The historical reality of the plural of paucity and the plural diminutive in Classical Arabic

Evidence from *kalām al-ʿarab* (Part Two)

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This study investigates the semantics of the plural of paucity and the plural diminutive, based on their attestations in the non-literary source of Classical Arabic traditionally known as *kalām al-ʿarab*. In noun plural marking, the meaning of the diminutive is as elusive as that of the plural of paucity. What is known of both kinds of meanings is mainly derived from the indirect description of early lexicographers and grammarians. To assess the historical reality of this traditional semantic description, attestations from the *kalām al-ʿarab* are collected, then compared to data from Arabic dialects, and finally subjected to a distributional analysis. The grammatical categories of the collective, inherent plural, and the pseudo-dual are also considered in this assessment.

1. Aim and introduction

This study continues an investigation of the plural of paucity and the diminutive in the noun plural marking in *kalām al-ʿarab* and, generally speaking, in Classical Arabic.[1] The investigation aims at a better understanding of the semantics of both phenomena.

Their joint treatment seems to be particularly appropriate to fulfill this aim. As shown in the first installment of this study, in *kalām al-ʿarab* and modern Arabic dialects occur forms such as *tumayrāt/tmērāt*, where the form *tamarāt*, traditionally described as a plural of paucity, co-occurs with the diminutive marker *.u.ay.* to denote 'some dates' rather than 'dates.' This data clarifies that the plural of paucity and diminutive *both* convey paucal meaning when combined with each other. However, a proper understanding of this semantic facet of both phenomena can only be achieved by studying them in tandem.

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[1] For Part One of this study, see Grande (2021).

From a broader perspective, the investigation in the previous installment of this study of some linguistic materials attested in both *kalām al-ʿarab* and modern Arabic dialects brought to light traces of paucal meaning in four nouns. In addition to the aforesaid diminutivized feminine sound plural *tumayrāt/tmērāt*[2] 'some dates,' they are the basic *countable* collectives *dhawd/dhawd-ak*[3] '3-to-10, some (she)-camels,' *laḥṭ-raḥṭ* 'palm(s) of the hand(s), toes' > *raḥṭ* '3-to-10 people' (cp. Latin *manus* 'hand' > 'band, troop'),[4] and the diminutivized collective *dhuwayd/dhweyd*[5] '3-to-10, some (she)-camels.' From these two countable collectives emerges a category that is not traditionally recognized: the 'collective of paucity' (the reader is referred to Part One, Sections. 6, 7.1. for further details).

No evidence was available from these linguistic materials concerning the paucal meaning of the remaining kinds of plural: the basic broken and sound plurals of paucity, and the diminutivized broken and masculine sound plurals of paucity. This is summarized in Table 1. below.

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[2] The lexeme *tmērāt* is from the dialect of Marâzîg (Nefzaoua region, Southern Tunisia).

[3] The lexeme *dhawd-ak* is from Rwala Arabic.

[4] In this case, the dialectal parallel is a phonological alternation (Lebanese Arabic *yərḥaṭ/yəlḥaṭ* 'he eats with vigor') rather than a corresponding lexeme.

[5] The lexeme *dhweyd* is from Rwala Arabic.

Basic form				
Traditional description			[SOME]	Reliability of the traditional description
Collective	Collective proper		-	YES
	(Collective of paucity) [6]		X	(Not applicable)
Plural	Sound plural	Masculine sound plural of paucity	?	?
		Feminine sound plural of paucity	?	?
	Broken plural	Plural of paucity	?	?
		Plural of multitude	-	?
Diminutivized form				
Traditional description			[SOME]	Reliability of the traditional description
Collective	Collective proper		?	?
	(Collective of paucity)		X	(Not applicable)
Plural	Sound plural	Masculine sound plural of paucity	?	?
		Feminine sound plural of paucity	X	YES
	Broken plural	Plural of paucity	?	?
		(Pl. of multit. not diminutivizable)	-	(Not applicable)

Table 1. Distribution of paucity in *kalām al-ʻarab* and modern Arabic dialects

In the basic collectives of paucity and the diminutivized feminine sound plural, the diminutive marker *.u.ay.*, which will be henceforth referred to as 'the diminutive,' does not perform the semantic function traditionally ascribed to it—that is, it adds no extra meaning of physical or metaphorical smallness to a referent conceived as 'regular' in some physical or metaphorical respect.

Rather, in these linguistic materials the diminutive removes a semantic ambiguity involving the number value of the basic noun it is attached to: e.g., *tumayrāt/tmērāt* 'some dates' vs. *tamarāt* 'some/many dates.' The diminutive does so by selecting one number value of the basic noun over another, and by simply 'repeating' it: e.g., *tamarāt* 'some/~~many~~ dates' > *tumayrāt* 'some dates.' In this sense, it performs what can be provisionally defined as a 'doubling function.' Distributionally, the question still remains of what relationship holds in *kalām al-ʻarab* between such a doubling function of the diminutive in noun plural marking and its semantics in noun singular marking, where it behaves as a diminutive in the traditional sense. In this domain, the diminutive clearly adds an extra meaning of physical or metaphorical smallness to the basic noun it is attached to (e.g., *rajul* 'man' > *ruwayjil* 'small man' in *al-Kitāb*, III, 426, and its dialectal equivalents such as *rwēzel* 'small man' in Denizeau 1957: 69).

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[6] This term is placed in brackets, as it is not part of the traditional description. It is rather the result of the collection and comparison of data from *kalām al-ʻarab* and modern Arabic dialects; see Part One, Section 7.2.

The second installment of this study will offer a distributional analysis of the linguistic materials *dhawd/dhawd-ak, laḥṭ-raḥṭ, dhuwayd/dhweyd,* and *tumayrāt/tmērāt*, thereby including the so-called 'collective of paucity' in the investigation. This analysis will allow for a better understanding of the basic and diminutivized plurals of paucity, which are still semantically unclear, as well as of the diminutive in noun plural marking, and especially of its semantic relationship with the diminutive in noun singular marking. Besides the above materials, the distributional analysis will be based on additional data from *kalām al-ʿarab* and modern dialects, which includes the so-called inherent plural. After some brief terminological remarks, the collective of paucity and the plural of paucity will be subjected to distributional analysis, followed by the diminutive in noun plural marking.

