for their goal. In the case of (22), the  $\phi$ -features on AP and NP may function as their goal.

Turning now to the case of DP with N-adjectives, the present analysis correctly predicts the availability of N-adjectives in OE.

- (23) a. *ða cwican*  
           those quick.PL (cobede,Bede\_1:11.50.3.448: o2)
- b.
- 
- ```

graph TD
    DP --> D
    DP --> NP1[NP]
    D --> da[ða]
    da --- u_phi[u-φ]
    NP1 --> AP
    NP1 --> NP2[NP]
    AP --> cwican[cwican]
    cwican --- phi_PL[φ[PL]]
    NP2 --> pro[pro]
  
```

The derivation of (23) converges because the lexically valued ϕ -features on AP *cwican* function as a goal for the unvalued ϕ -features on D. Notice

that special licensing and identification conditions on *E-pro*, especially those like (6) and (7) that rely on the notion of government are not necessary here; under the present analysis, *E-pro* is allowed to occur if the derivation of the relevant DP converges. The semantic properties of *E-pro* including its ϕ -features are determined by those of the preceding adjective and/or the antecedent.

Recall from section 3.1 that the frequency of N-adjectives decreased in the course of ME, and they became restricted to fossilized plural expressions denoting a certain social group of people by PE. This is explained in terms of the unavailability of *E-pro* within DP after the loss of adjectival inflection during ME. Before proceeding, let us make clear the internal syntax of an ordinary DP in PE.

- (24) a. John bought [_{DP} the red apple].

Unlike adjectives in OE, those in PE do not have agreement inflections, so they cannot bear lexically valued ϕ -features. Instead, I follow Chomsky (2001) in assuming that they have unvalued ϕ -features that function as a probe agreeing with lexically valued ϕ -features. If this is correct, both D and the adjective have unvalued ϕ -features in (24) and the lexically valued ϕ -features on NP function as their goal, leading to the convergent derivation.

Let us now turn to the case of DP with *E-pro* in PE, as shown in (25).

- (25) a. *Bill bought [the green].

It is obvious that the derivation of (25) does not converge, because there are no elements that can serve as a goal for the two sets of unvalued

ϕ -features. Thus, *E-pro* is not allowed to occur within DP after the loss of adjectival inflection, thereby accounting for the fact that N-adjectives are no longer productive except for fossilized plural expressions in PE.⁷

3.2.2. The Rise of the Prop-word *One*

Once *E-pro* within DP became unavailable during ME due to the loss of adjectival inflection, the prop-word *one* came to be attested, as we saw in section 3.1. The grammaticality of DP with the prop-word *one* follows immediately from the present analysis.

- (26) a. Bill bought [the green *one*]

The derivation of (26) converges, because it contains the prop-word *one* that bears lexically valued ϕ -features including a number feature, which in turn function as a goal for the unvalued ϕ -features on D and AP. Apart from its lexically valued ϕ -features, the semantic interpretation of the prop-word *one* depends on its antecedent as in the case of *E-pro*.

3.3. Summary

This section has provided a corpus-based investigation of the historical development of N-adjectives in general, as well as a syntactic analysis based on the DP structure and assumptions that are compatible with the recent Minimalist framework. This means that we are now free from most of the problems with Haumann (2003) pointed out in section 2.2, but there are remaining issues concerning the presence of *E-pro* and the status of the prop-word *one*, which are addressed in the next section.

⁷ As predicted by the present analysis, examples like (i) involving N-adjectives are fully grammatical in Dutch, where adjectives are inflected for number and gender.

(i) Jan kocht de rode auto en [de groene].

John bought the red car and the green

‘John bought the red car and the green one.’

(Kester (1996: 58))

4. Remaining Issues

4.1. The Presence of E-*pro*

One of the remaining issues is to provide evidence for the presence of E-*pro* associated with N-adjectives, which I argue comes from the availability of genitive N-adjectives. I have investigated the frequency of genitive N-adjectives in the history of English, and the result of this investigation is summarized in Table 2, followed by some examples from OE.

Table 2 The Frequency of Genitive N-Adjectives (per 100,000 words)

Period	EOE	LOE	EME	LME	E1	E2	E3
Frequency	40.7	24.0	0.2	0.1	0.0	0.2	0.2

- (27) a. forðon ðurh tyn winter full Godes cyricena
 because through ten year full God's church
 hynnysse and *unsceaððiendra fordemednesse* and
 persecution and innocent.PL.GEN condemnation.SG.NOM and
 slege haligra martyra unblinnendlice don wæs
 fatal stroke holy martyrs incessantly done was
 'for with burning of God's churches and condemnation of the
 innocent and slaughter of holy martyrs it went on incessantly
 for ten years' time' (cobede,Bede_1:6.34.3.270: o2)
- b. þæt is seo stow, in ðære beoð onfangne *soðfæstra*
 that is the place where are received truthful.PL.GEN
saula
 soul.PL.NOM
 'that is the place where the souls of the just are received'
 (cobede,Bede_5:13.432.10.4346: o2)
- c. he nyle naht eaðe *þæs synfullan deað*
 he not to want not easily that sinful.SG.GEN death.SG.ACC
 'he did not desire death of the wicked easily'
 (coaelhom,ÆHom_16:47.2279: o3)

Table 2 shows that N-adjectives may appear in the genitive case in OE, but this became almost impossible after the ME period. In fact, although PE allows a restricted set of N-adjectives, they must not be accompanied by the possessive marker -s, according to Swan (2005).

- (28) *the poor's problems (Swan (2005: 13))

The availability of genitive N-adjectives in the history of English can be explained in terms of the presence of E-*pro* and the status of the genitive

inflection. First, genitive N-adjectives were allowed in OE, because genitive case is realized on lexical items such as nouns and adjectives as their inflectional ending. The internal structure of (27a) will be as in (29).

