

# Blind Spots in Raḍī l-Dīn al-'Astarābādī's Grammar of Numerals\*

Jean N. Druel

## 1 Introduction

The grammar of numerals is a fascinating chapter to explore in Arabic grammatical treatises because it is at the crossroad of many issues in these treatises.<sup>1</sup> This, because numerals should theoretically apply to any other substantive in the language, and that the nominal group made up of the numeral and its counted object should be able to be in any nominal syntactic slot in the sentence. The problem is that numerals have very different morphologies (adjectives, substantives, compounds, plural-like) and this is incompatible with the freedom of behavior that is expected from them.

The blind spot in the eye is the point where the visual nerve connects to the retina. This point itself is blind but it enables vision. Any theory has their blind spots, i.e. assumptions that make the theory possible but that are not questioned *per se* by the author. They are interesting to unveil because they reveal what it is that holds the theory together.

Raḍī l-Dīn Muḥammad ibn al-Ḥasan al-'Astarābādī (d. 688/1289?) is a grammarian of whom little is known except maybe that he was Shi'ī from Tabaristan (Tawfiq 1978:11; Mango 1979:721; Weipert 2009:118). He is the author of two major commentaries on treatises by the Egyptian grammarian of Kurdish origin Ibn al-Ḥājjib (d. 646/1249; Fleisch 1979:781), *Šarḥ al-Kāfiya fī l-naḥw*, which is devoted to syntax (*'irāb*), and *Šarḥ al-Šāfiya fī 'ilmay al-taṣrif wa-l-ḥatt*, which is devoted to morphology and calligraphy (Larcher 1989:109 f.).

---

\* I am very grateful to Manuel Sartori and to professors Pierre Larcher and Jonathan Owens for their valuable comments on this paper. To be sure, I am not a specialist of al-'Astarābādī. The incentive for my research was to trace the developments of the grammar of numerals in later grammarians. All mistakes in this paper are only imputable to my impertinence to dare to deal with such a difficult author as al-'Astarābādī.

1 For the treatment of the syntax of numerals in the standard reference grammars of Arabic see Howell (2003: IV, 1423–1501); Wright (1967: I, 253–264; II, 234–249); Fleisch (1990: I, 506–524).

In this article, I will explore Raḍī l-Dīn al-'Astarābādī's grammar of numerals in his commentary on *al-Kāfiya fī l-naḥw*, in order to reveal its logic and its blind spots. Although al-'Astarābādī is only the author of the commentary, I will mention only his name as source of the views he expresses. It is however more than obvious that in many cases the paternity of these views should be attributed to Ibn al-Ḥājjib, rather than to al-'Astarābādī. This is especially true of the mere outline of the commentary. Moreover, in his commentary, al-'Astarābādī extensively quotes Ibn al-Ḥājjib's own commentary on his *Kāfiya*, as well as Ibn Ḥājjib's commentary on al-Zamaḥṣārī's *Mufaṣṣal* (Larcher 1991:370).

There are to this day at least nine editions of this commentary:<sup>2</sup>

- i. Two (different?) Iranian editions in Teheran dated 1271/1854–1855 and 1275/1858–1859;<sup>3</sup> Sarkīs (1928:I, 941) mentions two (different?) Persian editions dated 1268/1851–1852 and 1271/1854–1855
- ii. An Ottoman edition dated 1275/1858–1859 in Istanbul, reprinted in Istanbul in 1305/1887–1888 and 1310/1893, and in Beirut in 1969(?); Sarkīs (1928:I, 941) mentions a (different?) edition dated 1292/1875–1876, which could have also been printed in Istanbul, according to Larcher (1989:110)
- iii. An Indian edition dated 1282/1865–1866 in Delhi;<sup>4</sup> and a (different?) edition dated 1882 in Lucknow<sup>5</sup>
- iv. An Egyptian edition published in Būlāq in 1299/1881–1882
- v. Two (different?) Russian editions published in Kazan in 1885 and 1896 mentioned only by Sarkīs (1928:I, 941)
- vi. A Libyan edition by Yūsuf Ḥasan 'Umar dated 1392–1398/1973–1978, re-published in Tehran in 1373 SH/1994–1995, and reprinted in 1392 SH/2013–2014
- vii. A Saudi edition by Ḥasan Muḥammad 'Ibrāhīm al-Ḥifzī and Yaḥyā Bašīr Miṣrī in Riyadh dated 1414/1993

2 This list is based on Larcher (1989), to which I added the two Iranian re-editions of the Libyan edition (no. vi) and the three editions published after 1989 (nos. vii, viii, ix).

3 Tawfīq (1978:35f.) says that according to Van Dyke (1896:301) there are two Iranian editions dated 1271 and 1275. These are mentioned in Brockelmann (1943–1949/1996, SI, 532) but not in Van Dyke (1896).

4 Or dated 1280 in Lucknow, according to Van Dyke (1896:306).

5 Brockelmann (1943–1949/1996, SI, 532), Fleisch (1961–1979:II, 41). Tawfīq (1978:36) says that this second Indian edition is dated “around 1882” and Sarkīs (1928:I, 941) gives the date of 1880.

- viii. A Lebanese edition by Émile Badī‘ Ya‘qūb in Beirut dated 1419/1998
- ix. An Egyptian edition by ‘Abd al-‘Āl Sālim Makram dated 2000 in Cairo.

According to Larcher (1989:112), the Libyan edition by Yūsuf Ḥasan ‘Umar is of very poor quality. He says that the editor has apparently ‘corrected’ the Ottoman edition, based on his own intuition. As for the Egyptian edition, it is based on five manuscripts and on both the Ottoman and the Libyan editions (Gilliot 2004, no. 19, 209f.). In this article, I will quote Makram’s Egyptian edition. This edition, the Ottoman edition, and the Iranian reprint of the Libyan edition, are the only three editions I had access to.

Fleisch is probably the first Orientalist to have praised the high level of sophistication of al-‘Astarābādī’s grammatical thinking, “car souvent il ne se contente pas de citer les paroles mêmes de ses devanciers, mais repense, résume les questions et donne des raccourcis vigoureux” (Fleisch 1961–1979:1, 41). He is considered by Bohas, Guillaume, and Kouloughli (1989:260) and Versteegh (1989:259) to be a summit in the Arab scholastic grammatical tradition, a synthesis of the linguistic reflection, subtle and sophisticated. I will present al-‘Astarābādī’s theory on numerals after having recalled three different grammatical frames in which grammarians have interpreted numerals in Arabic before him.

## 2 Three Different Solutions, Three Different Kinds of Problems

In Cambridge in 2012, I presented the three following frames, in which Sībawayhi (d. 180/796?), al-Mubarrad (d. 285/898) and Ibn al-Sarrāj (d. 316/928) analyze the grammar of numerals. For more details on these three frames, see Druel (2012), and its summary in Druel (2015).

### 2.1 *Sībawayhi*

Sībawayhi is visibly trying to find a unique frame that would account for all numerals. He chooses the frame of the “adjectives that resemble the active participles” (*al-ṣifāt al-muṣabbaha bi-l-fā‘il*, *Kitāb* 1, 86.20–21), of which numerals can be considered to be a sub-case. Considered separately, numerals have very different behaviors, but considered collectively, all numerals behave like the adjectives that resemble the active participles. Compare for example *ḥamsatu ‘awlādin* ‘five boys’ with *jamīlu l-wajhi* ‘beautiful of face’ (annexational construction); *al-‘awlādu l-ḥamsatu* ‘the five boys’ with *al-wajhu l-jamīlu* ‘the beautiful face’ (appositional construction); *al-‘awlādu ḥamsatun* ‘the boys are five’ with *al-wajhu jamīlun* ‘the face is beautiful’ (predicational construc-

tion); and *'išrūna waladan* 'twenty boys' with *jamīlun wajhan* 'beautiful of face' (specifying construction).

Not all numerals can be used in all four constructions, but when considered collectively, they behave like *jamīl* 'beautiful', an adjective resembling the active participle. More precisely, all numerals can be found in the predicative and appositional constructions, but the annexational and specifying constructions are in complementary distribution, depending on whether numerals are annexable or not. Annexable numerals can be found in annexational constructions (*ṭalātatu 'atwābin* 'three garments'; *Kitāb* I, 86.9), but the specifying construction *ḥamsatun waladan* 'five boys' is problematic (*Kitāb* I, 87.8; 232.3; 253.3f.). For non-annexable numerals, the specifying construction (*'išrūna dirhaman* 'twenty dirhams'; *Kitāb* I, 85.5) is compulsory.

This interpretation of Sībawayhi is highly speculative and it is not without difficulties. The reason is that Sībawayhi believes that the specifying construction has a verbal origin, whereas the three other constructions have a nominal origin. Numerals are 'substantives' (*'asmā'*) and some of them, the non-annexable ones, are found in a verbal-like construction. The main problem can thus be formulated as follows: where does the residual verbal syntactic strength in non-annexable numerals come from? Active participles derive their syntactic strength from the verb. This strength gives them freedom to put their complement in the dependent form, as in *ḍāribun zaydan* 'hitting Zayd' (*Kitāb* I, 80.2). They are strong enough to be postponed after their dependent form complement, as in *'anta zaydan ḍāribun* 'you are hitting Zayd' (*Kitāb* I, 54.8), and they can bear the definite article, which is considered in this case a shorter form of the relative pronoun, as in *hādā l-ḍāribu zaydan* 'this is the one hitting Zayd' (*Kitāb* I, 77.8).

In the case of the adjectives resembling the active participle, their syntactic strength also has a verbal origin, since they analogically correspond to the active participles of the verbs of the same root, just like *ḥasan* 'beautiful' analogically corresponds to *\*ḥāsin*, the non-existent active participle of the verb *ḥasuna/yaḥsunu* 'to be beautiful'. However, they have less strength than the active participles, which is clear from the fact that they cannot be postponed in the specifying construction. It is possible to say *ḥasanun wajhan*<sup>6</sup> 'beautiful of face' but not *\*wajhan ḥasanun*. They can also bear the definite article,

6 The expression is not found literally in the *Kitāb* but it is the axis around which the demonstration is built. Carter (1972:486) believes that Sībawayhi considered this expression to be incorrect in Arabic and analogically replaced by *'išrūna dirhaman* 'twenty dirhams' in the demonstration. I believe this is an over-interpretation of the absence of the expression in the *Kitāb*.

as in *al-ḥasanu wajhan* ‘the beautiful of face’ (*Kitāb* I, 83.18), *al-ḥasanu l-wajha* ‘the beautiful of face’ (*Kitāb* I, 84.4) and *al-ḥasanu l-wajhi* ‘the beautiful of face’ (*Kitāb* I, 84.9).

In the case of non-annexable numerals, where does their verbal-like syntactic strength come from? Sībawayhi does not mention a verbal origin for numerals and leaves us with a comparison between the numerals and the adjectives resembling the active participle that would be only at a surface level. Numerals cannot be postponed, as in *\*dirhaman ‘iṣrūna*, and it is not clear whether they can bear the definite article, as in *al-‘iṣrūna dirhaman* ‘the twenty dirhams’.

A second problem that Sībawayhi does not address is why it would be ‘lighter’ to put the counted object in the singular above ‘ten’ and not between ‘three’ and ‘ten’? It seems to be obvious for him that above ‘ten’, it would be ‘heavy’ to have a plural counted object, but he does not comment on this any further (*Kitāb* I, 85.5–7).

## 2.2 *Al-Mubarrad*

The way al-Mubarrad deals with numerals and their counted object is very different from that of Sībawayhi. He distinguishes between ‘basic’ numerals (‘three’ to ‘ten’) and ‘subsidiary’ numerals (‘eleven’ to ‘one thousand’) (*Muqtaḍab* II, 165.13f.). Basic numerals do not need a specifier (*tamyīz*), they are neither “vague” (*mubhama*) nor “bearing *tanwīn*” (*munawwana*) (*Muqtaḍab* II, 164.4–5). On the contrary, subsidiary numerals (‘eleven’ to ‘one thousand’) need a *tamyīz* (*Muqtaḍab* II, 144.7; 164.5f.; 165.2; 13; 167.10–12; 169.5–10; III, 32.6f.; 38.3–5). These subsidiary numerals are themselves subdivided into series that behave differently: ‘eleven’ to ‘nineteen’ and decades are *mubhama* and *munawwana*, whereas hundreds and thousands are not *munawwana* (but are probably *mubhama*). Here, *munawwana* practically means ‘non-annexable’.

The result of this Porphyrian subdivision is that numerals are divided into three categories: basic numerals (which are all annexable), annexable subsidiary numerals and non-annexable subsidiary numerals. Each category has a different behavior and the only point they have in common is that they have the same semantic relationship with their counted object, which can be expressed by the preposition *min* as in partitive *ḥamsatun min al-kilāb* ‘five (of the genus) dogs’ (*Muqtaḍab* II, 158.6–159.1) and *‘iṣrūna min al-darāḥimi* ‘twenty (of the genus) dirhams’ (*Muqtaḍab* III, 66.9f.). It is clear that al-Mubarrad only deals here with the most difficult issue, which is the complementary distribution of the annexable and specifying constructions.

Although it would have been enough to separate between annexable and non-annexable numerals, the division that al-Mubarrad introduces between basic and subsidiary numerals enables him to account for the difference be-

tween plural counted objects (after basic numerals) and singular counted objects (after subsidiary numerals). Only the singular counted object is called a *tamyīz*, whether it surfaces in the dependent or in the oblique form. The category that relates to *tamyīz* is that of *mubham* 'vague' substantives, a subcategory of substantives that are semantically deficient and that need a specifier. Subsidiary numerals need a *tamyīz*, whereas basic numerals do not. Al-Mubarrad is not explicit about whether hundreds and thousands are *mubhama*, but it would be consistent with his own theory to consider them so since they need a *tamyīz*.

Al-Mubarrad's theory does not need to address Sībawayhi's difficulty about a residual verbal syntactic strength in non-annexable numerals. The distinction between basic and subsidiary numerals also makes it possible to distinguish between a plural counted object after the former and a singular counted object after the latter, although this is not a justification. For al-Mubarrad, it is enough to say that different categories behave differently.<sup>7</sup> In the end, this question also loses its urgency in his theory, if compared to that of Sībawayhi.

But al-Mubarrad's theory also has its drawbacks. The first one, if compared with Sībawayhi, is that there is no syntactic consistency among numerals. Each series behaves differently, and therein lies the consistency: it is consistent for different series to behave differently. This is so frequent in the grammar of numerals that it can be called a 'differentiation principle'.

The second difficulty is that although *tamyīz* is primarily described as a dependent form complement, it also surfaces in the oblique form after annexable subsidiary numerals, i.e. hundreds and thousands. There is a shift in the description of *tamyīz*. In order to maintain some consistency among subsidiary numerals, al-Mubarrad also calls *tamyīz* the oblique case of the counted object after hundreds and thousands. The remaining characteristics of *tamyīz* is thus its singular and its meaning (partitive *min* 'of, from').<sup>8</sup>

If Sībawayhi's theory could be labelled a speculative one, al-Mubarrad's theory could probably be labelled an atomistic one, due to the numerous examples and counter-examples he gives, and his use of differentiation as an explanatory tool (the fact that words belong to different categories seems to be a sufficient justification for their different behavior).

7 See for example the justification for the oblique form *tamyīz* after hundreds (*Muqtaḍab* II, 167.10), or the justification for the fact that, unlike *mi'a* 'hundred', *alf* 'thousand' behaves like any other counted object (*Muqtaḍab* II, 169.9).

8 In the end, the specifying construction and the annexational construction are both cases of *taḥṣīṣ*. See Sartori's contribution in this volume.

### 2.3 *Ibn al-Sarrāj*

Ibn al-Sarrāj's grammar is organized according to the parts of speech (verbs, nouns, particles) and the endings they can take (independent, dependent). He distinguishes between two types of nouns with a dependent ending (*manṣūbāt*): verbal and non-verbal complements. *Tamyīz* is one type of dependent form complement, and it can be of two types, verbal and non-verbal, depending on the word it specifies (*'Uṣūl* I, 222–228). Numerical *tamyīz* belongs to the latter type. Unlike al-Mubarrad, Ibn al-Sarrāj says that all numerals are in need of a specifier (*'Uṣūl* I, 311.2). This *tamyīz* surfaces in the oblique form after annexable numerals and in the dependent form after non-annexable numerals (*'Uṣūl* I, 311.2–5). This is possible because annexation (*'idāfa*) has two meanings, possession (*'Uṣūl* I, 53.8), as in *baytu zaydin* 'Zayd's house', and species (*jins*; *'Uṣūl* I, 53.17), as in *raṭlu zaytin* 'a rotl of oil'. The 'species' meaning is equivalent to the particle *min* (*'Uṣūl* I, 315.11–13). This meaning of the relationship between numerals and their counted object is true for all numerals, which was already al-Mubarrad's teaching.

Just like al-Mubarrad, Ibn al-Sarrāj only deals with the complementary distribution of the annexational and specifying constructions, and not the other constructions. The difference is that al-Mubarrad would not call *tamyīz* the counted object if it is *mudāf 'ilayh* after a numeral between 'three' to 'ten', but only if it is after hundreds and thousands. Al-Mubarrad had to distinguish between basic and subsidiary numerals in order to account for the difference between plural and singular counted objects, since his definition of *tamyīz* required the singular. By defining an *ad hoc* category that applies only to numerals, Ibn al-Sarrāj avoids this issue. It is part of the definition of numerical *tamyīz* that it surfaces in the plural after three to ten and in the singular above ten.

The definition that Ibn al-Sarrāj gives of *tamyīz* has clearly no verbal origin and the dependent form is only there because some numerals cannot be annexed. The dependent form of this complement is only verbal at a surface level, but there is no verbal-like strength in the numeral that governs it. He also explicitly says (*'Uṣūl* I, 324.7–9) that numerals cannot be compared to the active participles.

The main problem of Ibn al-Sarrāj's theory is the fact that numerical *tamyīz* is inserted in a chapter devoted to dependent form complements although the oblique form is the base-form. It is only because some numerals are not annexable that their *tamyīz* has to surface in the dependent form. In a grammar organized according to the ending forms, there is no place for transversal categories. This is the case of many issues on which Ibn al-Sarrāj keeps silent: the gender of numerals, the gender disagreement between numerals and their counted objects, the gender disagreement between the two parts of compound

cardinal between 'thirteen' and 'nineteen', the verbal value of ordinals. Al-Mubarrad faced the same problem, but it was less obvious because his grammar is not organized according to the ending forms. This leaves him more freedom to deal with a greater number of issues in any part of his *Muqtaḍab*.

Another point that was implied in al-Mubarrad's grammar and that becomes prominent in Ibn al-Sarrāj's grammar is that there is no one-to-one correspondence between syntax and semantics. For example, annexation has two meanings, possession and species, as mentioned above. And in turn, species can be expressed by two different constructions, annexational (*ḥamsatu awlādin* 'five boys') and specifying (*'iṣrūna waladan* 'twenty boys'). Numerical *tamyīz* expresses the species, using either construction. In exactly the same manner, there is no one-to-one correspondence between morphology and syntax. For example, *-'ašara* '-teen' is compared to a compensatory *nūn* in some chapters and to a *tā' marbūṭa* in others, depending on the needs of the demonstration.

Ibn al-Sarrāj simplifies al-Mubarrad's subdivision by creating an *ad hoc* category of numerical *tamyīz* that avoids two problems met by al-Mubarrad: the number of the counted object and the fact that some numerals are 'vague' (*mubham*), while others are not. To be sure, these problems are not 'solved', they simply disappear, just like most of Sibawayhi's problems disappear in al-Mubarrad's and in Ibn al-Sarrāj's theories.

### 3 Al-'Astarābādī's Solution

#### 3.1 *Numerals Have an Adjectival Origin, Semantically and Syntactically*

In his commentary on Ibn al-Ḥājjib's (d. 646/1249) *Kāfiya fī l-naḥw*, al-'Astarābādī presents an original synthesis of the grammar of numerals. Its most striking characteristic is the fact that al-'Astarābādī considers that in their relationship with their counted objects, numerals originally have an adjectival meaning (*ma'nā l-waṣf*), as in *ṭalāṭatu rijālīn* 'three men', whose 'base' (*'aṣl*)<sup>9</sup> is *rijālun ṭalāṭatun*, meaning *rijālun ma'dūdatun bi-hādā l-'adad* 'men counted by this numeral' (*Šarḥ al-Kāfiya* IV, 239.f.). Al-Mubarrad had already mentioned this

9 Literally 'origin', but probably referring here to an underlying structure, both semantic and syntactic. Larcher (2002–2003:65) translates *'aṣl* by 'base', understood as logical rather than historical. See Larcher (2014) on *'aṣl* in this interpretation. Commenting on Ibn Ya'īš' (d. 643/1245) *Šarḥ al-mulūkī fī l-taṣrīf*, Bohas (1984:23–31) says that *'aṣl* can refer to two different things: the root and the phonic representation of the verb. Ibn Ya'īš thus calls *q-w-l* the *'aṣl* of *\*qawala*, which in turn is the *'aṣl* of *qāla*. In all cases, *'aṣl* refers to an underlying form, not to the surface form.



semantic equivalence (*Muqtaḍab* III, 341.6), but for al-ʿAstarābādī it seems to reveal an underlying syntactic and semantic structure (which he probably refers to when he speaks of *ʿaṣl*), which has effects at the surface level, in particular in the gender agreement and disagreement between numerals and their counted objects. This is probably the most complicated point in his theory of numerals. Here is the outline of the demonstration.

Understood as adjectives, numerals agree in gender and number with their counted objects, thus complying with the general rule. However, since all plural nouns are made feminine singular (*Šarḥ al-Kāfiya* IV, 239.11 f.), numerals agree in the feminine singular, as in *rijālun talātātun* ‘three men’. This is proved by the fact that it means *rijālun maʿdūdatun bi-hādā l-ʿadad* ‘men counted by this numeral’ (*Šarḥ al-Kāfiya* IV, 239.16 f.). However, masculine nouns in the plural have been deprived of their *tāʾ marbūṭa*, as in *rijāl* ‘men’. Their feminine marker has been deleted (*ḥudifat*). In exactly the same manner, the plural noun *niswa* ‘women’ is a feminine singular with a deleted feminine marker. However, this deletion is not visible, since *niswa* actually carries a *tāʾ marbūṭa*. The fact that, unlike in *rijāl*, the deletion of the feminine marker is not visible in *niswa* makes it masculine, or in al-ʿAstarābādī’s words, “*niswa* has become like a masculine because of the hiding of its feminine marker” (*fa-šāra ʿniswaʾ ka-ʿannahu mudakkār li-ḥafāʾ taʾnīṭihi*; *Šarḥ al-Kāfiya* IV, 243.9). However, what is actually hidden is the deletion of the feminine marker, not the marker itself. The paradoxical consequence is that *niswa* agrees in the masculine singular, as in *niswatun talātun* ‘three women’. This behavior is further justified by the fact that “something is not affected by its equivalent the way it is affected by its opposite” (*li-ʿanna l-šayʾ lā yanfaʿil ʿan miṭlihi inḥiṭālu ʿan diddihi*; *Šarḥ al-Kāfiya* IV, 243.8 f.). This rule is very close to the ‘differentiation principle’ we found in al-Mubarrad’s grammar. Because they are different, *rijāl* and *niswa* should behave differently. This gender ‘agreement’ rule is true for numerals between ‘three’ and ‘ten’. Other numerals present no difficulty in this matter (*Šarḥ al-Kāfiya* IV, 246.9–19): ‘one’ and ‘two’ regularly agree in gender and number, as do ‘eleven’ and ‘twelve’; ‘thirteen’ to ‘nineteen’ display mixed behavior, partly ‘analogous’ (*qiyās*) and partly not. Al-ʿAstarābādī does not explore this question any further. As for decades, hundreds and thousands, there is no problem since they have only one form in the masculine and in the feminine.

An immediate consequence of this behavior is that the ending *tāʾ marbūṭa* in numerals in their ‘absolute form’ (*muṭlaq al-ʿadad*), as when enumerating ‘one, two, three’ or when saying ‘six is the double of three’, is not ‘part of their pattern’ (*lāzima*; *Šarḥ al-Kāfiya* IV, 243.1). It is an adjectival feminine marker.

This lengthy demonstration (*Šarḥ al-Kāfiya* IV, 239.6–243.11) is probably the key to the grammar of numerals in al-ʿAstarābādī’s theory. Indeed, once he

has proven that all numerals behave like regular 'derived adjectives' (*ṣifāt muš-taqqa*) at an 'underlying level' (*'aṣl*), he can tackle the issue of the complementary distribution of the specifying and annexational constructions. However, in order to understand the next demonstration, one needs to refer to his general syntactic theory.

### 3.2 *Numerals Usually Surface in Other Slots Than Their Own*

Another striking characteristic of al-'Astarābādī's grammar lies in the clear distinction he draws between the predicative elements (*'umad*, sg. *'umda* 'support, main issue') and the non-predicative ones (*faḍalāt*, sg. *faḍla* 'remnant, surplus'). They correspond to two 'grammatical slots' (*maḥall*): *raf*<sup>c</sup> 'independent slot', which is the base-form for *'umad*; and *naṣb* 'dependent slot', which is the base-form for *faḍalāt* (*Šarḥ al-Kāfiya* I, 49.7–19).<sup>10</sup>

As for the nouns in the oblique form (*majrūrāt*), they are of two types. The first type is a *faḍla* that surfaces in the oblique form because it comes after a preposition (*Šarḥ al-Kāfiya* I, 49.20 f.), as in *marartu bi-zaydin* 'I passed by Zayd' (*Šarḥ al-Kāfiya* II, 264.14). In this case, *zayd* is a "non-predicative element introduced by a preposition" (*faḍla bi-wāsiṭat ḥarf*), "in the dependent slot" (*manṣūb al-maḥall*). The second type is because a *'umda* or a *faḍla* has been annexed to it (*Šarḥ al-Kāfiya* I, 60.14–16), as in *ḍarabanī ḡulāmu zaydin* 'Zayd's servant hit me' and *ḍarabtu ḡulāma zaydin* 'I hit Zayd's servant'. In the first example, *ḡulām* 'servant' is a *'umda* (the subject) and it is annexed to *zayd*, and in the second example, *ḡulām* is a *faḍla* (direct object) and it is also annexed to *zayd*. What is confusing is that Ibn al-Ḥāḡib calls *mudāf 'ilayh* a noun in the oblique form after a preposition (*Šarḥ al-Kāfiya* II, 264.6 f.), following Sībawayhi (cf. *Kitāb* I, 177.10 f.), as al-'Astarābādī reminds us (*Šarḥ al-Kāfiya* II, 264.8–11). It is however clear for al-'Astarābādī that the two constructions are completely different, since the oblique form after a preposition (*al-majrūr bi-ḥarf*) is a *faḍla*, whereas the *mudāf 'ilayh* (in the modern sense of the second term of an annexation) has no slot in the sentence, it only completes either a *'umda* or a *faḍla*.

Between 'three' and 'ten', the base form is *rijālun talātātun* 'three men', as mentioned above. The counted object is described (*mawṣūf*) by an adjective and the numeral 'agrees' in number and gender (all plural nouns are feminine singular; *Šarḥ al-Kāfiya* IV, 242.9). For the sake of lightness (*tahfif*; *Šarḥ al-*

10 See Bohas, Guillaume, and Kouloughli (2006:64–72) for more insight in the difference between government and predication, two competing models that account for form endings in Arabic grammatical theory.

*Kāfiya* IV, 239.20), the numeral has been annexed to its counted object in the expression *talātatu rijālin* ‘three men’, but nothing changes as far as agreement is concerned, the numeral still being in the feminine singular and the counted object in the plural, even though it is now *muḍāf ’ilayh*. Its syntactic slot has changed, it cannot be a *faḍla* any more, it only “completes what precedes it” (*min tamām al-’awwal*; *Šarḥ al-Kāfiya* IV, 257.2). By resorting to the lightness argument, al-’Astarābādī simply avoids further discussion.

Between ‘eleven’ and ‘ninety-nine’, the base form (*’aṣl*) is always the same: *darāhimu ’iṣrūna* ‘twenty dirhams’ (*Šarḥ al-Kāfiya* IV, 241.11), the counted object is *mawṣūf*, but the numeral does not agree in number and gender because of its specific morphology (*Šarḥ al-Kāfiya* IV, 241.12–17). For these numerals, annexation is not possible because of their morphology, so when the numeral was put first it could not be annexed to its counted object. Instead, the counted object has now the status of a *faḍla*, it does not simply complete what precedes, as was the case for the counted object after ‘three’ to ‘ten’, but it has a slot (*maḥall*) in the sentence, whose meaning is specification (*tamyīz*). In this case, the plural is not necessary any more, it is understood (*al-jam’iyya maḥhūma*; *Šarḥ al-Kāfiya* IV, 257.5). By taking the shape of a *faḍla* (*ṣūrat al-faḍalāt*), the counted object keeps its *mawṣūf* base (*yurā’ā ’aṣluhu ḥīna kāna mawṣūfan*; *Šarḥ al-Kāfiya* IV, 257.7).

The point at stake here is not completely obvious. It seems that al-’Astarābādī draws a clear distinction between counted objects after numerals from ‘three’ to ‘ten’, which lose their syntactic slot in the sentence by becoming *muḍāf ’ilayh*, i.e. merely completing what precedes them, and counted objects after numerals from ‘eleven’ to ‘ninety-nine’, which acquire a new syntactic slot, namely that of a *tamyīz*. In other words, the base form is the same for all counted objects and their numeral (the counted object is *mawṣūf*, it has a slot in the sentence, and the numeral is its *ṣifa*), but when they surface, they come in two different structures. In *talātatu rijālin* ‘three men’, the counted object *rijāl* loses its grammatical slot, whereas in *iṣrūna dirhaman* ‘twenty dirhams’, the counted object *dirham* keeps a grammatical slot in the sentence.

For hundreds and thousands, their specifier is in the oblique form and in the singular. Al-’Astarābādī simply says that the oblique form is the base form (*’alā l-’aṣl*; *Šarḥ al-Kāfiya* IV, 257.17). As for the singular, he says that when the Arabs realized that the singular was sufficient to express a plural for the dependent form *tamyīz* in the numerals that precede hundreds and thousands, they kept it (*Šarḥ al-Kāfiya* IV, 257.19–258.1). He adds that it is not rare for a singular to refer to a plural meaning. He then at length comments the Qur’ānic exceptions of a plural *tamyīz* in the dependent form (*Šarḥ al-Kāfiya* IV, 258.5–259.17).

In the end, the whole demonstration may not seem very convincing, except if we understand that the syntactic slots are efficient *per se* in al-ʾAstarābādī's theory: the mere change in the position of a word in the sentence has efficient implications for its declension and behavior. It is as if the slots in the sentence had an inherent functionality. In the case of the numeral and its counted object, it seems that his method is first to ensure that numerals fit the general rules of the language (they can be considered as adjectives at an underlying level), and then to explain the changes that happen at surface level due to any change in their position in the sentence.

### 3.3 *Numerals and the Theory of ʾamal*

In order to have a better view of al-ʾAstarābādī's grammatical theory of numerals, we have to consider his theory of *ʾamal*, which he presents in a chapter devoted to declension in general (*Šarḥ al-Kāfiya* I, 39–87), because this is where the originality of his views resides. These views are presented in Tawfiq (1978:191–201). As we have mentioned above, al-ʾAstarābādī draws a clear distinction between *ʾumad* and *faḍalāt*. In order to be speech (*kalām*), an utterance needs a minimum of two *ʾumdas* (*Šarḥ al-Kāfiya* I, 17.2–8). *Faḍalāt* can be added to these core elements, either with or without a preposition. Lastly, each of these elements, *ʾumad* and *faḍalāt*, can be either annexed to one or more *muḍāf ʾilayh*, which will surface in the oblique form, or described by a qualificative. This applies to the underlying level. Of course, at the surface level, these elements can appear in a different form, each element can be implicit, or it can be represented by a phrase or a full sentence. We will not enter into all these possible cases.

We have already mentioned what happens to numerals and their counted object when they are moved from one slot to another, for example, when the numeral is annexed to its counted object instead of being its qualificative, or when the numeral cannot be annexed. The question that kept previous grammarians occupied is that of the *ʾamal* of numerals, in the specifying relationship in particular. Al-ʾAstarābādī explains that ultimately the *ʾāmil* is the speaker (*al-mutakallim*; *Šarḥ al-Kāfiya* I, 43.15; see also Peled 1994:151–153). Words are modified in their endings, the agent (*ʾāmil*) of this modification is the speaker and the tool (*ʾāla*) he uses is declension (*ʾirāb*). Al-ʾAstarābādī adds that the tool and the agent are like the knife and the person who cuts (*Šarḥ al-Kāfiya* I, 43.14), which cannot be separated in their action. But “the grammarians have equated the agent and the efficient cause, although it is only a sign, not the cause, this is why they called it ‘agent’” (*al-nuḥāt jaʿalū l-ʾāmil ka-l-ʾilla l-muʾattira wa-ʾin kāna ʾalāma lā ʾilla wa-li-hādā sammawhu ʾāmilan*; *Šarḥ al-Kāfiya* I, 43.14–16). The result is that he distinguishes between the ‘grammatical

agent' (*al-ʿāmil al-naḥwī*) and the 'real agent' (*al-ʿāmil fī l-ḥaqīqa*; *Šarḥ al-Kāfiya* I, 54.12), the former being only a 'sign' (*ʿalāma*) of the latter, which is the speaker. See Peled (1994:155 f.) for more insight in the difference between the functional principle and the immediate grammatical *ʿāmil*. In the case of al-ʿAstarābādī, the functional principle is clearly the enunciation itself.

To summarize, the (grammatical) agent on the subject is the verb, because the verb transformed the subject in the second part of the speech (*Šarḥ al-Kāfiya* I, 50.10 f.); the *mubtadaʿ* and the *ḥabar* are their mutual (grammatical) agent (*Šarḥ al-Kāfiya* I, 50.12 f.);<sup>11</sup> the (grammatical) agent on the *faḍalāt* is the verb and the subject together (*Šarḥ al-Kāfiya* I, 51.9); and, lastly, the agent on the *mudāf ʿilayh* is the "meaning of annexation" (*maʿnā l-ʿidāfa*) not the *mudāf* itself (*Šarḥ al-Kāfiya* I, 61.12–14). For al-ʿAstarābādī, the *ʿāmil* of the dependent form *tamyīz*, just like all other *faḍalāt*, is the completeness of the speech that precedes, not a particular word in the sentence. In al-ʿAstarābādī's words:

Their completeness [of the noun or of the speech] is the reason for the dependent form of the *tamyīz*, by resemblance with the complement, which comes after the completeness of the speech that is achieved by the subject (*ʿanna tamāmahumā [tamām al-ism wa-l-kalām] sababun l-intiṣāb al-tamyīz tašbīhan la-hu bi-l-mafʿūl alladī yajīʿu baʿda tamām al-kalām bi-l-fāʿil*).

*Šarḥ al-Kāfiya* 11, 99.1–3

As for the oblique form *tamyīz*, its *ʿāmil* is the meaning intended by annexation as mentioned above (*Šarḥ al-Kāfiya* I, 61.12–14).

### 3.4 The Category of *tamyīz*

*Al-Kāfiya fī l-naḥw* and its commentary are organized according to the parts of speech (the noun, parts I–IV; the verb, part V; the particle, part VI). The part dealing with nouns consists of two sections. The first one is devoted to declension (declension, diptotes, independent form nouns, dependent form nouns, oblique form nouns, *al-tawābiʿ* and indeclinable nouns), and the second

11 Although this looks like the theory of *tarāfuʿ* ("mutual assignment of the independent case"), which is traditionally linked to Kūfan grammarians, things are probably more subtle for al-ʿAstarābādī, who explicitly says elsewhere that the theory of *tarāfuʿ* is 'weak' (*daʿīf*; *Šarḥ al-Kāfiya* V, 166.19–20). In the passage we are quoting here, al-ʿAstarābādī does not mention *tarāfuʿ*. More research should be done on the difference between al-ʿAstarābādī's view and that of the Kūfan grammarians. On *tarāfuʿ*, see Tawfiq (1978:199) and Bohas, Guillaume, and Kouloughli (1990:68–72).

part is devoted to specific issues in syntax and morphology (definiteness and indefiniteness, numerals, masculine and feminine, dual, plural, *al-maṣḍar*, *ism al-fā'il*, *ism al-maf'ūl*, *al-ṣifa al-muṣabbaha bi-sm al-fā'il*, *ism al-tafḍīl*).

*Tamyīz* is mainly dealt with in two places in the commentary, in the section devoted to dependent form complements (*Šarḥ al-Kāfiya* II, 96–118) and in the section devoted to numerals (*Šarḥ al-Kāfiya* IV, 252–266). Although *tamyīz* is primarily introduced as a dependent form complement (*Šarḥ al-Kāfiya* II, 96–98; 100.10), it can also surface in the same meaning, but in the oblique form, if it is lighter (*Šarḥ al-Kāfiya* II, 97.2–5). Its meaning is to lift the ambiguity of a word or a phrase that would otherwise be vague (*mubham*), i.e. “applicable to all categories” (*ṣāliḥ li-kull naw'*; *Šarḥ al-Kāfiya* II, 97.12), just like all numerals, which are ‘intrinsically vague’ (*mubham mustaqirr*; *Šarḥ al-Kāfiya* II, 97.11–13). As Peled (2003:62) puts it, the word *tamyīz* “cannot really be described as technical term[s] in the modern scientific sense, given [its] close affinity to underlying homonymous extralinguistic concepts”, namely the extralinguistic concept *tamyīz* ‘discrimination, specification’.

As mentioned above, the two different shapes that numerical *tamyīz* can take imply very different syntactic categories, *faḍla* (the dependent form) vs *muḍāf 'ilayh* (the oblique form). Al-'Astarābādī draws the consequences of this marked difference in terms of *'amal* and in terms of surface form. This enables him to maintain consistency within his grammatical frame. He calls *tamyīz* the numerical complement in both forms, because they have the same meaning, but he does not avoid the syntactic differences between them and their implications.

### 3.5 *Comparison with Sibawayhi, al-Mubarrad and Ibn al-Sarrāj*

The most obvious difference between al-'Astarābādī's grammar of numerals and that of his predecessors is that the autonomy of this chapter is pushed a step further in his commentary. Just like in Ibn al-Sarrāj's treatise, numerals appear first in the section devoted to dependent form complements, but only to present their dependent form *tamyīz*. All other issues linked to numerals are dealt with in great detail outside the frame of any particular case ending, along with other transversal issues (such as definiteness and indefiniteness, masculine and feminine, dual, plural). Ibn al-Sarrāj also dealt with a few issues related to numerals, but he inserted them in the same chapter devoted to dependent form complements (*'Uṣūl* I, 321–328). Separating the chapter on numerals from all particular case endings enables al-'Astarābādī to deal with many more issues than Ibn al-Sarrāj without giving the impression that he is bound by the mere outline of his commentary, which is also organized according to case endings.

Al-'Astarābādī's commentary thus constitutes a compromise between al-Mubarrad's thematic organization and Ibn al-Sarrāj's declensional subdivided system. In the section devoted to nouns, al-'Astarābādī first presents the different endings, including the invariable nouns, and then adds lengthy sections on transversal issues, which are thus not connected to any particular form, as was the case in Ibn al-Sarrāj's treatise. The best example for this is the treatment of definiteness. It is almost impossible to fathom from the *Kitāb* all the possible behaviors of numerals in terms of definiteness. In the *Muqtaḍab* it is made easier by the multiplication of examples and in the *'Uṣūl fī l-naḥw* this issue is partially dealt with in the 'issues' (*masā'il*) related to definiteness, but it is far from being as systematic as in al-'Astarābādī's *Šarḥ*, where one finds a specific chapter devoted to the behavior of numerals in terms of definiteness.

Another great difference between al-'Astarābādī's theory and that of his predecessors lies in his *'amal* theory. According to Baalbaki (2008:59), post-Sibawayhi grammarians have a more theoretical approach to grammar, which might give the impression that grammatical causes (*'ilal*) tend to have an autonomous life, less and less connected with grammatical phenomena. A great deal of Sibawayhi's grammar is devoted to the comparison of the 'strength' (*quwwa*) that words have in interaction with one another. In al-Mubarrad's *Muqtaḍab* and even more in Ibn al-Sarrāj's *'Uṣūl* the concept of *quwwa* loses its relevance in the grammatical analysis of declension at the profit of the concept of 'slot' (*maḥall*) that words occupy. In al-'Astarābādī's commentary, this trend is taken a step further: the 'agent' (*'āmil*) of declension is neither a strength that words would have, nor the slot as such that they occupy in the sentence, but the speaker who utters the sentence. The speaker puts words in particular slots, but the agent of declension is ultimately the intended meaning. By doing this, al-'Astarābādī avoids all questions linking syntactic strength to morphology in numerals. Numerals have very different morphological patterns (such as *fā'il*, compounds, plural-like ending *-ūna*) and they occupy different slots. Previous grammarians had trouble describing them in one single frame, but al-'Astarābādī avoids the issue as such by considering that the syntactic agent is neither linked to the actual words (their inner strength, stemming from their pattern or from their status as a part of speech), nor to their slot in the sentence but to the utterance as a whole and, ultimately, to the intention of the speaker. However, the comparison I am drawing here is clearly rooted in categories that are not used by al-'Astarābādī. Rather, his commentary pulls Ibn al-Ḥājjib's text towards an analysis of 'performative utterances' (*'inšā'*; Larcher 2013:204–207), rather than towards the search of syntactic causes. It is in this sense that Larcher labels his commentary a rhetoric integrated into syntax, "a *balāgha* integrated into *naḥw*" (Larcher 2013:204).

A third difference between the four theories can be detected in the way these grammarians compare numerals with adjectives. Sībawayhi links his grammar of numerals to *al-ṣifāt al-muṣabbaha bi-l-fā'il* (because of the residual verbal strength they have), but he is not followed by al-Mubarrad and Ibn al-Sarrāj, who bring in the category of *tamyīz* that numerals would need because of their 'vagueness' (a concept not absent from Sībawayhi's *Kitāb*, but not exploited any further). Ibn al-Sarrāj even explicitly says that numerals cannot be compared to *ṣifāt muṣabbaha*. His point is to definitively break with the issue of a syntactic strength in numerals. The category of *tamyīz* is only governed by morphological and semantic rules, not by a syntactic agent that would be in numerals. The way al-'Astarābādī reintroduces the issue of the agent enables him to cut it loose from the morphology of numerals, without losing its efficiency at the syntactic level.

As far as numerals are concerned, al-'Astarābādī's commentary may be regarded as a synthesis of Sībawayhi's search for consistency at a wider level, al-Mubarrad's endeavor to describe as many issues as possible, and Ibn al-Sarrāj's systematic subdivisions. These three characteristics are indeed found in his grammar of numerals, organized in the new frame of his pragmatic theory of *'inšā'*.

#### 4 Conclusion

In Sībawayhi's grammar, the main assumption is clearly that language is thoroughly consistent and that the grammarian can reveal this consistency. As we have mentioned, another assumption is that words have strength in themselves and that this strength interacts between words. In al-Mubarrad's grammar, the main assumption is that the grammarian can be exhaustive in describing the language. Another assumption is that to merely describe grammatical phenomena is to explain them. And in Ibn al-Sarrāj's grammar, the main assumption is that language is a completely logical phenomenon that can be entirely described through Porphyrian subdivisions. In each theory, these assumptions function as blind spots: they are not discussed by the grammarians, but they hold each theory together as a whole.

In al-'Astarābādī's grammar we can probably infer, although more research is obviously needed, that the main assumption, or the main undiscussed blind spot, is that syntactic slots are efficient *per se* and that the grammarian only has to understand what these slots are, or, in other words, what the intention of the speaker is. This is ultimately linked to the speaker's ability to build meaningful utterances, which can also be seen as a major blind spot in his theory, because it



poses again the question of the definition of who is a native speaker of Arabic, a question which has triggered much research, especially in the earlier stages of Arabic grammar.<sup>12</sup> More research should be done about how al-'Astarābādī and later grammarians would define a 'native speaker', if they do, or whether the speaker as the agent of declension and source of meaningful utterances is only a useful fiction.<sup>13</sup>

## Bibliographical References

### A Primary Sources

'Astarābādī, *Šarḥ al-Kāfiya* = Raḍī l-Dīn Muḥammad ibn al-Ḥasan al-'Astarābādī (d. 688/1289), *Šarḥ al-Raḍī 'alā Kāfiyat Ibn al-Ḥājjib*. Ed. by 'Abd al-'Āl Sālim Makram. 7 parts in 4 vols. Cairo: 'Ālam al-Kutub, 2000/*Šarḥ al-Kāfiya*. 2 vols. Istanbul: Maṭba'at al-Širka al-Šaḥafiyya al-'Uṭmāniyya/*Šarḥ al-Raḍī l-ma'rūf Šarḥ Kāfiyat Ibn al-Ḥājjib*. Ed. by Yūsuf Ḥasan 'Umar. 4 parts in 2 vols. Teheran: Mu'assasat al-Šādiq. (Repr., 1392 SH/2013–2014.)

Ibn al-Sarrāj, *'Uṣūl* = 'Abū Bakr Muḥammad ibn al-Sarī l-Baḡdādī Ibn al-Sarrāj (d. 316/928), *al-'Uṣūl fī l-naḥw*. Ed. by 'Abd al-Ḥusayn al-Fatī. 3rd ed. 3 vols. Beirut: Mu'assasat al-Risāla, 1996.

Mubarrad, *Muqtaḍab* = 'Abū l-'Abbās Muḥammad ibn Yazīd al-Ṭumālī l-'Azdi al-Mubarrad (d. 285/898), *Kitāb al-muqtaḍab*. Ed. by Muḥammad 'Abd al-Ḥāliq 'Uḍaymah. 4 vols. Cairo: Wizārat al-'Awqāf, Lajnat 'Iḥyā' al-Turāṭ al-'Islāmī, 1966–1979.

Sībawayhi, *Kitāb* = 'Abū Bišr 'Amr ibn 'Uṭmān Sībawayhi (d. ca. 180/796), *al-Kitāb*. Ed. by Hartwig Derenbourg, *Le livre de Sībawaihi*. 2 vols. Paris: Imprimerie nationale, 1881–1889. (Repr., Hildesheim and New York: G. Olms, 1970.)

### B Secondary Sources

Baalbaki, Ramzi. 2008. *The legacy of the Kitāb*. Leiden: E.J. Brill.

Bohas, Georges. 1984. "Contribution à l'étude de la méthode des grammairiens arabes en morphologie et en phonologie d'après les grammairiens arabes 'tardifs'". Georges Bohas and Jean-Patrick Guillaume, *Étude des théories des grammairiens arabes*. 1. *Morphologie et phonologie*, xi–xviii, 1–133. Damascus: Institut français de Damas.

12 See for example Guillaume (1985), Bohas, Guillaume, and Kouloughli (1989), Versteegh (1990, 2004).

13 See Versteegh (1996:591; 1997:41f.) on the 'fiction' that resides in the fact that although grammarians say they are describing and explaining the language of the Bedouin, they actually describe and explain the language of the Qur'ān and poetry.

- Bohas, Georges, Jean-Patrick Guillaume, and Djamel Eddine Kouloughli. 1989. "L'analyse linguistique dans la tradition arabe". *Histoire des idées linguistiques*, ed. by Sylvain Auroux, 1, 260–282. Liège and Brussels: Mardaga.
- Bohas, Georges, Jean-Patrick Guillaume, and Djamel Eddine Kouloughli. 1990. *The Arabic linguistic tradition*. London and New York: Routledge. (Repr., Washington, D.C.: Georgetown University Press, 2006.)
- Brockelmann, Carl. 1943–1949. *Geschichte der arabischen Literatur*. 2+3 vols. Leiden: E.J. Brill. (Repr., 1996.)
- Carter, Michael G. 1972. "Twenty dirhams' in the *Kitāb* of Sībawayhi". *Bulletin of the School of Oriental and African Studies* 35.485–496.
- Druel, Jean N. 2012. *Numerals in Arabic grammatical theory: An impossible quest for consistency?* Ph.D. thesis, Radboud Universiteit, Nijmegen.
- Druel, Jean N. 2015. "What happened to the grammar of numerals after Sībawayhi?". *The foundations of Arabic linguistics*, 11, ed. by Amal Marogy and Kees Versteegh, 81–99. Leiden: E.J. Brill.
- Fleisch, Henri. 1961, 1979. *Traité de philologie arabe*, 1, 11. Beirut: Imprimerie catholique.
- Fleisch, Henri. 1979. "Ibn al-Ḥād̲j̲ib, Djamāl al-Dīn Abū 'Amr 'Uthmān b. 'Umar b. Abī Bakr al-Mālikī". *Encyclopaedia of Islam*, 2nd ed., 111, 781. Leiden: E.J. Brill.
- Gilliot, Claude. 2004. "Textes arabes anciens édités en Égypte au cours des années 1999 à 2002". *Mélanges de l'Institut dominicain d'études orientales* 25–26.193–475.
- Guillaume, Jean-Patrick. 1983. "Fragments d'une grammaire oubliée". *Bulletin d'études orientales* 35.19–35.
- Howell, Mortimer S. 2003. *A grammar of the Classical Arabic language*. Anastatic repr. 7 vols. New Delhi: Gyan Publishing House. (First published 1883.)
- Larcher, Pierre. 1989. "Note sur trois éditions du *Šarḥ al-Kāfiya* de Raḍī l-Dīn al-'Astarābādī". *Arabica* 36.109–113.
- Larcher, Pierre. 1991. "*Al-'Īdāḥ fī šarḥ al-Mufaṣṣal* de Ibn al-Ḥāḡib". *Arabica* 38.369–374.
- Larcher, Pierre. 2002–2003. "*Ayy(u) šay'in, 'ayšin, 'ēš*: Moyen arabe ou arabe moyen?". *Quaderni di Studi Arabi* 20–21.63–77.
- Larcher, Pierre. 2013. "Arabic linguistic tradition. II. Pragmatics". *The Oxford handbook of Arabic linguistics*, ed. by Jonathan Owens, 185–212. Oxford: Oxford University Press.
- Larcher, Pierre. 2014. "Ibn Baṭṭūṭa et le *faqīh* de Kāwiya (Geyve, Anatolie)". *Romano-Arabica* 14.235–246.
- Mango, Andrew J. 1979. "Al-Astarābādī, Raḍī al-Dīn Muḥammad b. al-Ḥasan". *Encyclopaedia of Islam*, 2nd ed., 1, 721. Leiden: E.J. Brill.
- Peled, Yishai. 1994. "Aspects of case assignment in medieval Arabic grammatical theory". *Wiener Zeitschrift für die Kunde des Morgenlandes* 84.133–158.
- Peled, Yishai. 2003. "Aspects of the use of grammatical terminology in Medieval Arabic grammatical tradition". *Arabic grammar and linguistics*, ed. by Yasir Suleiman, 50–85. London and New York: Routledge.

- Sarkīs, Yūsuf Alyān. 1928. *Muʿjam al-maṭbūʿāt al-ʿarabiyya wa-l-muʿarraba*. Cairo: Maṭbaʿat Sarkīs.
- Tawfīq, ʿAmīra ʿAlī. 1978. *Al-Raḍī l-ʿAstarābādī: ʿĀlim al-naḥw wa-l-luġa*. Riyadh: al-ʿIdāra l-ʿĀmma li-Kulliyyāt al-Banāt.
- Van Dyke, Edward. 1896. *Kitāb iktifāʾ al-qanūʿ bi-mā huwa maṭbūʿ*, ed. by Muḥammad ʿAlī l-Biblāwī. Cairo: Maktabat al-Hilāl.
- Versteegh, Kees. 1989. “Le langage, la religion et la raison”. *Histoire des idées linguistiques*, ed. by Sylvain Auroux et al., 1, 243–259. Liège and Brussels: Mardaga.
- Versteegh, Kees. 1990. “Freedom of the speaker? The term *ittisāʿ* and related notions in Arabic grammar”. *Studies in the history of Arabic grammar*. 11. *Proceedings of the 2nd Symposium on the History of Arabic Grammar, Nijmegen, 27 April–1 May 1987*, ed. by Michael G. Carter and Kees Versteegh, 281–293. Amsterdam and Philadelphia: J. Benjamins.
- Versteegh, Kees. 1996. “The linguistic introduction to Rāzī’s *Tafsīr*”. *Studies in Near Eastern languages and literature: Memorial volume of Karel Petráček*, ed. by Petr Zemánek, 589–603. Prague: Academy of Sciences of the Czech Republic.
- Versteegh, Kees. 1997. *Landmarks in linguistic thought*. 111. *The Arabic linguistic tradition*. London and New York: Routledge.
- Versteegh, Kees. 2004. “Meanings of speech: The category of sentential mood in Arabic grammar”. *Le voyage et la langue: Mélanges en l’honneur d’Anouar Louca et d’André Roman*, ed. by Joseph Dichy and Hassan Hamzé, 269–287. Damascus: Institut français du Proche-Orient.
- Weipert, Reinhard. 2009. “Al-Astarābādī, Raḍī al-Dīn”. *Encyclopaedia of Islam*, 3rd ed., 111, 118. Leiden: E.J. Brill.
- Wright, William. 1967. *A grammar of the Arabic language*. 3rd ed. 2 vols. Cambridge: Cambridge University Press.