2. Terminological issues

The linguistic materials collected in the previous installment confirmed only in part the traditional description of some basic or diminutivized collectives and plurals in terms of paucity.

Nevertheless, it makes sense to retain the traditional terminology alluding to paucity, if only for the practical purpose of classification. This terminology remains valid insofar as it provides a *formal* criterion of classification. Unless further evidence is available, in this study the term 'plural of paucity' refers to *morphological* properties: for instance, what is traditionally labeled as 'a (basic) broken plural of paucity' is no more than a root co-occuring with a given circumfixal morpheme, such as *ʾa..ā.* (e.g., *ʾaqdām* 'feet'). At the current research stage, the only 'plural of paucity' that merits the name semantically is the diminutivized feminine sound plural, as illustrated in Section 1. above.

Since the traditional terminology will be chiefly used here to describe the form of collectives and plurals, a componential notation will be employed to describe their semantics, as illustrated in Table 2. below. In this terminological framework, the terms 'collective' and 'plural' themselves tend to denote a particular form rather than a particular meaning. Thus, minimally speaking, a collective can be conceived as an unmarked stem, and a plural as a marked stem, each of which denotes more entities, as illustrated in Table 3. below.

This terminological choice allows for the incorporation of recent outcomes in the study of nominal semantics that undermine a well-established semantic definition of collectives and plurals, according to which the former denote a collection and the latter denote members. Cross-linguistic evidence shows that collection-semantics can no longer be conceived as a defining trait of a collective, in that it can also be conveyed by a plural; conversely, member-semantics can no longer be conceived as a defining trait of a plural, as it too can be conveyed by a collective (see Part One, Section 2. and Acquaviva 2008).

Componential notation	Alternative terminology
[ONE]	singular, singulative
[MORE]	plurality (of collectives and plurals)
[SOME][7]	paucal, paucity (few, some, etc.)
[MANY][8]	multal (many, much)

Table 2. Componential notation

	>>> Direction of markedness >>>		Examples		Gloss
	Unmarked	Marked			
	Stem	Stem + ***additional marker***			
Collective	[MORE]	[ONE]	tamr	tamr**a**	date(s)
Plural	[ONE]	[MORE]	qadam	**a**qdaːm	foo/eet

Table 3. Markedness-base definition of collectives and plurals

3. The distribution of the collective of paucity and the plural of paucity

3.1. Collective

A distributional study of the nouns *dhawd/dhawd-ak*, *dhuwayd/dhweyd*, *laḥṭ-raḥṭ* 'palm(s) of the hand(s), toes' > *raḥṭ*, and *tumayrāt/tmērāt* reveals that they all fall within the 'collective' category, which can be conceived minimally as an unmarked stem denoting [MORE] (see Table 3. above).

Morphologically, this is apparent for *laḥṭ-raḥṭ > raḥṭ, dhawd/dhawd-ak*, and the latter's diminutivized counterpart *dhuwayd/dhweyd*. The diminutivized feminine sound plural *tumayrāt/tmērāt* equally falls within the 'collective' category, as it ultimately derives from the collective *tamr.*

On the level of meaning, *dhawd/dhawd-ak*, *dhuwayd/dhweyd*, and *tumayrāt/tmērāt* are characterized by cohesion and interchangeability, two semantic features of a collection (see Part One, Section 2.). Upon closer scrutiny, the same holds for *laḥṭ-raḥṭ > raḥṭ*, since its original referents 'palm(s) of the hand(s), toes' are cohesive and to some degree interchangeable. These nouns also share low animacy, another defining feature of a collection (in the case of *laḥṭ-raḥṭ > raḥṭ*, low animacy is observed, again, in its original referent 'palm(s) of the hand(s), toes'). Finally, they semantically share individuation, a multifactorial property like collection-semantics: cross-linguistically, widespread individuation-

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[7] The alternative notation [SOME] to the exclusion of [MANY], employed in the first installment of this study, would be more accurate, but more cumbersome as well.

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features are low number (i.e., [SOME]) and high animacy (Corbett 2000: 217). Specifically for *dhawd/dhawd-ak, dhuwayd/dhweyd, tumayrāt/tmērāt*, and *laḥṭ-raḥṭ* in the original sense of 'palm(s) of the hand(s), toes,' they all share the feature of low number, as illustrated in Section 1 above, while the feature of high animacy is quite peripheral, as it is observed only in the later meaning of *raḥṭ*, i.e., '3-to-10 people.'

On the level of form, the semantic features of individuation and collection-semantics are diagnosed, respectively, through countability and the capability of feminine singular agreement (see Part One, Section 3). Appreciable evidence is found in this respect. On the countability of *dhawd* and *laḥṭ-raḥṭ*, see the data reported in Part One, Section 7.1. On the feminine singular agreement of *dhawd* and *tamarāt*, see *Kitāb al-Jīm*, (III, 178, 19): *yalkaʻu dhawda banī fulān, ay yaḥlibu-hā*, i.e., '*yalkaʻ* a few she-camels of s.o.'s tribe, that is milks them.F'[9] and *tulqà fī-hi tamarāt* 'where dates are thrown.F.'

However, a distributional asymmetry is observed in the nouns under scrutiny. On the one hand, in *dhawd/dhawd-ak, dhuwayd/dhweyd,* and *laḥṭ-raḥṭ > raḥṭ* low number, i.e., [SOME], is an instance of lexical meaning, being encoded within the stems *dhawd* and *laḥṭ-raḥṭ*. On the other hand, in *tumayrāt/tmērāt* the same feature is an instance of contextual (or derivational) meaning, the context being the morphological environment *.u.ay..āt/..ē.āt* in which the stem occurs.

In sum, in distributional terms *dhawd/dhawd-ak, dhuwayd/dhweyd, laḥṭ-raḥṭ,* and *tumayrāt/tmērāt* are ultimately collective nouns characterized by a semantic pattern of co-occurrence, in which (I) collection-semantics (cohesion, interchangeability, and low animacy) is paired with (II) low number, i.e., [SOME], intended as an instance of individuation.

The question arises whether, besides collectives, [SOME] occurs in plurals as well, especially within the pattern of co-occurrence in (I-II). To answer this question, further linguistic materials from *kalām al-ʻarab* and modern dialects will be collected and subjected to a distributional analysis. As noted at the end of the first installment of this study, priority will be given to linguistic materials that include instances of plurals poorly studied in (Arabic) linguistics, such as the pseudo-dual and the inherent plural.[10]

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[9] For *dhawd* agreement in *ū* is also possible: *inna-hum la-dhawdu waʻka* 'indeed, they are some camels hastening to the water trough' (*al-Jīm*, III, 305). In this case *dhawd* conveys member-semantics: see Part One, Section 3.1. That a noun may oscillate between the two kinds of agreement comes as no surprise; such an oscillation is observed in broken plurals, where it is a matter of contextual meaning.

[10] See Corriente (1971: 79-80, 120) and Corbett (2000: 95, 207, 286) for a cursory mention of the pseudo-dual.

3.2. Plural: 'pseudo-dual'

The pseudo-dual is a stem marked by a bound morpheme denoting [MORE], thereby falling into the category of plural (see Blanc 1970: 45-46 and Table 3. above).

In many (though not in all) dialects, this bound morpheme is *formally* identical to the dual morpheme (e.g., *ēn*), whence the label 'pseudo-dual.' Semantically, the referents of the pseudo-dual are mainly paired or multiple body parts, such as eyes or fingers. Some examples of duals and pseudo-duals are given, respectively, in 1., 3., 5., 7. and 2., 4., 6., 8. below (data from Blanc 1970 and Marçais 1956):

1.	'in-ēn	2.	arba' 'in-ēn	(Egyptian Arabic)
	eye-DU/(-PSEUDO-DU)		four eye-PSEUDO-DU	
	'two eyes/(eyes)'[11]		'four eyes'[12]	
3.	ṭar'-īn	4.	ṭarṣ-īn	(Djidjelli Arabic)
	breast-DU/(-PSEUDO-DU)		molar-PSEUDO-DU	
	'two breasts/(breasts)'		'molars'	
5.	der'-āyen	6.	der'-īn	
	arm-DU		arm-PSEUDO-DU	
	'two fathoms'		'arms'	
7.	uṣba'-ēn	8.	aṣāb'-ēn	(Palestinian Arabic)
	digit-DU		toes, digits-PSEUDO-DU	
	'two toes, two digits'		'toes, digits'	

Marçais (1956: 346) and Blanc (1970: 46) remark that in some dialects, the terms referring to *paired* body parts, e.g., *'in-ēn* 'eyes' and *ṭar'-īn* 'breasts' in 1., 3., as well as *kəff-īn* 'palms of the hands' in 9. below, imply the number value 'two' as the preferred reading,[13] so they are usually described as duals. For instance, Marçais (1956: 346) states: 'La finale *-īn*, indice du duel, affecte […] *kəff-īn.*'

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[11] The bracketed gloss indicates the less frequent reading.

[12] Cp. also Djidjelli Arabic *telt 'n-īn* 'three eyes,' *təmn yedd-īn* 'eight hands' (Marçais 1956: 347).

[13] In Marçais's (1956: 452) own words: 'noms désignant des mesures de temps, de poids, de capacité, etc., noms désignant des parties doubles du corps […]. Les premiers sont restés de vrais duels […]. Les seconds, par contre, passés de duels à duels-pluriels.' The pseudo-dual may refer to paired or multiple body parts due to a diachronic process
of semantic change that moves along a continuum. The pseudo-dual originated as a dual referring to paired body parts
(e.g., hands); later it came to refer to multiple paired body parts (e.g., molars), and finally to multiple body parts in
general (e.g., limbs). Corriente (1971: 79-80, 120) posits a diachronic scenario along these lines.

By contrast, the terms referring to *multiple* body parts, e.g., ṭarṣ-īn 'molars' in 4., imply a multiple set of referents as the preferred reading. For instance, in Djidjelli Arabic 'un terme qui désigne tel membre [...] multiple, est employé au pluriel (ongles, doigts, pattes, par exemple, etc.) [...] les mêmes formes [du duel] ont été adoptees [...]: ṭarṣa «molaire», forme nue ṭarṣīn' (Marçais 1956: 346, 453).

Now, a set of multiple body parts (toes, digits, molars etc.) consist of referents bound to a common restricted 'space,' so to speak—the human or animal body, which intrinsically limits their number. That is, in terms such as ṭarṣ-īn 'molars' in 4., the number of referents is by its own nature relatively low: technically speaking, these terms denote [SOME].

However, the exact number value of a low amount of multiple body parts is not well-defined, depending on the specific nature of the multiple body parts considered: e.g., molars, fingers, toes, digits, and teeth amount to eight, ten, twenty, and thirty-two items, respectively. This is why Blanc (1970: 47) states that the body parts referred to by the dual and pseudo-dual 'range from a minimum of two to a maximum of perhaps two dozen.' In the typological literature, the fact that the feature [SOME] is not well-defined and has no fixed number value is a widely recognized phenomenon: Corbett (2000: 39-40) subsumes this feature under the instances of indeterminate number.

A pattern of complementary distribution therefore emerges in the semantic domain of body parts, where one and the same ending expresses the number value 'two' when associated with paired body parts (dual: cp. ṭar'-īn in 3.), while expressing a low number value, i.e., [SOME], when associated with multiple body parts (pseudo-dual: cp. ṭarṣīn in 4.). In both cases, the default number value is an instance of lexical meaning, since it is set as 'two' or [SOME] depending on the semantic content of the stem.

This pattern of complementary distribution requires some specification. In Djidjelli Arabic standards of quantification, including numerals,[14] behave as paired body parts, in that their ending īn expresses the number value of 'two' (dual), as in 9.-11. below (Marçais 1956: 423, 452; see also fn. 12.):

9.	kəff-īn	10.	reṭl-īn	11.	mīt-īn	12.	khamse mij-īn
	palm-DU		pound-DU		hundred-DU		five hundred-PSEUDO-DU
	'two palms'		'two pounds'		'two hundred'		'five hundred'

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[14] A standard of quantification is an instance of a quantity against which others are counted: see Acquaviva (2008: 96-97).

This is probably the result of analogy. Words such as *kǝff-īn* in 9., which at once signify a paired body part and a standard of quantification (Marçais 1956: 423), following a well-attested semantic shift (cp. English 'foot'), might have acted as the pivot of an analogical extension along the following lines:

13.   paired body part >   etymologically related standard of q. > any standard of q.
         kǝff-īn   *kǝff-īn*   *mīt-īn*
         'two palms'   'two palms (measurement unit)'   'two hundred'

However, the analogical behavior of standards of quantification seems to be subject to dialectal variation: when associated with the numeral 'hundred,' the ending *īn* expresses the number value 'two' in Djidjelli Arabic, as in 11., while expressing a low number value in Dhofari Arabic, as in 12. (Rhodokanakis 1908: 87). Given that hundreds higher than two hundred must range from three to nine, their low number value clearly corresponds to [SOME].

Marçais (1956: 347) and Blanc (1970: 46) also highlight that an ending that expresses the number value 'two' (dual), when associated with paired body parts, may also express a higher number value (pseudo-dual) through contextual meaning, e.g., when co-occurring with a numeral, as in 2. above (see also fn. 12 for more examples). It is not clear from Marçais's and Blanc's description whether this kind of pseudo-dual, resulting from contextual meaning, denotes just [MORE] or, more specifically, [SOME].

However, the pseudo-dual resulting from contextual meaning in 2. is of no relevance here. By contrast, the pseudo-dual resulting from lexical meaning, intrinsically denoting [SOME], will turn out to be relevant in due course.[15]

Another pattern of complementary distribution can be observed on the level of form (Blanc 1970: 47-48). The dual and pseudo-dual may exhibit different endings (cp. 5., 6.) or different stems, with the dual retaining the singular stem and the pseudo-dual adopting a broken plural stem, as in 7., 8., respectively. This *morphological* pattern of complementary distribution (see 5., 6. or 7., 8.) does not necessarily co-occur with the *semantic* pattern of complementary distribution illustrated immediately above (see 3., 4.).

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[15] Nor is the generic reading of this kind of pseudo-dual, i.e., the fact that *ṭarṣīn* etc., may denote [MORE] rather than [SOME], particularly relevant here. For instance, in Djidjelli Arabic *ṭarṣī-hǝm* 'their molars' is as possible as *ṭarṣī-hā* 'her molars' (Marçais 1956: 453 and see also 16. below). Plainly, *ṭarṣī-hǝm* implies a generic reading (molars of many people cannot be few), and this is an instance of contextual meaning since it is due to the suffix pronoun *-hǝm*. Yet, this fact does not affect the main point that the most natural reading of multiple body parts is their lexical meaning, which implies [SOME].

Further distinctive traits of the pseudo-dual are observed in its paradigm (Blanc 1970: 47-48, Marçais 1956: 453): unlike the dual, the pseudo-dual drops *n* in the pronominal construct state and exhibits gender inversion, i.e., change of gender from singular to pseudo-dual. This is exemplified by the following data:

14.	ṭarṣ-a	15.	ṭarṣ-īn	16.	ṭarṣ-ī-hā	(Djidjelli Arabic)
	molar-F		molar-PSEUDO-DU.M[16]		molar-PSEUDO-DU.M-her	
	'molar'		'molars'		'her molars'	

To summarize, the pseudo-dual displays the following diagnostic properties:

17.   Pseudo-dual (e.g., *ṭarṣ-īn* 'molars.M'):

  (I)   gender inversion (cp. *ṭarṣ-a* 'molar-F')

 (II)   inanimacy

(III)   main semantic domains:

      a.   paired body parts

      b.   multiple body parts

      c.   standards of quantification

(IV)   number value:

      a.   paired body parts: pseudo-dual as *contextual* meaning: [MORE]

      b.   multiple body parts: pseudo-dual as *lexical* meaning: [SOME]

      c.   standards of q.: dual or pseudo-dual subject to dialectal variation: 'two' vs. [SOME]

The pseudo-dual as defined along these lines has been reported so far in the literature only in connection with modern dialects. The following section investigates a possible parallel of the dialectal pseudo-dual in *kalām al-'arab.*

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[16] The pseudo-dual marker is masculine, in the sense that the dedicated feminine *t*-marker must be added to it to convey feminine meaning, as is shown by the following instance of the pseudo-dual, from the spoken Arabic of Tunis: *rukubtīn* 'knees,' from *rukba* 'knee' (Blanc 1970: 48).

3.3. Plural: biconsonantal sound plural

According to Blanc (1970: 46), the semantic core of the pseudo-dual is a set of referents consisting of eyes, ears, hands, feet (paired body parts), and teeth (a multiple body part).

By extension, other referents consisting of paired or multiple body parts may be morphologically realized as pseudo-duals, e.g., *ṭarʿ-īn* 'breasts' in 3. above and *ẓarmīn* 'bowels' (Marçais 1956: 348). However, 'some dialects have widened the range [of referents] considerably. […] The Anatolian dialects add an unusual *ʿūdayn* 'sticks' […] [T]he true dual is, on the analogy of other pseudo-duals […]*ʿūdtayn* ' (Blanc 1970: 46). Another instance of a pseudo-dual not denoting paired or multiple body parts is the numeral *mij-īn* 'hundreds' in Dhofari Arabic (see 12. above).

In the *kalām al-ʿarab* described by Sībawayhi and coeval sources, the vast majority of these or similar referents is morphologically realized as a masculine sound plural akin to the dialectal pseudo-dual, as shown in Table 4 (where grey indicates the core set of pseudo-duals).[17] Effectively, these referents exhibit an (oblique) ending *īna* formally identical to *īn* in 7 out of 9 cases: *wednīn/burīna, yéddīn/aydīna, sennīn/lithīna, ṭarʿīn/thudīna, ẓarmīn/riʾīna, ʿudayn/qulīna, mijīn/miʾīna*. For the two remaining referents, i.e., eyes and feet, the dialectal pseudo-dual has no parallel in the masculine sound plural in *kalām al-ʿarab*.

	Pseudo-dual			Masculine sound plural		
	SG	PL	gloss	SG	PL	gloss
Paired body parts	*ʿīn*	*ʿīnīn*	eye/s	*ʿayn*	*aʿyun…*	eye/s
	udén	*wednīn*	ear/s	*bura*	*burīna*	ear-ring/s
	yédd	*yeddīn*	hand/s	*yad*	*aydīna*	hand/s, paw/s
	ržél	*režlīn*	foo/eet, leg/s	*rijl*	*arjul*	foo/eet, leg/s
Multiple body parts	*senna*	*sennīn*	too/eeth	*litha*	*lithīna*	gum/s
Paired body parts	*ṭarʿa*	*ṭarʿīn*	breast/s	?	*thudīna*	breast/s
Multiple body parts	-	-	-	*ʿiḍa*	*ʿiḍīna*	limb/s
	-	*ẓarmīn*	bowels	*riʾa*	*riʾīna*	lung/upper digestive sys.
Standards of quant.	*mije*	*mijīn*	hundred/s	*miʾa*	*miʾīna*	hundred/s
Other	?	*ʿūdayn*	stick/s	*qula*	*qulīna*	stick/s

Table 4. Pseudo-duals and semantically related masculine sound plurals in *kalām al-ʿarab*

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[17] The relevant sources will be provided for each term in footnotes. In Table 4 the data from *kalām al-ʿarab* is cited in accusative/oblique case for convenience. In the sources the same data may be also cited in the nominative case (*burūna,* etc.).

This distributional gap is not accidental. *A pseudo-dual has a parallel in the masculine sound plural when it bears two co-occuring features*: a biconsontal stem and [SOME].

Thus, *'ayn* carries neither feature, whence its inability to be morphologically realized as a masculine sound plural. The term *rijl* may refer not only to feet but also to paws,[18] so it may imply the low number value 'four,' i.e., [SOME], but is not biconsonantal: accordingly, its morphological realization as a masculine sound plural is not possible either. As regards *burīna*, it is a biconsonantal stem referring to earrings, entities bound to a common restricted 'space,' the ears, which intrinsically limits their number.[19] Likewise, *lithīna* is a biconsonantal stem whose multiple referent 'gums' is not easily quantifiable but limited in number,[20] and *thudīna* is a biconsonantal stem attested in a line where it refers to the breasts of mourning women, who qualify as a restricted set, relative to the women of the entire community to which they belong, e.g., a tribe.[21] The same holds for other terms denoting multiple body parts that are not attested as pseudo-duals in the dialectal sample collected by Blanc (1970): according to early sources, *'idīna* 'limbs' and *ri'īna* 'lungs and upper digestive system' are biconsonantal stems referring to body parts that, albeit not easily quantifiable, are limited in number.[22]

Only two out of nine terms do not obey this generalization, in that they are morphologically realized as masculine sound plurals although, as far as is known, their biconsonantal stem does not co-occur with [SOME]: *aydīna* 'hands'[23] and *qulīna* 'sticks.'

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[18] See Lane (1863, s.v. *RJL*) and its sources. Lane reports this interpretation for the saying *al-rijl jubbār*: 'it may here mean the leg or foot absolutely [...] if a beast tread upon a man.' The interpretation goes back to *kalām al-'arab*, being ascribed to the jurist al-Shafi'ī (d. 820/204): *al-shafi'ī yarà [...] nafaḥat l-dābbatu bi-rijli-hā aw khaṭabat bi-yadi-hā* (*Tahdhīb al-Lugha,* XI, 24).

[19] The word occurs in *Kitāb al-'Ayn* (VIII, 285) with the generic meaning 'ring' (*ḥalqa*). Admittedly, the specific meaning 'earring' (*qurṭ*) is recorded later by al-Jawharī (d. 1002/393): see Lane (1863, s.v. *BRW*).

[20] This term admittedly cannot be clearly traced back to *kalām al-'arab*. As far as is known, it only occurs in *Lisān al-'arab* (XV, 241) where it is minimally described as a plural of *litha* (*wa-litha tujma'u lithātin wa-lithīna*).

[21] The line in question cannot be dated. However, the non-canonical nature of *thudīna* points to its archaicity. The traditional view is that this form is an error, as reported by Lane (1863, s.v. *THDW*), who also offers the following translation of the line in which *thudīna* occurs: *wa-aṣbaḥat-i l-nisā'u musallibātin la-hunna l-waylu yamdudna l-thudīnā* 'And the women became widowed, having woe, pulling their breasts.' It can hardly be maintained that the form *thudīna* has been invented to fit the meter since, as the Arab lexicographers themselves notice, the more usual broken plural *thudiyya*, which is metrically equivalent, would have equally served the purpose.

[22] Regarding *'idīna*, al-Muqātil (d. 150/767) glosses it as *a'ḍā'an ka-a'ḍā'i l-jazūr* 'parts, like the limbs of the sacrificial camel' (*Tafsīr*, II, 437). Regarding *ri'īna*, in *Kitāb al-'Ayn* (I, 136) it is glossed as *saḥr* (*al-saḥru wa-hiya l-ri'a*), a term that in turn is glossed as *a'là l-ṣadr* 'upper chest' and, in greater detail, as *al-ri'a fī l-baṭni bi-mā-shtamalat wa-mā ta'allaqa bi-l-ḥulqūm* 'the ri'a in the belly, along with what the *ri'a* includes, and along what adheres to the gullet' (*Kitāb al-'Ayn*, III, 136).

[23] This form occurs in a line attributed to Abū l-Haytham (d. 37/657), one of Muḥammad's companions (*Tāj al-'Arūs*, XL, 353), so it may belong to a stage of the language even older than *kalām al-'arab*. While its date is uncertain, its authenticity is proven

Besides a biconsonantal stem and [SOME], the vast majority of the masculine sound plurals under scrutiny are also characterized by gender inversion, which is morphologically realized as an alternation *at* vs. *īna*. They comprise all the items listed in Table 4. with the exception of *aydīna* and *thudīna*, namely: *burīna, lithīna, qulīna, mi'īna, 'iḍīna, ri'īna.*

Overall, the masculine sound plural in *kalām al-'arab*, when morphologically realized as a biconsontal stem, displays the same formal and semantic properties of the pseudo-dual summarized in 17. above, from gender inversion to equivalence or near-equivalence of semantic domains, if not of referents. *Ceteris paribus*, the masculine sound plural in *kalām al-'arab* also has a regular plural alternant: *burīna, lithīna, qulīna, mi'īna, 'iḍīna,* and *ri'īna* co-exist with the feminine sound plurals *burāt, lithāt, qulāt, mi'āt, 'iḍawāt,* and *ri'āt,* recorded in *al-Kitāb* (III, 337, 598) and *Kitāb al-'Ayn* (VI, 268).

The extensive sharing of properties between the dialectal pseudo-dual and the biconsonantal masculine sound plural in *kalām al-'arab* leads to the identification of the two:[24]

18.   Masculine sound plural referring to body parts, etc.
   (I)   cross-variety distribution: dialects ('pseudo-dual'), *kalām al-'arab* (biconsonantal stem)
  (II)   cross-variety variation: yes/no regular plural (in *āt*)
 (III)   diagnostic properties: as in (17) above

The biconsonantal masculine sound plural is morphologically underived. In this respect, it is distributionally opposed to the traditionally recognized masculine sound plural, which tends to be a derived form, either deverbal (e.g., *muslimūna* 'Muslims,' *fallāḥīn* 'peasants') or denominal (e.g., *'arabiyyūna* 'Arabs'). A further study of this opposition is left for future research.

3.4. Intermediate results: the inherent plural

The biconsonantal masculine sound plural (see 17., 18. above) shares its diagnostic properties with the so-called inherent plural of Italian (see Part One, end of Section 2.).

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by a dialectal parallel, the Spanish Arabic *aydīn* (Blanc 1970: 54). The stem of *aydīna* plausibly is the *hamza*-initial broken plural *aydī* cited by al-Khalīl (*al-'Ayn*, VIII, 102). This is a further parallel between the kind of masculine sound plural under scrutiny and the pseudo-dual: cp. *aṣāb'-ēn < aṣābi'* in 8. above (Blanc 1970: 47). This is also the stance of the Arab lexicographers, who analyze *'aydīna* as a masculine sound plural derived from a broken plural (*jam' al-jam'*): see, e.g., *Tahdhīb al-Lugha*, XIV, 168.

[24] Some dialectologists have already likened the pseudo-dual to the masculine sound plural, based on the formal similarity between *īn* and *īna* (see Blanc 1970: 46 and refs. therein). Their argument, however, is not tenable; a formal similarity between two linguistic items may conceal a different semantic nature, as is shown by the dual and pseudo-dual.

This is easily gleaned from a comparison of the Italian and Arabic words listed in Table 5. below:

		SG, M	PL, M	PL, F	SG, F	PL, F	PL, M
Paired body parts	arm/s	*braccio*	*bracci*	*braccia*	*(droʻ)*	—	*derʻ-īn*
	horn/s	*corno*	*corni*	*corna*	*(qarn)*	—	*qarn-īn*
Multiple body parts	finger/s	*dito*	*diti*	*dita*	*(uṣbaʻ)*	—	*aṣābʻ-ēn*
	limb/s	*membro*	*membri*	*membra*	*ʻiḏa*	*ʻiḏawāt*	*ʻiḏīna*
Standards of quant.	hundred/s	*centinaio*	—	*centinaia*	*miʼa*	*miʼīna*	*miʼāt*
Other	stick/s	*legno*	*legni*	*legna*	*qula*	*qulīna*	*qulāt*

Table 5. Italian inherent plural and biconsonantal masculine sound plural

In particular, gender inversion of Italian inherent plurals requires some clarification. In synchrony, the final *a* of Italian inherent plurals can be regarded as a feminine marker, which is opposed to the masculine marker *o* of the corresponding singulars, since in the nominal domain the final *a* element usually marks feminine nouns such as *cas-a* 'house-F' and *famigli-a* 'family-F' (a collective).

The Italian inherent plural displays a further diagnostic property: Acquaviva (2008: 129) underlines that its plural marker, characterized by gender inversion, 'is nowhere else in the language an exponent for plurality.' In this respect, the biconsonantal masculine sound plural of Arabic does not pattern with the Italian inherent plural, since the endings *ūna* and *īn* also occur, for instance, in the derived masculine sound plural, as is shown by familiar examples such as *muslimūna* and *fallāḥīn.*

That said, the sharing of properties between the two kinds of plural is quite extensive: they share all properties except for the inability to function as an exponent of plurality in other areas of grammar; furthermore, their semantic commonalities go beyond the identity of semantic domains *to encompass identical referents*, as is shown in Table 5. above.

The preceding discussion has shown that the biconsonantal masculine sound plural, far from being a language-specific phenomenon, can be subsumed under the category of the inherent plural, which is attested also in Italian. Accordingly, this kind of plural will henceforth be referred to as the 'inherent masculine sound plural,' as is schematized in 19. below.

19.   Inherent plural

Inherent masculine sound plural: biconsonantal stem: *aydīna, thudīna, lithīna, ʻiḏīna ...*

The Italian and Arabic plurals in Table 5. are 'inherent' in two senses. In a semantic sense, multiple reference is 'inherent,' i.e., intrinsic, to these plurals since limbs tend to be conceptualized in conjunction with each other, rather than independently: see Acquaviva (2008: 17-18), Chierchia (1998:

54), and Tiersma's (1982: 835) 'Principle 1.'[25] In a morphological sense, multiple reference 'is inside the base for inflection' (Acquaviva 2008: 62, cp. also Tiersma 1982: 838), in that an inherent plural is *not* derived from a singular: e.g., in *kalām al-ʿarab, ʿiḍīna* is not derived by a corresponding masculine singular *ʿiḍ, which is unattested.

The inherent sound plural's underivability from a singular is conducive to a reanalysis of it as an unmarked stem (Tiersma 1982: 838), and the inherent masculine sound plural is no exception to this trend. Generally speaking, the inherent plural's unmarked status is deduced from its ability to be expanded through a plural marker, a process typical of an unmarked stem (Tiersma 1982: 838; see also Table 3. above), and in the specific case of *kalām al-ʿarab* this is actually observed in the inherent masculine sound plurals *aydīna* and *aṣābʿēn* (cp. fn. 22. above), where the expected sound plural marker *īn, ēn* co-occurs with a further circumfixal plural marker.

3.5. Plural: 'broken plural'

Not all referents consisting of paired or multiple body parts are morphologically realized as inherent masculine sound plurals.

They can be morphologically realized instead as broken plurals under certain conditions, as Sībawayhi explicitly states (*al-Kitāb*, III, 605-6):

> It is as if the [Arabs] wanted to distinguish between masculine and feminine, as if they likened the infixal long vowel [*ā*] to the feminine *t*-marker, since the [singular that exhibits this kind of long vowel] is of feminine gender; [...] the people who assign *lisān* 'tongue' feminine gender, say *alsun* 'tongue' [in the plural], while those assigning it masculine, say *alsina*. So the [Arabs] also said *adhruʿ* 'arms,' because of the feminine gender of *dhirāʿ* 'arm,' but this scheme [of paucity] cannot be replaced by another of multitude, even if they wanted to express a high number, and the same holds for *akuff* 'palms' and *arjul* 'foot, legs.'[26]

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[25] Recall that multiple reference in Italian also includes the number value 'two,' as this language does not express it through the dedicated category of the dual. Therefore, in this language paired body parts such as 'arms' (*braccia*) are inherent plurals, in the sense that they tend to be conceptualized in conjunction with each other, rather than independently.

[26] *ka-anna-hum arādū an yafṣilū bayna l-mudhakkari wa-l-muʾannathi ka-anna-hum jaʿalū l-ziyādata llatī fī-hi idhā kāna muʾannathan bi-manzilati l-hāʾi llatī fī qaṣʿatin wa-raḥaba [...] wa-ammā man annatha l-lisān fa-huwa yaqūlu alsun wa-man dhakkara qāla alsina wa-qālū dhirāʿ wa-adhruʿ ḥaythu kānat muʾannathatan wa-lā yajūzu bi-hā hadhā l-bināʾu wa-in ʾanaw l-akthara kamā faʿala dhalika bi-l-akuff wa-l-arjul*

This passage shows that in the *kalām al-'arab* described by Sībawayhi, a referent consisting of paired or multiple body parts is morphologically realized as a broken plural if two conditions are met. The first condition is morphological: a broken plural of paucity *a..u.* is only possible for a singular stem that refers to paired or multiple body parts (e.g., *kaff, rijl, dhirā'*). In this semantic environment, *a..u.* therefore qualifies as a regular broken plural of paucity, opposed to an ungrammatical plural of multitude.

The second condition is semantic and more specific: if the singular stem in question exhibits a long vowel before the third root-consonant, it must also convey the same meaning as the *t*-marker, in this case feminine gender. For instance, the regular broken plural of paucity *adhru'* is possible insofar as the *ā* of its singular *dhirā'* conveys feminine gender like the *t*-marker of *rukba* 'knee,' etc.

This second condition can be referred to as 'the condition on the meaningful long vowel of the singular,' and it appears to be attested also in another area of the grammar of *kalām al-'arab*. In the *nomen actionis* of form II, the *ī* of the circumfixal morpheme *ta..ī.* precedes precisely the third root-consonant (e.g., *tanzīl* 'revelation') and alternates with the *t*-marker of the circumfixal morpheme *ta..i.a* to produce the meaning of intensity or causation. In *al-Kitāb* (IV, 83) Sībawayhi describes this alternation as a pattern of complementary distribution, with *ta..ī.* co-occurring with a regular third root-consonant, and *ta..i.a* with an irregular third root-consonant, which consists of a glide, as in *ta'ziya* 'consolation.'[27] To this it should be added that the irregular third root-consonant can be also a geminated one: cp. *tatimma* 'completion, perfection' (*Kitāb al-'Ayn,* VIII, 111).[28]

This data shows that the condition on the meaningful long vowel of the singular, posited by Sībawayhi for the regular plural of paucity *adhru'*, is part of a broader pattern of complementary distribution. *The long vowel that precedes a regular third root-consonant must alternate with a t-marker that follows a glide or geminated third root-consonant*. This is summarized in 20. below, based on Sībawayhi's statements quoted immediately above:

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[27] The original text reads: 'Chapter on the *t*-marker replacing another element [...] It is not possible to delete the glide *y* of *ta'ziya* and the like' (*bābu mā laḥaqta-hu hā'a l-ta'nīthi 'iwaḍan [...] wa-ammā 'azzaytu ta'ziyatan wa-naḥwu-hā fa-lā yajūzu ḥadhfu-hā*).

[28] Some *nomina actionis* are attested, where *ta..i.a* unexpectedly co-occurs with a regular third root-consonant. This is plausibly due to semantic analogy with *tatimma*: *takmila* 'completion, perfection' > *ta'ẓima* 'magnification' > *takrima* 'honoring.'

20.   Selectional restriction

   a.   Implication:

   If the singular...   then the plural...

   paired, multiple body parts   *a..u.*, *plural of multitude

   b.   Environment:

   $C_1VC_2VV_XC_3$ / $C_1VC_2G_3\text{-}a_X$ / $C_1VC_2C_2\ \text{-}a_X$

   c.   Cp.

   tanzī$_X$l   /   *ta'ziy-a$_X$*/   *tatimm-a$_X$*

   Symbols: X = same meaning;   * = ungrammatical;   G = glide

In other words, the condition on the meaningful long vowel of the singular that Sībawayhi posits for the regular plural of paucity *a..u.* is empirically grounded if it derives not only from a singular long-vowel stem, e.g., *adhru' < dhirā'*, but also from a geminated stem with a *t*-marker, e.g., *akuff < kaffa* (cp. the pair *tanzīl/tatimma* in 20.c above). Interestingly, in *kalām al-'arab* the singular of the broken plural *akuff* may be either *kaff* or *kaffa*, with the latter form ending precisely with the *t*-marker: cp. *laqaytu-hu kaffata kaffata* 'I suddenly met him (lit. I met him hand in hand)' in *al-Kitāb*, III, 304; see also *al-'Ayn*, V, 282.[29]

   From a broader distributional perspective, *akuff* displays all the diagnostic properties of the inherent plural, except for an alternative regular plural (see 18. above). They are gender inversion (*kaffa > akuff*), inanimacy, reference to body parts, and a unique exponence of plurality.[30] In particular, the latter property is observed in the vowel *u* of *akuff* and, generally speaking, of *a..u.*: this is diachronically an old marker conveying [MORE], which is etymologically related to the *ū* of *-ūna* (Murtonen 1964: 32-33) and does not occur outside this circumfixal morpheme.[31]

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[29] The English translation is based on al-Khalīl's gloss of this utterance: *mufāja'atan* '(caught) by surprise.' In this utterance, *kaffata* is diptotic because of its distributive nuance.

[30] In Acquaviva's (2008: 129) own words, the marker of an inherent plural 'is nowhere else in the language an exponent for plurality' (see Section 2.).

[31] In the *kalām al-'arab* described by Sībawayhi (*al-Kitāb*, III, 579), plurals such as *rukubāt* 'knees' occur, characterized by the insertion of *u* between the second and third root-consonants (cp. the singular *rukba* 'knee'). This *u* is likely to be an instance of epenthesis rather than a device of noun plural marking.

However, the condition on the meaningful long vowel of the singular also implies that the regular broken plural of paucity *a..u.* derives not only from a singular long-vowel stem, e.g., *adhruʻ < dhirāʻ*, or from a geminated stem with a *t*-marker, e.g., *akuff < kaffa*, but also from a glide-final stem with a *t*-marker. This is schematized by the triad *tanzīl/taʻziya/tatimma* in 20.c above. It is worth considering in this regard another term referring to paired or multiple body parts, notably *aḥqin* 'flanks.' This is again a broken plural of paucity *a..u.*, having undergone some phonological adjustment, due precisely to the glide status of its third root-consonant.[32] Its singular stem is *ḥaqw* or, alternatively, *ḥaqwa*, with a feminine *t*-marker. The latter form is reported only by late lexicographical sources, from al-Fayrūzabādī (d. 817/1414) onward (*Tāj al-ʻArūs*, XXXVII, 455), but its rarity is indicative of its antique nature, so it can be traced back to *kalām al-ʻarab*, if not earlier (on rarity as a cue of archaicity, see Ratcliffe 1998: 206). Again, an archaic paradigm characterized by gender inversion emerges: *ḥaqwa > aḥqin*. Overall, *aḥqin*, like *akuff*, displays all the diagnostic properties of the inherent plural, except for an alternative regular plural (see 18. above).

Ceteris paribus, *aḥqin* 'flanks' differs from *akuff* 'palms' in that it denotes [SOME], rather than [MORE], when it is used metaphorically in the sense of 'flanks of the mountain' (cp. *al-thanāyā bi-aḥqī-hā* 'the heights with their flanks' in *Kitāb al-ʻAyn*, III, 254). Effectively, the metaphorical referents 'flanks' are bound to a common restricted 'space,' the mountain, which intrinsically limits their number.

Finally, the broken plural of paucity *a..i.a* seems to be distributionally akin to *a..u.* . To begin with, when denoting multiple body parts, *a..i.a* turns out to be a regular broken plural of paucity. The early lexicographers Abū ʻUbayd (d. 224/838) and Abū Ḥātim (d. 255/869) stigmatize as incorrect (*khaṭaʼ*), in *kalām al-ʻarab*, the usage of *asinna* and *arḥiya* as plurals of *sinn* 'tooth' and *raḥà* 'molar' (*Lisān al-ʻArab* XIII, 220; *Tāj al-ʻArūs*, XXXVIII, 134), but precisely the anomalous status of *asinna* and *arḥiya* in that stage of the language points to their status as regular plurals of *sinn* 'tooth' and *raḥà* 'molar' in a stage of the language earlier than *kalām al-ʻarab*. An archaic regular paradigm *sinn > asinna, raḥà > arḥiya* thus obtains, characterized by gender inversion (on anomaly as a cue of an older regularity, see Ratcliffe 1998: 206).

Another similarity between *a..i.a* and *a..u.* is the inherent plural status. Like *akuff* and *aḥqin*, also *asinna* and *arḥiya* display all the diagnostic properties of an inherent plural except for an alternative regular plural. In particular, the property of the unique exponence of plurality is observed in the vowel *i* of *asinna*, *arḥiya* and, generally speaking, *a..i.a*. In fact, *a..i.a* consists of the feminine *t*-marker, due to

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[32] Alternatively, one may assume a circumfixal morpheme *a..i.*, on which see the following footnote.

gender inversion, and a circumfixal morpheme *a..i.*, whose vowel *i* is diachronically an old marker conveying [MORE], which is etymologically related to the *ī* of the rare plural *.a.ī.* (Ratcliffe 1998: 105, Corriente 1971: 99) and does not occur outside this circumfixal morpheme.[33] An instance of the rare plural *.a.ī.* is a quasi-synonym of *arḥiya*: *ḍarīs* '(stones resembling) molars' (*al-ḥijāratu-allatī ka-l-aḍrās: Tāj al-'Arūs*, XVI, 188). The plural *ḍarīs* is attested for *kalām al-'arab* in *Kitāb al-Jīm* (II, 195).

A final similarity between *a..i.a* and *a..u.* is the irregular third root-consonant: *asinna* and *arḥiya* share with *akuff* and *aḥqin* a glide-final or geminated triconsonantal stem. Diachronically the two kinds of triconsonantal stem (glide-final, geminated) do not differ so much, as they are originally one and the same biconsonantal stem expanded through a glide or gemination. Unlike the so-called 'root determinative,' this process of biconsonantal stem expansion is to be regarded as a diachronic description, not as a reconstruction, being observed in other historically attested Semitic languages.[34]

Distributionally, the fact that the above four plurals share the language-specific property of the expanded biconsonantal stem, as well as the properties of the inherent plural, shows that they are not a random collection, despite their small number, and rather fall into a principled category, which will be labeled hereafter as the 'inherent broken plural.'

Moreover, as is well known, the four plurals in question and broken plurals in general are derived from a root through the addition of an infixal or circumfixal morpheme. In this sense, they are *not derived from a singular*: remarkably, this is a morphological property they share with the inherent plural, including *'iