

ILḤĀQ AS A MORPHOLOGICAL TOOL IN ARABIC GRAMMAR

Ramzi Baalbaki

AMERICAN UNIVERSITY OF BEIRUT

The Arab grammarians differentiate between the *ziyāda* (augment) that introduces an element of meaning and the *ziyāda* that appends (*yulḥiq*) one morphological form to another. Having realized the potential of the concept of *ilḥāq* (appending) as an analytical tool in morphology, the grammarians divided appended words into several types according to the number of the radicals in their roots and the type of *ziyāda* that is involved, and tried to justify forms and patterns with reference to a set of detailed rules which they elaborately describe. This paper deals with the issues the grammarians tackle in their study of *ilḥāq*, such as its purpose, the possibility of analogically extending its examples, and the inapplicability of *idḡām* (gemination) to its patterns. It also examines how the grammarians use *ilḥāq* to reduce considerably the number of morphological patterns that form a closed system, to explain away anomalous and rare patterns, and thus to limit deviation from the norm (*qiyās*) and to test the validity of a host of morphological issues.

1.1. Within the Arabic root system a consonant may either be a radical (*aṣl*) or an augment (*ziyāda*), i.e., part of the etymological root or some kind of morphological affix, respectively. In discussing augmented forms, grammarians usually differentiate between the purely morphological *ziyāda*, whose purpose is to introduce an element of meaning, and the *ziyāda* whose purpose is to append (*yulḥiq*) one formal word pattern to another by interpreting one or more consonants in the word as having the status of affixes and not radicals. As with many postulates, this distinction goes back to Sībawayhi (d. 180/796; *Kitāb*, II, 9), and probably to his teacher, al-Ḥalīl b. Aḥmad (d. 175/791), whose influence on him was overwhelmingly in the areas of phonology and morphology (cf. Carter 1973, 154, and 1981, 352). To clarify this distinction, the grammarians had not only to define the limits between the two types of *ziyāda* in view of both form and meaning, but also to justify why certain words could not be considered appended (*mulḥaq*), although their forms do suggest such a possibility.

This painstaking task which the grammarians shouldered, and which

necessitated close scrutiny of a host of mostly complex and rarely used words whose patterns are said to be the result of *ilhāq* (appending), was motivated by their general tendency towards limiting the items that constitute a closed system—particularly, the number of patterns the available corpus of words should be divided into—and by their interest in using the rules that govern *ilhāq* as testing devices to prove the validity of their more general morphological premises. This paper sets out to investigate the methods the grammarians used in their study of *ilhāq* and to demonstrate how they tried to incorporate these rules within their overall system of morphological analysis.

1.2. Much of the material on *ilhāq* is discussed in several scattered parts of the *Kitāb* (esp. II, 8–11; 197; 334–41; 401–403), but Sibawayhi nowhere gives a definition of *ilhāq* or formulates and lists together the rules that pertain to it. Equally scattered are the comments of Mubarrad (d. 285/898) in his *Muqtaḍab* (esp. I, 204–205, 244; II, 225ff; III, 88, 385–86; IV, 3–4). Māzinī (d. 248/862), on the other hand, discusses the different aspects of *ilhāq* in one part of his *Taṣrīf* (I, 34–53), be it in less detail than in the *Kitāb* or the *Muqtaḍab*. However, Ibn Ğinnī's (d. 392/1002) commentary on the *Taṣrīf* complements its text to make it more or less comprehensive. Furthermore, as we shall see later, Ibn Ğinnī makes several perceptive observations on *ilhāq* as part of his unparalleled approach to linguistic analysis.

As for the most well-organized and comprehensive study of *ilhāq* in the sources, it is obviously that of Astarābādī (d. 686/1287) in *Šarḥ al-Šāfiya* (I, 52–70). It is surprising, however, that some authors of major works on morphology barely mention a few rules about *ilhāq*, as did Ibn °Uṣfūr (d. 669/1271) in his *Mumti°* (I, 206–208), or sporadically mention its function without devoting a particular section or chapter to it, as did Ibn Ğinnī, who at times mentions, in his alphabetical list of *hurūf* (here, phonemes) in *Sirr šinā°at al-i°rāb*, that a certain *ḥarf* can have the function of *ilhāq* (e.g., *alif*; II, 691–93).¹

¹ It should be noted that Ibn Ğinnī, in his *Sirr*, generally avoids the use of the term *ilhāq*, and uses the more general term *ziyāda* instead. For instance, he mentions a large number of the examples of *ilhāq* of *tā°*, *nūn* (I, 167–69 for both) and *wāw* (II, 594) without referring to *ilhāq*. He might have preferred *ziyāda* because it contrasts more directly with *aṣl* (i.e., what is part of the word's root), since he tries to establish the contrast between what is augmented and what is a part of the root. Another possible reason is that since he investigates in his *Sirr* not only the morphological characteristics of the *hurūf*, but also their

Many of the later sources also show little interest in *ilhāq*, and it is remarkable that, unlike his commentary on Ibn Ğinnī's *al-Taṣrīf al-mulūkī* (64f.), Ibn Ya'īs's (d. 643/1245) most detailed work, *Šarḥ al-Mufaṣṣal*, does not include a special chapter on *ilhāq* (see sporadic mention of the term in VI, 113, 119, and IX, 146–48; cf. Zamaḥšarī, *Mufaṣṣal*, 240, 241, and 358, where the term *ilhāq* appears only in the latter case). Also noteworthy is that Suyūṭī (d. 911/1505) has an atypically short summary of the main issues of *ilhāq* in his *Ham' al-hawāmi'* (II, 216–17)—most of which relates to whether or not it is restricted to what the Arabs actually used—and only an incidental mention of *ilhāq* as one of the kinds of *ziyāda* in *Ašbāh* (IV, 137).

Finally it should be mentioned that works that deal with loan words usually cite *ilhāq* as one of the main factors that affect the Arabicized forms of these loans. For example, Ğawālīqī (d. 540/1145) and Ḥafāḡī (d. 1069/1659) mention several patterns that demonstrate this phenomenon (*Mu'arrab*, 8, and *Šifā'*, 36–37), and Ibn Kamāl Pasha (d. 940/1533) has a lively discussion of its role in Arabicization and frequently refers to this role in analyzing particular examples (*Risāla*, 47f.; and index, p. 153). This interest in the relation between *ilhāq* and loan words, it may be noted, owes its origin to Sībawayhi's chapter on *mā u'riba min al-a'ğamiyya* (What has been Arabicized from foreign languages; *Kitāb*, II, 342).

Since the above-mentioned authors are largely in agreement concerning the function of *ilhāq* and the material that constitutes its corpus, we shall refer to them collectively unless we need to specify or indicate different views.

2.1. Although Sībawayhi does not give a formal definition of *ilhāq*, his discussion of it includes all the elements later grammarians used in formulating its definition. These elements are the following: (a) that it is a *ziyāda*; (b) that it causes trilaterals to be appended to quadrilaterals and quinqueliterals, and quadrilaterals to be appended to quinqueliterals; (c) that this *ziyāda* is different from the one which uniformly introduces an element of meaning;² (d) that the pattern of the appended word should

syntactic traits, and refers to the introduction of particles by using the root *LHQ* (e.g., *lahāq*, *lahiqat*, *talḥaq*; *Sirr*, II, 325, 332, 384, 396, etc.), he consciously tried to avoid the term *ilhāq* for the sense of appending, so as not to cause confusion between the two types.

²The meanings of the cited examples will be indicated only in cases where the semantic aspect is discussed, and the examples will be given mostly as

phonologically conform to the pattern of the word to which it is appended, i.e., what can be referred to as the *target* pattern; (e) that the derivatives of the appended word should be congruent to the derivatives of the target word; and (f) that the rules of assimilation (*idḡām*), if applicable, should not be made operational in the appended word because this would change its pattern and hence its congruence to the word to which it is appended. Due to the highly complex nature of the subject, sections 2.2–2.4 will deal in more detail with the grammarians' views on the above elements, and we shall try later to examine issues of a more general nature that relate to the grammarians' use of this tool in their linguistic analysis.

2.2. The phonemes used for appending are mostly *wāw*, and *yā'* (e.g., *kaḡṭar* and *ḡayḡam*, both appended to *ḡa'far*; and *ḡirwa'*, and *'ityar*, both appended to *dirham*), but they also include, among others,³ *nūn* (e.g., *ra'šan*, appended to *ḡa'far*), *mīm* (e.g., *dilqim* appended to *zibriḡ*), and *alif* (e.g., *ḡabanṭā*—from the root *ḡBT*, with the addition of *nūn* and *alif*—which is appended to *ḡabarkā*, itself with a final *alif* that is not part of the root). Such instances of augmentation with no recurring phonemes are often attributed to their basic roots by a semantic comparison between their apparent root and an assumed root with less radicals. A good example is that of *dulāmiṡ* (shining), whose apparent root *DLMS* is further reduced to a trilateral root semantically related to it, *DLṡ* (cf. *dalīs*, *daliṡ*, *dilāṡ*, and *dalāṡ*, all of which mean “shining”; see Ibn Manṡūr, *Lisān*, *DLṡ*, and Zubayḡī, *Amṡila*, 62). Thus, the *mīm*, according to the grammarians, appends *dulāmiṡ* to *ḡuḡādib*, an authentic quadrilateral.

In addition to this, theoretically any phoneme can be used for appending if it recurs within the appended word.⁴ Examples include *mahdad*, *ḡidabb*, *'aṡawṡal*, *ḡalakūk*, *qurṡāṡ*, *'afanḡaḡ*, and *quṡa'rīra* appended to *ḡa'far*, *qimaṡr*, *farazḡaq*, *qarabūs*, *qurṡās*, *'abanqas*, and *ḡuza'bīla*, respectively (Suyūṡī, *Muzhir*, II, 35–36). The difference be-

nouns because the sources use them much more than verbs to illustrate *ilḡāq*.

³ The phonemes of augment, including those used for *ilḡāq*, i.e., *s*, *'*, *l*, *t*, *m*, *w*, *n*, *y*, *ḡ*, *ā*, are generally referred to by mnemonic devices such as *sa'altumūnīḡā*, *al-yawma tansāḡu*, *ḡawītu l-simāna*, *wa-atāḡu Sulaymān*, *amānun wa-tashīlun*, *taslīmun wa-hanā'un*, etc. See Ibn ḡinnī, *Munṡif*, I, 98; Astarābādī *Šārḡ*, II, 331; Suyūṡī, *Ham'*, II, 214.

⁴ See Bohas and Guillaume (1984, 109f.) for a discussion of *ilḡāq* by the addition of one of the letters of augment or by the recurrence of one of the roots, and the difference between the two types.

tween the first seven representative examples and their respective counterparts is that all members of the first group may be attributed to roots whose radicals are supposedly reducible to a number less than the number of radicals in the root of their counterparts to which they are appended. For example, *ʿaṭawīṭal* (stout, fleshy, and flabby) is apparently quinqueliteral like *farazdaq*, but since it is semantically related to the root *ʿTL* (which indicates abundance, stoutness, flabbiness, etc., and which was augmented by the addition of *wāw* and *īāʾ*, according to the pattern *faʿallal*), it is considered trilateral in origin, unlike the loan word *farazdaq*, none of whose radicals may be reducible with reference to a trilateral or quadrilateral root to which it may be assigned. Similarly, *ḥalakūk* (intensely black) is derived from a trilateral root *HLK* which indicates blackness, whereas its counterpart, *qarabūs* (part of a horse’s saddle), also a loan word, is thought to have four radicals (*q*, *r*, *b*, and *s*) that must be considered part of its supposed root.⁵

Based on the above, the vast majority of the corpus of appended words may be divided into five types:⁶

⁵ We chose our two examples from loan words because they clearly have irreducible roots, but it must be noted that Arabic quadrilaterals and quinqueliterals may also have irreducible roots, as in *ḡaʿfar* and *ḥuzaʿbīla*, both of which are mentioned as examples above. For other examples where the semantic aspect indicates the existence of *ilhāq*, see Astarābādī, *Šārḥ*, II, 333 f. In certain cases, both the rules of augmentation and the semantic resemblance between the appended word and other derivatives from the same root point to the existence of *ilhāq*. One example is *kawṭar* (abounding in good), whose *wāw*, according to Ibn Ğinnī (*Taṣrīf*, 16), is an augment for two reasons, namely, that the word has three radicals other than the *wāw*, and that the meaning of abundance is present in the word *kaṭīr*, which is derived from the same root as *kawṭar*.

⁶ The use of *ilhāq* in the classification of words according to the number of their radicals should be distinguished from its use by some lexicographers for a similar classification into trilaterals, quadrilaterals and quinqueliterals. What a lexicographer like Ibn Durayd means by saying that certain words are “annexed” to the quinqueliterals (*ulḥiqa bi-l-ḥumāsī*) is that it is easier to classify them with the quinqueliterals as a distinct group, and not that they were made to conform to one of the patterns of the quinqueliterals as the more common use of the term *ilhāq* implies. This explains why in the pattern *fuʿālil*, for example, *dulāmiṣ* and *ḡuḥādib*, considered by the grammarians to be trilaterals appended to an augmented quadrilateral (see the second type mentioned in the text above), both appear in Ibn Durayd’s *Ġamhara* (II, 1210, 1212) as examples of words that are “annexed” to quinqueliterals. In other words, Ibn Durayd is interested here in *ilhāq* as a tool for classifying words in exhaustive lists, and not in the

i. Triliterals appended to quadrilaterals: e.g., *ğadwal* (ĞDL) and *ra^cšan* (R^cŠ), compared with *ğa^cfar* (Ğ^cFR); and *duḥlul* (DHL) and *ḥulkum* (HLK), compared with *burtun* (BRTN).

ii. Triliterals appended to augmented⁷ quadrilaterals: e.g., *dulāmiš* (DLŠ), compared with *ğuḥādib* (ĞHDB); *ihlil* (HLL), compared with *birṭil* (BRTL); and *ḥabawnan* (HBN), compared with *ḥabawkar* (HBKR).

iii. Triliterals appended to quinqueliterals: e.g., *inqaḥl* (QH^cL), compared with *qirṭa^cb* (QRT^cB); and *ḥabarbar* (HBR), compared with *farazdaq* (FRZDQ).

iv. Quadrilaterals appended to quinqueliterals: e.g., *qiršabb* (QRŠB), compared with *qirṭa^cb* (QRT^cB); and *ğaḥanfal* (ĞHFL), compared with *safarğal* (SFRĞL).

v. Quadrilaterals appended to augmented quinqueliterals: e.g., *quša^crira* (QŠ^cR), compared with *ḥuza^cbila* (HZ^cBL); and *ḥaysafūğ* (HSFĞ), compared with *adrafūt* (DRFT).

Since words cannot have more than five radicals, *ilhāq* does not affect quinqueliterals (*li-anna banāt al-ḥamsa laysa warā³ahā šay³ min al-aṣl fa-yulḥaq bi-hi*; Ibn Ğinnī, *Munšif*, I, 51). In other words, because there is no target pattern which the quinqueliterals can be appended to, *ilhāq* was not applied to them, and they had to be placed outside the closed system which *ilhāq* represents (see 3.3 below).

2.3. At the level of meaning, the grammarians draw a sharp distinction between *ilhāq* and augmentation through which patterns that indicate certain meanings are formed. Of course, this latter type is much more widespread than *ilhāq* and may be viewed as derivation (*ištiqāq*) par excellence,⁸ whereas *ilhāq* is a special type of derivation whose relative frequency of use is quite limited. This notwithstanding, the grammarians consider the two types to be on an equal footing in the process of deriving words since they consider each of them to be representative of a *distinct* purpose of *ziyāda*. As noted in 1.1 above, Sībawayhi (*Kitāb*, II, 9)

theoretical aspect of *ilhāq* as discussed by the grammarians.

⁷ Augmentation here mostly means the addition of a diphthong or a long vowel (*ā*, *ū*, or *ī*), probably since these, unlike short vowels, appear in writing.

⁸ It is noteworthy that some grammarians use *ilhāq* to distinguish between *taṣrīf* (morphology) and *ištiqāq* (derivation). Their argument is that the former is more general than the latter specifically because *ilhāq* may be included under *taṣrīf* but not under *ištiqāq* (Suyūṭī, *Muzhir*, I, 351).

alluded to the distinction between two kinds of *ziyāda*, one of which appends one form to another (*tulḥiq bināʿan bi-bināʿ*), while the other introduces an element of meaning (*tadhul li-maʿnā*).

Māzinī also makes this distinction (*Taṣrīf*, I, 13, and Ibn Ğinnī, *Munṣif*, I, 13–17), but in a less direct way. Based on the purpose of *ziyāda*, he classifies it into four types: (a) the *ziyāda* of *ilhāq*, which appends one form to another; (b) the *ziyāda* for vowel prolongation, such as *ʿağūz* and *ğarīb*; (c) the *ziyāda* that indicates a meaning (*maʿnā*), such as nūnation (*tanwīn*) and the prefixes of the imperfect (*ḥurūf al-muḍāraʿa*); and (d) the *ziyāda* that is inseparable from the word because the very meaning (*maʿnā*) of the word is dependent on the augmented pattern, e.g., the *alif* and *tāʿ* of *iftaqara*, which have been part of the pattern *iftaʿala* since it was first coined (*wuḍiʿa*) and used instead of **faqura*. A closer look at this apparently more elaborate classification, however, readily reveals that it is essentially consistent with Sibawayhi’s, since it contrasts *ilhāq* with the *ziyāda* that indicates meaning. Of the latter type are (c) and (d) above, where the word “meaning” is used in Māzinī’s text, as well as (b), since vowel prolongation is part of the structure of several patterns that are indicative of meaning, as in Māzinī’s own example, *ʿağūz*, of the pattern *faʿūl*, which indicates a common adjective for both masculine and feminine, and which has a plural, *ʿağāʿiz*, that is exclusively indicative of the feminine (Sibawayhi, *Kitāb*, II, 208; cf. II, 131, where the *wāw* in *ʿağūz* is contrasted with the *ziyāda* of *ilhāq*).

Ibn ʿUṣfūr’s classification of the types of *ziyāda* (*Mumtiʿ*, I, 204–6) is even more elaborate than Māzinī’s, since it includes types that are either purely phonological, such as the *hāʿ* of quiescence (*hāʿ al-sakt*), or that do not strictly qualify for inclusion under separate headings, such as the feminine ending of *zanādiqa*—called *tāʿ* (or *hāʿ*) of compensation (*tāʿ al-ʿiwaḍ*) on the assumption that it compensates for the elided *yāʿ*⁹ in *zanādīq*—which actually belongs to a pattern that indicates the plural, and hence meaning. Taking this into consideration, the core of Ibn ʿUṣfūr’s classification is basically in agreement with that of Sibawayhi and Māzinī.

The distinction of the grammarians between the *ziyāda* of *ilhāq* and the *ziyāda* of *maʿnā* raises the problem of those appended words which

⁹ This *yāʿ* refers to the written form of the word, and should be understood as a reference to the long vowel *ī* which was shortened to *i* (cf. *zanādīq* and *zanādiqa*).

apparently do carry an element of meaning due to their augment. An example of such words is *ḥawqala* (said of a man who ages and becomes weak), which is appended to *fawʿala* (Ibn ʿUṣfūr, *Mumtiʿ*, I, 167), and whose meaning is not identical to the original verb, *ḥaqila* (said of a camel that suffers indigestion after drinking water mixed with sand). To resolve this discrepancy, Astarābādī uses this example, among others (*Šarḥ*, I, 52–53), to introduce a vital component to the definition of *ilhāq*, and hence to the distinction between *ilhāq* as a *ziyāda* that is described as not having to do with meaning and the *ziyāda* that indicates meaning. In his terms, the *ziyāda* of *ilhāq* is *ḡayr muṭṭarida fī ifādat maʿnā*, that is, it does not systematically add a well-defined element of meaning. It is this unsystematic characteristic of *ilhāq* that truly distinguishes it from the *ziyāda* that systematically introduces a discernible element of meaning and is therefore outside the sphere of *ilhāq*, as is the case in the *hamza* of *ʾakbar* and *ʾafḍal*, which, he says, consistently expresses the comparative (*tafḍīl*), and the *mīm* of the pattern *mifʿal*, which consistently indicates the instrument (*Šarḥ*, I, 53; II, 332).

2.4. At the purely formal (*lafẓī*) level, the grammarians identify several rules associated with *ilhāq*. These rules, scattered as they are in the earlier sources, were assembled by some later authors either to formulate an accurate definition of *ilhāq*, as did Astarābādī (*Šarḥ*, I, 52), or to list each criterion (*ḍābiṭ*) that reveals the use of *ilhāq*, as did Suyūṭī (*Hamʿ*, II, 216). In this respect too, the grammarians seem to be most interested in the distinction between *ziyāda* of *ilhāq* and *ziyāda* of *maʿnā*. Indeed, their discussion centers on two main aspects which endorse their distinction of the two types. The first aspect is the congruence between the appended word and the word to which it is appended with regard to the number of radicals and the metric measure (*wazn*), i.e., the pattern of *ḥarakāt* and *sakanāt* (occurrence or non-occurrence of vowels after consonants). This congruence, the grammarians stress, should also apply to the derivatives of both words, that is, in the case of verbs (usually cited in the perfect), it should manifest itself in the imperfect, the imperative, the verbal noun, the active participle, and the passive participle, and in the case of nouns, it should appear in the diminutive and broken plural forms. Without going into details and exceptions to this general guideline of congruence, suffice it here to say that it was used to show the underlying difference between what is *mulḥaq* and what is not.

For example, Astarābādī (*Šarḥ*, I, 55; cf. Ibn Ğinnī, *Ḥaṣāʾiṣ*, I, 222, 232) argues that the inclusion of the verbal noun in the above list of de-

rivatives that manifest congruence between the words that are appended and the words they are appended to should disqualify patterns such as *aḟ^cala*, *fa^cala*, and *fā^cala* from being appended to the verb *daḟraḡa*, with which they rhyme, since their verbal nouns, *if^cāl*, *taḟ^cīl* and *mufā^cala*, are not congruent with the verbal noun of *daḟraḡa*, which is *daḟraḡa(tun)*, of the pattern *fa^clala(tun)*. Similarly, in nouns, the insistence that congruence should apply in broken plurals,¹⁰ according to Astarābādī (ibid., I, 56), readily shows that *ḥimār*, in spite of being metrically equivalent to *qimatr*, cannot be considered appended to it, since its broken plurals, *ḥumur* and *aḥmira*, are not of the same pattern as *qamāḟir*. Obviously, the inclusion of such peculiarities of *ilhāq* in its definition in Astarābādī's *Šarḥ* (I, 52) is the reason why this definition, whose aim is to exclude other phenomena, is unusually long and detailed.

The second aspect which the grammarians focus on in the distinction between the *ziyāda* of *ilhāq* and the *ziyāda* of *ma^cnā* at the formal level is that *idḡām* (gemination) applies to the latter but not to the former.¹¹ Sībawayhi notes the difference between these two types of *ziyāda* as to the applicability of *idḡām*, and devotes a chapter to those appended words whose final radicals are reduplicated but not geminated (*Kitāb*, II, 401–402; cf. II, 408). Thus, he contrasts *qardad*, which is appended to *ḡa^cfar* and *salḡab*, with *maradd*, originally **mardad*, and attributes the lack of *idḡām* to *ilhāq* itself. The aim of the contrast between *qardad* and **mardad* is to show that *idḡām*, for which both words qualify according to their phonological structure, becomes inoperable in the presence of *ilhāq*. In fact, Sībawayhi argues that *idḡām* does not take place in such appended words because the speaker intentionally keeps the last two radicals separate in order to achieve *ilhāq* through the augment (*lam tudḡim li-annaka innamā aradta an tuḡā^cif li-tulḡiqahu bi-mā zidta bi-daḟraḡtu wa-ḡaḡdaltu*). This is why in *ḡalbaba*, he says, the two *bā*'s are not geminated, hence the use of the forms *ḡalbabtuhu*, *muḡalbab*, *ḡulbiba*, *taḡalbaba*, *yataḡalbabu*, and the like, which are appended to their counterparts derived from *daḟraḡa*, such as *tadaḟraḡa*, *yatadaḟraḡu*, and *daḟraḡtu* (*Kitāb*, II, 401; cf. Fārisī, *Ta^clīqa*, V, 156–57; Mubarrad, *Muqtaḡab*, I, 204–205, 244). Ibn ^cUḡfūr (*Mumti^c*, I, 207)

¹⁰ See Sībawayhi's *Kitāb*, II, 197 and 211, for examples of the broken plurals of appended words.

¹¹ See the phonological reasons Bohas and Guillaume (1984, 39–41, 110–113) cite for this phenomenon.

lends further support to this line of thinking by arguing that speakers tolerated the heaviness of two separate radicals (*iḥtamalū ṭiqal iḡtimā^c al-miṭlayn*) in such examples in order for their patterns to remain congruent to the words to which they were appended.

This structural identity, so to speak, of appended words was viewed by Ibn Ğinnī—whose unremitting quest for exploring the underlying principles of linguistic phenomena is largely unrivalled in the Arabic tradition—as part of a more general tendency which he detects in a host of examples (*Ḥaṣā'is*, III, 232–40; esp. 232–33) and which he discusses under the title *al-imitnā^c min naqd al-ḡaraḍ* (refusal to contradict the objective). The essence of his argument, in the case of *ilhāq*, is that its objective of achieving congruence between appended words and what they are appended to would have been annulled if normal *idḡām* been applied, and thus the Arabs refrained from applying the rules of *idḡām* to appended words because it was necessary to protect (*ḥirāsa*) and preserve (*ḥifẓ*) the original purpose. Apart from the fact that this explanation presupposes a conscious effort on the part of the speaker, its inclusion with allegedly comparable phenomena is an attempt to show that *ilhāq*, which represents an anomalous case with regard to the rules of *idḡām*, is not necessarily anomalous in other respects. In connection with this, we shall try to show later (see 4.2 below) how the grammarians incorporated the phenomenon of *ilhāq* within the general grammatical system, as they saw it, by applying to it the same criteria of analysis that they use in other cases.

3.1. Based on the elements that they included in defining *ilhāq* (see 2.1 above), and on their distinction between the *ziyāda* of *ilhāq* and the *ziyāda* of *ma^cnā* both at the level of meaning and form (2.3 and 2.4 respectively), the later grammarians were well-disposed toward assigning to *ilhāq* an ultimate purpose that would justify its existence as an independent phenomenon. In this respect, it seems that they wanted to surpass the earlier grammarians, who merely stated that the *ziyāda* of *ilhāq* appends one word to another (*tulḥiq binā³an bi-binā³*; see Sībawayhi, *Kitāb*, II, 9, and Māzinī, *Taṣrīf*, I, 13) and did not go beyond this self-explanatory level to determine a more specific purpose for *ilhāq*.¹² The usual view among the later grammarians is that the ultimate purpose of

¹² The same may be said of Mubarrad and Ibn al-Sarrāḡ (d. 316/929), who cite a large number of appended words (*Muqtaḍab*, see 1.2 above; and *Uṣūl*, esp. the chapter on *abniya*, III, 179–222) but do not cite any particular purpose for the phenomenon itself.

this *ziyāda* is to accommodate the use of the language, particularly in rhymed prose (*sağ^c*) and poetry, with *ittisā^c* or *tawassu^c* (lit., latitude of speech). This view, which is attributed by Ibn Ğinnī to his teacher Abū ʿAlī al-Fārisī (d. 377/987) seems to have been generally, but not universally, adopted in the sources (cf. Ibn Ğinnī, *Ḥaṣāʾiṣ*, I, 358; II, 25, and *Munṣif*, I, 34, 38, 43; Ibn Yaʿīš, *Šarḥ al-Mulūkī*, 65; Astarābādī, *Šarḥ*, I, 66–67; Suyūṭī, *Ham^c*, II, 217). The problem with this interpretation, however, is twofold. Firstly, the proposed *ittisā^c* could only be achieved if the writer or poet were free to apply analogy and come up with words that may never have been heard before. Fārisī was aware of this prerequisite and tried to circumvent it by asserting that one may invent such words, on the analogy of attested examples, and thus use, in poetry, constructions like *ḍarbaba Zaydun ʿAmran, marartu bi-rağulin ḍarbabin, and ḍarbabun afdalu min ḥarğaçin*, where *ḍarbab* is used as a verb, an adjective, and a noun, respectively (Ibn Ğinnī, *Munṣif*, I, 43–44; cf. *Ḥaṣāʾiṣ*, I, 358–59).

The inadequacy of this argument is nonetheless evident to Ibn Ğinnī, who alludes to his teacher’s view, both in *Ḥaṣāʾiṣ* and *Munṣif*, as part of his discussion of Māzinī’s distinction between those appended forms that are *qiyāsī* (regular, analogically extended) and those that are *samāʿī* (unproductive, restricted to attested material). In fact, Ibn Ğinnī seems to alert the reader to the limited applicability of Fārisī’s view. He does this not only by giving an account of their discussion, during which Ibn Ğinnī asks whether it would not be tantamount to inventing speech (*a-fatartağil al-luğa irtiğālan*; *Ḥaṣāʾiṣ*, I, 359; cf. *Munṣif*, I, 44), but also by supporting Māzinī’s view that analogical extension does not apply to any of the appended forms other than those of the pattern *fa^clal*, such as *mahdad* and *ğalbab*, where the third radical is duplicated (*Munṣif*, I, 42), and thus forms like *ğawhar*, *baytar*, *ğadwal*, *ḥidyam*, *rahwak*, *artā*, *mi^czā*, *salqā*, and *ğa^cbā* (*Ḥaṣāʾiṣ*, I, 358) are restricted to *samā^c*. Moreover, the issue of the *qiyāsī* versus the *samāʿī* nature of *ilḥāq* is presented by Suyūṭī (*Ham^c*, II, 217; cf. Ibn Mālik, *Tashīl*, 299) as a subject of controversy among three parties. The first of these restricts *ilḥāq* to *samā^c*, unless the grammarians need to create words with which to train students, whereas the second party—to which Fārisī belongs—puts no restraints on analogically extending its attested examples. The third party is more selective since it resorts to the criterion of frequency of usage to determine the permissibility, or otherwise, of allowing analogical extension.

The other problem related to Fārisī’s view that *ittisā^c* is the ultimate

purpose of *ilhāq* is that, as we learn from some grammarians, the same notion of *ittisāʿ* can explain other types of *ziyāda* and, conversely, that some specimens of *ilhāq* are explicable by alternative notions used to explain other types of *ziyāda*. The first part of this problem is most clearly visible in Ibn al-Ḥāḡib's (d. 646/1249) text (in Astarābādī's *Šarḥ*, I, 65–66), where he assigns different purposes for the existence of patterns, including augmented ones, and cites *tawassuʿ* as the reason for using the *maḡṣūr* (abbreviated) and *mamdūd* (prolonged) forms (i.e., in certain doublets),¹³ as well as what he calls *dū l-ziyāda* (augmented [word]). The other part of the problem is evident in Astarābādī's explanation of Ibn al-Ḥāḡib's text, since he asserts that the notion of *ḥāḡa* (need), rather than *tawassuʿ*, is the real purpose of using the *ziyāda* of *ilhāq* as well as other kinds of *ziyāda*, such as that of the active participle, the passive participle, and the verbal noun. Astarābādī then hastens to say that it is also possible to explain the *ziyāda* of *ilhāq* by *tawassuʿ*.

It is evident from the above that the grammarians, starting with Fārisī, were trying to justify the existence of *ilhāq* by assigning a purpose to it, just like other morphological phenomena which they associated with distinctive purposes. By insisting, however, on determining this purpose more specifically than did earlier grammarians such as Sībawayhi and Māzinī, who merely stated that *ilhāq* appends certain words to others, these grammarians actually failed to appreciate why their forerunners acknowledged *ilhāq* as a distinct phenomenon, and consequently why they contented themselves, in determining its purpose, with explaining what it does, and stopped short of seeking a more specific purpose to ascribe to it.

3.2. In order to understand the significance of *ilhāq* for the earlier grammarians, and particularly with regard to the difference we have just mentioned between them and their successors, it is more appropriate to speak of the *role* that they assigned to *ilhāq* in their analysis than of the *purpose* that it serves from the angle of the speaker. In other words, the early grammarians, most notably Sībawayhi and Māzinī, treated *ilhāq* as a phenomenon in its own right and did not consider it to be part of any larger phenomenon because they realized its huge potential as a tool of morphological analysis. Theoretically speaking, they could have considered it to be a kind of *ištiqāq* whose examples are characterized by the

¹³ This refers to words that can be either *maḡṣūr* or *mamdūd*, such as *fidā* and *fidāʿ*, *zinā* and *zināʿ*, *hayḡā*, and *hayḡāʿ* (Farrāʿ, *Maḡṣūr*, 38, 42, and 43, respectively).

use of certain phonemes and/or the repetition of others, and so on (e.g., say that *ḥalakūk* is derived from the root *HLK* with the introduction of the long vowel *ū* and the repetition of *k*). Alternatively, they could have said, as some lexicographers did (see n. 6), that these examples are of the same patterns as those words to which they are appended and could thus effectively have avoided the need to speak of *ilḥāq* (e.g., *ḥalakūk* would be—regardless of the number of its radicals as explained in 2.2 above—on an equal footing with *qarabūs*, both of the pattern *fa^calūl*, and not appended to it). The fact that they chose to think of it as a distinct phenomenon, therefore, was not dictated by the nature of the corpus of words that were considered to be examples of it—unlike, for example, the three other kinds of *ziyāda* that Māzinī mentions (see 2.3 above) and that are linguistic realities that naturally represent undeniable and self-explanatory distinct phenomena. In effect the early grammarians were responding to their own interest in what they perceived as a major analytical tool. This explains why they were not concerned with what its purpose is from the point of view of the speaker. As for the later grammarians' search for a purpose for *ilḥāq* grounded in pragmatics rather than pure analysis, it is now evident that it went against the very reason why the earlier grammarians recognized *ilḥāq* as a distinct phenomenon.

The most obvious advantage that *ilḥāq* represented for the earlier grammarians is that it enabled them to reduce considerably the number of what we can describe as *major* morphological patterns that they had to acknowledge within a closed system. A quick look at the list of words that are said, in any grammatical work that includes them, to be appended to the word that represents such a pattern readily reveals the extent of this reduction. In the case of the major pattern *fa^clal*, for example, Ibn al-Sarrāḡ (*Uṣūl*, III, 182) gives *ḡa^cfar* and *salḥab* as the noun and adjective that represent it and to which other words are appended. These words, the supposed radicals of whose roots are considered to be reducible to less than the four radicals of *ḡa^cfar* and *salḥab* (see 2.2 above), are: *ḥawqal* (*fa^cal*), *zaynab* (*fa^cal*), *ḡadwal* (*fa^cwal*), *mahdad* (*fa^clal*), *alqā* (*fa^clā*), *ra^cšan* (*fa^clan*), *sanbata* (*fa^clat* or *fan^cal*),¹⁴ and

¹⁴ The final *tā³* of the word *sanbata(tun)*, of course, should not count in the proposed pattern, otherwise its inclusion under *fa^clal* by Ibn al-Sarrāḡ would be inexplicable. He most probably included it under *fa^clal* because *sanbat* is its variant (Sībawayhi, *Kitāb*, II, 348; cf. 327; Ibn al-Dahhān, *Šarḥ*, 101; Astarābādī, *Šarḥ*, II, 340). *Fa^clat* is more likely to be intended by Ibn al-Sarrāḡ than *fa^clan* (see Suyūfī, *Muzhir*, II, 15, for both possibilities) because the word after it, *ansal*, represents *fan^cal*, and Ibn al-Sarrāḡ systematically gives one

^c*ansal* (*fan^cal*). The eight different patterns which these eight words represent were thus grouped together under one major phonological pattern, *fa^clal*, since all of them conform to its *wazn* (metric measure), that is, its pattern of *ḥarakāt* and *sakanāt* (see 2.4 above). Similarly, hundreds of words are then cited by Ibn al-Sarrāḡ and grouped in such major patterns (ibid., III, 181–222).¹⁵ Further reduction in the number of patterns is achieved by the grammarians' acknowledgement of the possibility of appending trilaterals to quadrilaterals that are, themselves, appended to quinqueliterals (*Kitāb*, II, 341)—such as ^c*afanḡaḡ* (root ^c*FĠ*) which is appended to *ḡaḥanfal* (root *ĠHFL*), itself appended to *safarḡal* (root *SFRĠL*)—and of deriving appended words from other appended words (Astarābādī, *Šārḥ*, I, 55)—as *tašayṭana*, which is appended to *tadaḥraḡa* and is derived from *šayṭana*, itself appended to *daḥraḡa*. Understandably, the grammarians halted the process of reduction with words that are augmented quinqueliterals, such as *qaba^ctarā*, simply because they did not find a six-radical pattern to which they could append them, and so there was no possibility of grouping words under major patterns (cf. Sibawayhi, *Kitāb*, II, 9; Fārisī, *Baḡdādiyyāt*, 122, 434; Ibn Ğinnī, *Munšif*, I, 51, and *Ḥašā^cis*, I, 319–20; Ibn ^cUṣṫūr, *Mumti^c*, I, 206).

The grouping of appended words into major patterns gave the grammarians another considerable analytical advantage, namely, that they were able to draw up rules that are applicable not only to the words that represent the pattern and are not themselves appended to other words—e.g., *ḡa^cfar* and *salḥab* of the major pattern *fa^clal* mentioned in the previous paragraph—but also to all the words whose patterns are appended to *fa^clal*—e.g., *ḥawqal*, ^c*awsaḡ*, *zawraq*, *hawdaḡ*, etc., which are of the pattern *faw^cal*, and *zaynab*, *ḡaylam*, *šayraf*, *ḡayḡam*, etc., which are of the pattern *fay^cal*, and so on. Such rules are abundant in the sources, as

example for each pattern.

¹⁵ This grouping process which drastically reduces the number of “major” patterns is paralleled by the mostly Basran method of expressing augmented patterns, in most cases, by using only the letters *f*, ^c, and *l*, in contrast with one Kufan method which allows the repetition of the same augments in the proposed pattern. Thus, *safarḡal* and *šamardal* are both represented as *fa^callal* according to the first method, but as *fa^calḡal* and *fa^caldal*, respectively, according to the second. Obviously, the first method avoids generating an exceedingly large number of patterns and readily reveals the words that belong to the same pattern. See Suyūṫī, *Ham^c*, II, 213, for the differences among grammarians in expressing patterns; cf. Fārisī, *Baḡdādiyyāt*, 529–31, and Astarābādī, *Šārḥ*, I, 10–21.

early as Sibawayhi's *Kitāb*. For example, Sibawayhi formulates a universal rule to the effect that all trilaterals that were augmented to become quadrilaterals and were appended to genuine quadrilaterals have, like these quadrilaterals, broken plurals of the pattern *mafā'il*, such as *ḡadwal*, *ʿityar*, *kawkab*, *tawlab*, *sullam*, *dummal*, *ḡundab*, and *qardad*, whose plurals are *ḡadāwil*, *ʿatāyir*, *kawākib*, *tawālib*, *salālim*, *damāmil*, *ḡanādib*, and *qarādid*, respectively (II, 197, and Fārisī, *Taʿlīqā*, IV, 95; see other examples in ʿUḡayma's *Fahāris*, 364–72). The ultimate application of such rules may be seen in the pattern lists that some sources have (e.g., Ibn al-Sarrāḡ, *Uṣūl*, III, 181f., and Suyūṭī, *Muzhir*, II, 6f.). In such lists, the grammarians group together appended words with the words that they are appended to and present each group as a homogeneous category that shares several morphological traits applicable to all its constituents, irrespective of whether they are appended words or not.

3.3. The grammarians' use of *ilhāq* as an analytical tool shows that they also employed it to achieve one of their principal goals—to limit deviations from the norm (*qiyās*) and maximize the applicability of grammatical rules.¹⁶ The necessary condition for this purpose to be achieved, in the case of *ilhāq*, is the existence of a closed and well-defined system that would unmistakably identify appended words and patterns and describe the rules to which they are subject. Once this is accomplished, words that do not conform to these rules can be easily disqualified from inclusion in the closed system.

The mere fact that *ilhāq* involves the condensation of several patterns into one major pattern (see 3.2 above) goes a long way towards reducing the examples to a more manageable number. Moreover, a sizeable portion of the corpus of appended words represents extremely rare usages which, after being appended to major patterns, become effectively part of the norm of their own class and, consequently, cease to stand out as extremely rare or solitary examples, as they indeed were prior to the classification process of *ilhāq*. One such example is *hammariš* (adjective for a very old and wrinkled woman; e.g., *ʿaḡūz hammariš*), which repre-

¹⁶ For a study of this principle and its effect on the pedagogical attainability of grammatical rules, see Baalbaki (forthcoming). It should be mentioned here that since our primary sources on *ilhāq* are almost exclusively Basran, we cannot say for certain whether there was a partisan divide on the issue or not, but the methods which the Basrans use in this case largely reflect their general interest in interpreting data in a way that would restrict the existence of deviations.

sents a pattern *fa^calil*¹⁷ described by Sībawayhi as *qalīl* (*Kitāb*, II, 339) and which may be the only quadriliteral example of this pattern (Ibn Manẓūr, *Lisān*, *HMRŠ*). Once this pattern is appended to a quinqueliteral word, such as *qahbalis*, *ğahmariš*, and *şahşaliq* (*Kitāb*, II, 341, 354; Suyūṭī, *Muzhir*, II, 35), it becomes part of a larger entity and is no more regarded as anomalous. The same can be said of other examples usually cited as appended words, such as *naḥwariš*, *bulahniya*, *firindād*, *ḥayzalā*, *ilwadd*, and others.

Other techniques the grammarians employed in matters related to *ilhāq* should also be seen in the light of their effort to limit deviation from the norm. Sībawayhi's treatment of *qīqā^o* and *zīzā^o* involves one such technique. Now these two words belong to the category of *ism* (noun), as opposed to *maşdar* (verbal noun), and so the word to which they are to be appended should also be an *ism*, in line with the regular distinction Sībawayhi—and the later grammarians—drew between *ism* and *maşdar* in their study of *ilhāq*. The anomaly in the case of *zīzā^o* and *qīqā^o*, however, is that the pattern to which they should be appended—the reduplicated biliteral of *fi^clāl*, i.e., **fi^cfā^c*, such as *qilqāl*—is used exclusively with *maşdars* (Sībawayhi, *Kitāb*, II, 386; Māzinī, *Taşrīf*, II, 180; Ibn ʿUşfūr, *Mumti^c*, I, 151). To avoid this anomaly, which would affect the applicability of the distinction between *ism* and *maşdar*, Sībawayhi appends these two words to the nearest hamzated and unduplicated *fi^clāl* pattern (i.e., *fi^clā^o*) that does occur with *isms*, and chooses *ilbā^o* to illustrate it. Another technique that ensures the widest possible application of *qiyās* is the analogical extension of the rule (*tard al-ḥukm*; see Astarābādī, *Šārḥ*, II, 63) as applied to words whose derivation is not known. Thus, the *yā^o* of the appended word *ğay^oal*, according to Ibn Ǧinnī (*Munşif*, I, 35), can only be an augment in spite of the fact that the derivation of the word is unknown, because it can be demonstrated by examining other words that *yā^o* or *wāw* can be one of the radicals (i.e., as opposed to augments) of quadrilaterals only in reduplicated forms.¹⁸ Similarly, Astarābādī extends the rule through which the recurring con-

¹⁷ In addition to this pattern, Sībawayhi refers to *hammariš* in two other places as being of the pattern *fa^clalil* (II, 341) and *fan^calil* (II, 354). Cf. *Lisān*, *HMRŠ*, where Ibn Manẓūr attributes to Sībawayhi the proposal of two of these three patterns on two different occasions. See also Ibn ʿUşfūr, *Mumti^c*, I, 269, and Suyūṭī, *Muzhir*, II, 29.

¹⁸ As in the nouns *wazwaza* and *waḥwaḥa* (*Taşrīf*, II, 216; III, 86), and *ya^cya^ca* and *yahyaha* (Ibn Durayd, *Ĝamhara*, I, 216, 225).

sonant is known to be an augment in a large number (*kaṭīr*) of words whose derivation is known—such as the appended words *ḍurahriḥ*, *ḥiliblāb*, and *marmarīs*, which he relates to their cognate trilateral roots—to those words whose derivation is not known—such as *ṣamahmaḥ* and *barahraha*—and clearly says that he does so by way of analogy so that the rule might be applicable to all attested examples (*fa-ṭaradnā l-ḥukm fī l-kull*; see *Šārḥ*, I, 63). As a result, the rule's applicability is made to be universal rather than partial, and deviant examples become subject to the same rule that applies to the majority of the words of this type.

Turning to the identification of those words that do not qualify for inclusion in the closed system of appended material, it is clear that the grammarians not only strove to specify the characteristics of appended words so as to establish decisive criteria for the inclusion of material, but also dwelt on providing reasons for not including words that do not fit these criteria. As we saw earlier, particularly in 2.1–2.4, the grammarians specified the phonemes that may be used for *ilhāq* and their positions within appended words, the number of radicals in these words as well as in the words to which they are appended, the major patterns into which they may be grouped, the nature of the relationship between the *ziyāda* of *ilhāq* and that of meaning, the formal (*lafẓī*) rules that apply to the derivations of these words, and the suspension of the rule of *idgām*, where otherwise required, to them. Consequently, it may be said that any word that is at variance with any of these criteria cannot be part of the *ilhāq* corpus. The following examples will demonstrate how non-appended words are identified by the application of these criteria and shed further light on the grammarians' use of *ilhāq* as a morphological testing device.

a. The position of the augment. Several rules are mentioned under this criterion (Astarābādī, *Šārḥ*, I, 56–57 and Suyūṭī, *Ham*^c, II, 216–17). The *hamza*, for example, may be used for *ilhāq* in medial and final positions, but in an initial position it cannot be an appending (*mulḥiqa*) augment unless it occurs together with another augment, referred to as *musā'id* (aid).¹⁹ Thus, whereas ^ʔ*alandad* and ^ʔ*idrawn* are considered to be appended to *safarḡal* and *ḡirdaḥl*, respectively, because their initial *hamza* is accompanied by a *nūn* or a *wāw*, ^ʔ*afkal*, ^ʔ*ublum*, and ^ʔ*itmid*, whose initial *hamza* is the only augment, do not qualify as examples of *ilhāq*.

¹⁹ Astarābādī (II, 56), however, states that he finds no good reason why an initial *hamza* may not by itself, without a *musā'id*, be considered *mulḥiqa*.

b. The number of radicals. As was pointed out in 2.2 and 3.2 above, words were excluded from *ilhāq* on the basis of the number of their radicals. The most obvious case here is that of augmented five-radical words, such as *ʿaḍrafūt*, *ʿandalīb*, *qabaʿtarā*, and *ḍabaḡtarā*.²⁰ Since there are no target words, i.e., six-radical words excluding any augment, to which these examples may be appended, the grammarians had to exclude them from the *ilhāq* corpus and look elsewhere for possible interpretations. Hence, their explanation of the final *alif* in *qabaʿtarā*—which they were also unable to explain as a feminine ending, since the word accepts nūnation and since the variant form *qabaʿtarāt* does include the feminine ending (Sībawayhi, *Kitāb*, II, 9, 78, 342)—as an augment of enlargement (*taktīr al-kalima*) may be viewed as one way out of a difficult problem that arose because of the limitations of *ilhāq* (cf. Māzinī, *Taṣrīf*, I, 51, and Ibn ʿUṣfūr, *Mumtīʿ*, I, 206).

c. The “target” pattern. In addition to the lack of a target pattern to which augmented quinqueliterals may be appended (see “b” above), several other words, and even whole patterns, were not considered to be appended because of the lack of a target word or pattern to which they can be appended. For instance, Sībawayhi (*Kitāb*, I, 401–402) says that *iḥmarartu* and *iṣhābibtu*, both of trilateral roots, are not examples of *ilhāq* because there is no quadrilateral of the type **iḥraḡamtu* or **iḥrāḡamtu*, respectively, to which they can be appended. Māzinī (*Taṣrīf*, II, 269) passes a similar judgment on *iḡdawdana* for lack of the type **iḥrawḡama*, as does Mubarrad (*Muqtaḍab*, IV, 3) with words like *ʿaḡūz*, *raḡīf*, and *risāla*, which have no quadrilateral counterparts to which they can be appended. At times a whole pattern is said not to be intended for *ilhāq*, as in the case of *faʿlāʿ*, for which there is no corresponding unhamzated pattern—i.e., a quadrilateral such as **sardāḥ* or **sarbāl*—to which it can be appended, and hence its two final *aliḡs* (i.e., *ā* and *ʿ*) are, according to Sībawayhi (*Kitāb*, II, 10) and Fārisī (*Taʿlīq*, III, 38), used exclusively as a feminine ending.

d. The structure of the pattern. Contrary to “c” above, the target pattern may be available, but the structure of the words that can theoretically be appended to it prevent the process of *ilhāq*. This may be illustrated by the pattern *faʿlāl*, which theoretically is a target pattern to which trilaterals may be appended, but no trilateral was appended to it

²⁰ Cf. n. 7 above. The word *ḥandaqūq* is usually mentioned with this group as well, but we did not include it because it is, as Ibn Ğinnī rightly notes (*Munṣiḡ*, I, 53), of a quadrilateral origin, since its *qāf* occurs twice.

because its examples are restricted to reduplicated biliterals (hence **fa^cfā^c*), be they nouns (*asmā^ʿ*), such as *zalzāl* and *ḡatḡāt*, or adjectives (*ṣifāt*), such as *ḥaḥḥāt* and *ḥaḥḥāq* (Sībawayhi, *Kitāb*, II, 338). The reason for this is that the structure of trilaterals prevents the formation of reduplicated words, since this would theoretically require a nonexistent six-radical pattern. In comparison, the two sister patterns *fī^clāl* and *fu^clāl* were actually used as target patterns because their examples have four radicals that are not duplicated, such as *qinṭār* and *qurṭās*, and therefore words of trilateral origin like *ḡilwāḥ* and *qurṭāt*, respectively, lent themselves to be appended to them.

e. Meaning, derivatives and idḡām. The discussion of these three criteria in 2.3 and 2.4 above included several examples of words and patterns that were considered, in each case, to be outside the sphere of *ilhāq* because they do not conform to the criterion at hand.

4.1. As several examples cited above have shown, the various rules and details related to *ilhāq* were used by the grammarians as a testing device for a host of morphological issues. So widespread was the practice that one may conclude that it represented for them a major objective, in addition to the principal objective of reducing the patterns within the closed system of appended words. Three of the most essential morphological premises they used *ilhāq* as a testing device to check the validity of will be briefly discussed below.

a. The distinction between radicals according to aṣl and ziyāda. Appended words are used to confirm this distinction through the process of derivation and the realization of a common meaning they share with the roots. Sībawayhi (*Kitāb*, II, 116), for example, argues that *ʿafarnā* (strong lion), because of its affinity to *ʿifr* and *ʿifrāt* (both also mean “strong lion”), is an appended word because of the *ziyāda* of its *n* and *ā*, and he shows how this *ziyāda*—as well as that in *ʿufāriya*, which likewise means “strong lion”—is reflected in various aspects of their morphology. This is further tested by the four diminutive forms *ʿufayrin*, *ʿufayrina*, *ʿufayr*, and *ʿufayriya*, the first two of which prove that the *ā* of *ʿafarnā* is *zāʿida*, whereas the other two prove that its *nūn* is *zāʿida*. In this particular case, appended words are used to check the validity of the morphological rules that govern the diminutive and that are largely based on the distinction between what is *aṣl* and what is *ziyāda* in the words from which diminutives are formed.

b. The assignment of the position of the ziyāda. Since appended words mirror the phonological construction of the words that they are appended

to, including the positions of what is *ʾaṣl* and what is *ziyāda*, they were used by the grammarians to check the correctness of the roots that they assign for augmented words. An example of this are the two words *iḥranḡama* and *iḥranṭama*, said by the grammarians to be quadrilaterals (*banāt al-arbaʿa*) because they interpret the *nūn* as an augment (cf. Māzinī, *Ṭaṣrīf*, I, 86). This interpretation is supported by the comparison some grammarians make (ibid., I, 86–89, and Ibn Ğinnī’s commentary) between these words and appended words such as *iqʿansasa* and *islanqā*, the *mawḏiʿ* (position) of whose augmented *nūn* is determined to be between the *ʿayn* and the *lām*, i.e., the second and third original radicals of the roots *QʿS* and *SLQ*, respectively. It may thus be said that the two types of words reciprocally support the grammarians’ interpretation of each of them.

c. The identification of inadmissible patterns. The problem of identifying what is permissible and what is not seems to have occupied the earlier grammarians and lexicographers, probably as part of their effort to uncover the rules that determine the structure of Arabic words and consequently to be able to recognize as Arabicized or invented any word that is inconsistent with these rules.²¹ In this respect, the grammarians proposed several unattested patterns of *ilḥāq* which violate accepted structures in order to show that their impermissibility is due to the impermissibility of their counterparts to which they would have theoretically been appended. Ibn Ğinnī’s (*Munṣif*, I, 88–89) masterly discussion of why patterns of the types **ifʿanwaltu*, **ifʿanlaytu*, **infanʿaltu*, **īfanʿaltu* do not occur reveals that these were proposed to demonstrate their incompatibility with the attested pattern *ifʿanlaltu*, as in *iḥranḡamtu*, to which augmented quadrilaterals are usually appended (Suyūṭī, *Muzhir*, II, 41). Furthermore, the grammarians’ discussion of the criteria that disqualify words from being considered as examples of *ilḥāq* (see 3.3 above) shows how they repeatedly use them to check the validity of the rules that determine the permissibility or otherwise of target words and patterns to which other words and patterns may be appended.

The use of *ilḥāq* as a testing device nowhere finds its ultimate applica-

²¹ The earliest attempt of this kind is probably Ḥalīl’s introduction to *Kitāb al-ʿAyn*, written in the second half of the second century A.H. In it, he discusses some of the phonetic characteristics and phonotactics of Arabic words (I, 52–55) and specifically cites examples whose phonetic structure betray their foreign origin (e.g., *duʿšūqa* and *ḡulāhiq*) or their invention by skillful scholars (*naḥārīr*; e.g., *kašaʿtaḡ* and *ḥaḏaʿtaḡ*). See also Baalbaki 1998, 52–53, Sara 1991, 36–38, and Talmon 1997, 137–38.

tion better than in what is known as *masā'il al-tamrīn* (drill problems or exercises). Such drills are not only intended as pedagogical devices to train students and examine their grasp of the concepts involved. More essentially they test the applicability of these concepts through increasingly difficult questions, the answers to which should be in compliance with the theoretically permissible structures of Arabic words and patterns.²² Indeed, Ibn Ğinnī, in his justification of Māzinī's lengthy chapter dealing primarily with *ilhāq* material and entitled "Analogically formed unsound words the only patterns of which are used in sound words" (*hādā bāb mā qīsa min al-mu^ctall wa-lam yaġi³ mitāluhu illā min al-ṣaḥīḥ; Taṣrīf, II, 242–323*), says that the reason for the invention of this "science" (*'ilm*) is to use attested material as the basis for analogically constructing unattested material. By so doing, the grammarians could confirm the soundness of the morphological postulates that they used to explain attested usage. In Māzinī's chapter, for example, the rules governing the use of *wāw* and *yā³*, known as *i^clāl*, are thoroughly checked by arbitrary formulations such as **ibyayya^ca*, **uqwūwila*, **iw³aw³ā*, **īwīwā³*, and *ġazwawūt* (II, 243, 245, 247, 251, 257, respectively). The fact that each of the questions which usually begin with the stereotype expression "Construe (*ibnī*) x from y" should have one correct answer shows how the sum of rules that the grammarians deduced from usage worked together to yield attested words as well as theoretically usable words. Among the rules these drills seem to test in relation to *wāw* and *yā³* are the effect of vowels on them, the shift from one of them to the other, their compatibility and incompatibility, and principles related to gemination, omission, and their relation with *hamza*.

4.2. On a wider scale, the grammarians were keen to incorporate *ilhāq* into their overall system of grammatical analysis and to demonstrate its pertinence to it beyond the morphological level. It is for this purpose that they try to show how some of their assumptions and general principles of analysis are harmonious with their approach to *ilhāq*. An example of this is the principle that if a word is characterized by *tiqal* (heaviness), the

²² These drills are comparable to the grammarians' practice of converting complex sentences into relative structures. The aim of this process, known as *iḥbār* (predication), as Carter (1981, 353) correctly argues, "may well have been to transform all utterances into propositions in order to test their truthfulness," but it "finished up as a mere pedagogical device." Likewise in the case of our drills, their pedagogical purpose has eventually gained supremacy over their use as a device for testing morphological rules.

Arabs avoid the addition to it of another element that aggravates its *tiqal*, or introduce into it an element of *hiffa* (lightness) to counterbalance its *tiqal*. This very principle, which is especially familiar in *naḥw*—e.g., as in its application to justify the lack of *tanwīn* in diptotes (cf. Sībawayhi, *Kitāb*, I, 7), and the use *ḍamma*, due to its *tiqal* (heaviness), with the agent and the *fatha*, due to its *hiffa* (lightness), with the direct object, since a verb can have only one agent but may have more than one direct object (cf. Ibn al-Anbārī, *Asrār*, 78, and Baalbaki 1995, 87–88)—is carried over to the domain of *ilhāq*. Thus, Ibn Ğinnī (*Munṣif*, I, 51) argues that quinqueliterals were only augmented with one element (here, a long vowel) and not two elements since this would bring together two kinds of *tiqal*, that of the word's structure and that of two augments. He then proceeds to show how this fact has direct bearing on *ilhāq* because it limits the number of radicals that a target word can have. Astarābādī (*Šarḥ*, I, 64), on the other hand, invokes the principle of counterbalancing *tiqal* with *hiffa* to show that since it was not applied to the likes of *mahdad* and *alandad*—i.e., the *tiqal* of the augmented structures was not counterbalanced with the *hiffa* that gemination would have brought about—such words must have been intentionally deprived of gemination because they were meant to be appended words. Although this case is about the inapplicability of a particular principle to one kind of *ilhāq* because of a compelling reason, the mere fact that it warranted such a justification is extremely important, since it demonstrates the expectation that *ilhāq* not be at odds with other constituents of the grammatical system.

This expectation most probably owes its origin to the awareness of the grammarians that since they chose to treat *ilhāq* as a distinct phenomenon to facilitate morphological analysis, although this was not dictated by the nature of the linguistic data (see 3.2 above), they had to defend its use and thus justify their choice. Obviously the most efficient way to do this was to demonstrate that *ilhāq* is well accommodated to the general system and harmonious with some of its major principles, such as *hiffa* and *tiqal*, *samā'*, and *qiyās* (cf. Māzinī, *Taṣrīf*, I, 41; Ibn Ğinnī, *Ḥaṣā'is*, I, 114), rejection of anomalous (*šādḍ*) data (cf. Astarābādī, *Šarḥ*, I, 69), resemblance to unattested material²³ (Ibn Ğinnī, *Ḥaṣā'is*, II, 343), and

²³ *Surdad* and *sūdad*, according to Ibn Ğinnī, are appended to words that do not feature in actual usage but have the force of what is uttered (*fī ḥukm al-malfūz*). This is similar to the claim of the grammarians that some nouns, such as the interrogative particle *mā*, resemble supposed, non-existent particles that

the like, and that it operates according to well-defined rules that exhibit a logical relation among appended patterns (cf. *Kitāb*, II, 401, where Sibawayhi establishes the following correspondence: *fa^call: fa^clal = fu^cull: fu^clul = fi^cill: fi^clil*; and Ibn Ğinnī, *Munşif*, I, 47, where the relation between quinqueliterals and quadrilaterals is said to be the same as that between quadrilaterals and trilaterals). Ultimately, perhaps, the grammarians wanted to demonstrate that *ilḥāq* is yet another proof of the underlying logic of language and to stress that it is the grammarian's task is to discover the various ways in which this logic expresses itself.

REFERENCES

A. Primary sources

- Astarābādī, *Šarḥ* = Rađī l-Dīn Muḥammad b. Ḥasan al-Astarābādī, *Šarḥ Šāfiyat Ibn al-Ḥāğib*. Ed. Muḥammad Nūr al-Ḥasan et al. 4 vols. Cairo, n.d.
- Fārisī, *Bağdādiyyāt* = Abū °Alī al-Ḥasan b. Aḥmad al-Fārisī, *al-Masā'il al-mušmila l-ma^crūfa bi-l-Bağdādiyyāt*. Ed. Şalāḥ al-Dīn °Abd Allāh al-Sinkāwī. Baghdad: Maṭba^cat al-°Ānī, 1983.
- , *Ta^cliqa* = Abū °Alī al-Ḥasan b. Aḥmad al-Fārisī, *al-Ta^cliqa °alā Kitāb Sibawayhi*. Ed. °Awađ b. Ḥamad al-Qūzī. 6 vols. Cairo: Maṭba^cat al-Amāna, 1990–96.
- Farrā°, *Maqşūr* = Abū Zakariyyā° Yaḥyā b. Ziyād al-Farrā°, *al-Maqşūr wa-l-mamdūd*. Ed. Māğid al-Ḍahabī, 2d ed. Beirut: Mu^oassasat al-Risāla, 1988.
- Ĝawālīqī, *Mu^carrab* = Abū Mañşūr Mawhūb b. Aḥmad b. Muḥammad al-Ĝawālīqī, *al-Mu^carrab min al-kalām al-a^cğamī °alā ḥurūf al-mu^cğam*. Ed. Aḥmad Muḥammad Şākir. Cairo: Dār al-Kutub al-Mişriyya, 1361 A.H.
- Ḥafāğī, *Şifā°* = Şihāb al-Dīn Aḥmad b. Muḥammad al-Ḥafāğī, *Şifā° al-ğalīl fi-mā fi kalām al-°arab min al-daḥīl*. Ed. Muḥammad Kaşşāş. Beirut: Dār al-Kutub al-°Ilmiyya, 1998.
- Ḥalīl, °Ayn = Abū °Abd al-Raḥmān al-Ḥalīl b. Aḥmad al-Farāḥidī, *Kitāb al-°ayn*. Ed. Mahdī al-Maḥzūmī and Ibrāhīm al-Sāmarrā°ī. 8 vols. Baghdad: Dār al-Rašīd, 1980–85.
- Ibn al-Anbārī, *Asrār* = Abū l-Barakāt °Abd al-Raḥmān b. Muḥammad al-

could be expected to have been coined but were not. Cf. Ibn °Aqīl, *Šarḥ*, 32–33; Ibn Hişām, *Awđah*, I, 31; Baalbaki 1995, 87.

- Anbārī, *Asrār al-ʿarabiyya*. Ed. Muḥammad Bahğat al-Biṭār. Damascus: Maṭbaʿat al-Taraqī, 1957.
- Ibn ʿAqīl, *Šarḥ* = Bahāʾ al-Dīn ʿAbd Allāh Ibn ʿAqīl, *Šarḥ Ibn ʿAqīl ʿalā Alfīyyat Ibn Mālik*. Ed. Ramzī Munīr Baʿalbakī. Beirut: Dār al-ʿIlm lil-Malāyīn, 1992.
- Ibn al-Dahhān, *Šarḥ* = Abū Muḥammad Saʿīd b. al-Mubārak b. ʿAlī Ibn al-Dahhān, *Šarḥ Abniyat Sibawayhi*. Ed. Ḥasan Šādīlī Farhūd. Riyad: Dār al-ʿUlūm, 1987.
- Ibn Durayd, *Ğamhara* = Abū Bakr Muḥammad b. al-Ḥasan Ibn Durayd, *Ğamhrat al-luġa*. Ed. Ramzī Munīr Baʿalbakī. 3 vols. Beirut: Dār al-ʿIlm lil-Malāyīn, 1987–88.
- Ibn Ğinnī, *Ḥašāʾiṣ* = Abū l-Faṭḥ ʿUṭmān Ibn Ğinnī, *al-Ḥašāʾiṣ*. Ed. Muḥammad ʿAlī al-Nağğār. 3 vols. Cairo: Dār al-Kutub al-Miṣriyya, 1952–56.
- , *Munšif* = Abū l-Faṭḥ ʿUṭmān Ibn Ğinnī, *al-Munšif: Šarḥ Kitāb al-taṣrīf lil-Māzinī*. Ed. Ibrāhīm Muṣṭafā and ʿAbd Allāh Amīn. 3 vols. Cairo: Muṣṭafā al-Bābī al-Ḥalabī, 1954–60.
- , *Sirr* = Abū l-Faṭḥ ʿUṭmān Ibn Ğinnī, *Sirr šināʿat al-iʿrāb*. Ed. Ḥasan Hindāwī. 2 vols. Damascus: Dār al-Qalam, 1985.
- , *Taṣrīf* = Abū l-Faṭḥ ʿUṭmān Ibn Ğinnī, *al-Taṣrīf al-mulūkī*. Ed. Désiré Saqqāl. Beirut: Dār al-Fikr al-ʿArabī, 1998.
- Ibn al-Ḥāğīb, *Šāfiya* = Astarābādī, *Šarḥ*.
- Ibn Hišām, *Awḍaḥ* = Ğamāl al-Dīn Abū Muḥammad ʿAbd Allāh b. Yūsuf Ibn Hišām, *Awḍaḥ al-masālik ilā Alfīyyat Ibn Mālik*. Ed. Muḥammad Muḥyī l-Dīn ʿAbd al-Ḥamīd. 4 vols. Cairo: al-Maktaba al-Tiğāriyya, 1956.
- Ibn Kamāl Pasha, *Risāla* = Aḥmad b. Sulaymān Ibn Kamāl Pasha, *Risāla fī taḥqīq taʿrīb al-kalima al-aġamiyya*. Ed. Muḥammad Sawāʿī. Damascus: Institut Français de Damas, 1991.
- Ibn Mālik, *Tashīl* = Ğamāl al-Dīn Abū ʿAbd Allāh Muḥammad b. ʿAbd Allāh Ibn Mālik, *Tashīl al-fawāʾid wa-takmīl al-maqāšid*. Ed. Muḥammad Kāmil Barakāt. Cairo: Dār al-Kātib al-ʿArabī, 1967.
- Ibn Manzūr, *Lisān* = Ğamāl al-Dīn Abū l-Faḍl Muḥammad b. Mukram Ibn Manzūr, *Lisān al-ʿarab*. 20 vols. Būlāq, 1300–1307 A.H.
- Ibn al-Sarrāğ, *Uṣūl* = Abū Bakr Muḥammad b. Sahl Ibn al-Sarrāğ, *al-Uṣūl fī l-naḥw*. Ed. ʿAbd al-Ḥusayn al-Fatalī. 3 vols. Beirut: Muʿassasat al-Risāla, 1985.
- Ibn ʿUṣfūr, *Mumtiʿ* = Abū l-Ḥasan ʿAlī b. Muʾmin Ibn ʿUṣfūr al-Išbīlī, *al-Mumtiʿ fī l-taṣrīf*. Ed. Faḥr al-Dīn Qabāwa. 4th ed. 2 vols. Beirut: Dār al-Āfāq al-Ğadīda, 1979.

- Ibn Ya^ciš, *Šarḥ al-Mufaṣṣal* = Muwaffaq al-Dīn Ya^ciš b. ^cAlī Ibn Ya^ciš, *Šarḥ al-Mufaṣṣal*. 10 vols. Cairo: al-Maṭba^ca al-Muniriyya, n.d.
- , *Sarḥ al-Mulūkī* = Muwaffaq al-Dīn Ya^ciš b. ^cAlī Ibn Ya^ciš, *Šarḥ al-Mulūkī fī l-taṣrīf*. Ed. Faḥr al-Dīn Qabāwa. Aleppo: al-Maktaba al-^cArabiyya, 1973.
- Māzinī, *Taṣrīf* = Ibn Ğinnī, *Munṣif*.
- Mubarrad, *Muqtaḍab* = Abū l-^cAbbās Muḥammad b. Yazīd al-Mubarrad, *al-Muqtaḍab*. Ed. Muḥammad ^cAbd al-Ḥāliq ^cUḍayma. 4 vols. Cairo: Dār al-Taḥrīr, 1965–68.
- Sibawayhi, *Kitāb* = Abū Bišr ^cAmr b. ^cUṭmān Sibawayhi, *al-Kitāb*. 2 vols. Būlāq, 1316–17 A.H.
- Suyūṭī, *Ašbāh* = Ğalāl al-Dīn Abū l-Faḍl ^cAbd al-Raḥmān b. Abī Bakr al-Suyūṭī, *al-Ašbāh wa-l-naẓā'ir fī l-naḥw*. 4 vols. Hyderabad: Maṭba^cat Dā'irat al-Ma^cārif al-^cUṭmāniyya, 1359–60 A.H.
- , *Ham^c* = Ğalāl al-Dīn Abū l-Faḍl ^cAbd al-Raḥmān b. Abī Bakr al-Suyūṭī, *Ham^c al-hawāmi^c: Šarḥ Ğam^c al-ğawāmi^c fī ^cilm al-^carabiyya*. 2 vols. Cairo: Maṭba^cat al-Sa^cāda, 1327 A.H.
- , *Muzḥir* = Ğalāl al-Dīn Abū l-Faḍl ^cAbd al-Raḥmān b. Abī Bakr al-Suyūṭī, *al-Muzḥir fī ^culūm al-luġa wa-anwā'ihā*. Ed. Muḥammad Aḥmad Ğād al-Mawlā et al. 2 vols. Cairo: Dār Iḥyā^o al-Kitāb al-^cArabī, n.d.
- Zamaḥṣarī, *Mufaṣṣal* = Abū l-Qāsim Maḥmūd b. ^cUmar al-Zamaḥṣarī, *al-Mufaṣṣal fī ^cilm al-^carabiyya*. Cairo, 1323 A.H.
- Zubaydī, *Amṭila* = Abū Bakr Muḥammad b. al-Ḥasan al-Zubaydī, *Amṭilat al-abniya fī Kitāb Sibawayhi*. Ed. Muḥammad Ḥalīfa al-Danā^c. Beirut: Dār al-Naḥḍa al-^cArabiyya, 1996.

B. Secondary sources

- Baalbaki, Ramzi. 1995. Teaching Arabic at University Level: Problems of Grammatical Tradition. In *Proceedings of the Colloquium on Arabic Linguistics, Bucharest, August 29 – Sept. 2, 1994*, ed. Nadia Angheliescu and Andrei A. Avram, pt. 1, 85–101. Bucharest: University of Bucharest.
- . 1998. *Kitāb al-^cAyn* and *Jamharat al-Luġa*. In *Early Medieval Arabic: Studies on al-Khalīl Ibn Aḥmad*, ed. Karin C. Ryding, 44–62. Washington, D.C.: Georgetown University Press.
- . Theoretical Coherency versus Pedagogical Attainability: The Conscious Bias of Arab Grammarians. Forthcoming in a *festschrift* for Heinz Grotzfeld.

- Bohas, Georges and Jean-Patrick Guillaume. 1984. *Etude des théories des grammairiens arabes. I. Morphologie et phonologie*. Damascus: Institut Français de Damas.
- Carter, Michael, G. 1973. An Arab Grammarian of the Eighth Century A.D. *JAOS* 93: 146–57.
- . 1981. The Use of Proper Names as a Testing Device in Sībawayhi's *Kitāb*. *HL* 8, no. 2/3: 345–56.
- Ḥadīṭī, Ḥadīġa. 1965. *Abniyat al-ṣarf fī Kitāb Sībawayhi*. Baghdad: Maktabat al-Nahḍa.
- Sara, Solomon I. 1991. Al-Khalīl: The First Arab Phonologist. *IJIAS* 8, no. 1: 1–57.
- Talmon, Rafael. 1997. *Arabic Grammar in its Formative Age: Kitāb al-ʿAyn and Its Attribution to Ḥalīl b. Aḥmad*. Leiden : E. J. Brill.
- ʿUḍayma, Muḥammad ʿAbd al-Ḥāliq. 1975. *Fahāris Kitāb Sībawayhi*. Cairo: Dār al-Ḥadīṭ.