Then, the genitive inflection came to behave like a clitic in ME, as is evidenced by the rise of group genitives as in (30).

- (30) but þe kyng of Fraunces men weren i-slawe
 ‘But the king of France’s men were slain’

(CMPOLYCH, VIII,349.380 / Allen (2003:16))

This development can be captured by assuming that the genitive inflection came to occupy the position of D and be attached to its specifier as a clitic (Abney (1987) and Anderson (2008)).

The unavailability of genitive N-adjectives after ME immediately follows: E-*pro* intervenes to block the attachment of the genitive inflection -(e)s (later, the apostrophe -’s) to the preceding adjective, as shown in (31) (see Radford (2004) for empirical arguments that ellipsis sites induce intervention effects on cliticization).⁸

⁸ It has been observed that group genitives began to be attested in LME (Allen (2003)), while the radical decrease of genitive N-adjectives took place in EME, as we saw in Table 2. Allen (2008) states that the genitive inflection sometimes behaves like a clitic in EME, based on the rise of constructions like (i), where the genitive inflection only appears on the prenominal appositive phrase, but not on the postnominal one.

(i) for þes eorles sunu Rotbert of Normandi
 for the:M.GEN.SG duke:M.GEN.SG son Robert of Normandi
 ‘because of the son of duke Robert of Normandi ...’

(CMPETERB, 45.122, annal 1124.19, First Continuation / Allen (2008: 140))

If this is correct, it might be suggested that the genitive inflection began to change its status into a clitic occupying the position of D in EME, thereby triggering the radical decrease of genitive N-adjectives.

4.2. The Distribution of the Prop-word *One* in PE

Finally, let us conclude this section by noting that the present analysis of the prop-word *one* is supported by its distribution in PE. First, consider the following examples.

- (32) a. I like this very tall girl more than that *one*.
 (Radford (1981: 92))
 b. They passed through a small clear area, then a larger *one*.
 (Yasui and Nakamura (1984: 63))

The structure of the DP *this very tall girl* in (32a) is represented in (33). Since the prop-word *one* is interpreted as denoting *very tall girl*, it substitutes for NP₂ in (33).

- (33) [_{DP} this [_{NP₂} [_{AP} very tall] [_{NP₁} girl]]]

On the other hand, the DP *a small clear area* in (32b) will have the following structure. The prop-word *one* is interpreted as denoting *clear area*, so it substitutes for NP₂ in (34), excluding the size modifier.

- (34) [_{DP} a [_{NP₃} [_{AP} small] [_{NP₂} [_{AP} clear] [_{NP₁} area]]]]]

These facts are compatible with the proposed structure of DP involving the prop-word *one*, where it occupies the position of NP and pronominal adjectives are adjoined to NP.⁹

Next, let us turn to the fact that the prop-word *one* is unavailable in PE in some circumstances. Consider the following examples.

⁹ The ungrammaticality of the following examples demonstrates that the prop-word *one* does not substitute for the head N and the whole DP.

- (i) a. *The students of physics are smarter than the *ones* of chemistry. (ones = students)
 b. *Toscanini recorded Wagner's Faust overture, and Furtwängler recorded *one* too. (one = Wagner's Faust overture) (McCawley (1988: 185–186))

- (35) a. They ordered some/several/many/few/two cans of beer.
 b. They ordered some/several/many/few/two.
 c. *They ordered some/several/many/few/two ones.

(Haumann (2003: 78–79))

If the object QP in (35b) contains E-*pro*, it will have the structure in (36).

- (36) [_{QP} some/several/many/few/two_[PL] [_{NP} *pro*]]

Assuming that quantifiers like *some/several/many/few/two* are inherently plural and hence bear lexically valued ϕ -features, the derivation of this QP converges because there are no unvalued ϕ -features in (36). Notice that the prop-word *one* cannot appear in (35c), and this is explained in terms of economy: since the semantic contribution of the prop-word *one* is the same as that of E-*pro*, the element with less features, E-*pro* in this case, is selected, because it lacks ϕ -features and phonological features that the prop-word *one* has.

On the other hand, the sentences in (37) indicate that when an adjective appears after quantifiers like *some/several/many/few/two*, E-*pro* is not available and the prop-word *one* must be inserted.

- (37) a. *They ordered some/several/many/few/two large.
 b. They ordered some/several/many/few/two large ones.

The structure of (37a) is represented in (38).

- (38) [_{QP} some/several/many/few/two_[PL] [_{NP} [_{AP} large] [_{NP} *pro*]]]

While Q has lexically valued ϕ -features, the unvalued ϕ -features on AP cannot be valued, because their search domain does not contain any elements which can serve as a goal, leading to the nonconvergent derivation. On the other hand, if the prop-word *one* is inserted in the position of NP in (38), the derivation will converge because its valued ϕ -features function as a goal for the unvalued ϕ -features on AP.

5. Conclusion

This paper has investigated the correlation among the loss of adjectival inflection, the decline of N-adjectives, and the rise of the prop-word *one* in the history of English. The result of the corpus-based research has revealed that the frequency of N-adjectives decreased in the course of ME, when adjectival inflection was being lost and the prop-word *one* began to be employed. It is proposed that the correlation among these historical events can be accounted for in terms of the DP structure with E-*pro*, as well as the assumptions on the interpretability of ϕ -features on determiners and adjectives, under the Agree system proposed within the recent Minimalist frame-

work. Finally, it is shown that the proposed analysis is supported by the availability of genitive N-adjectives and the distribution of the prop-word *one* in PE.

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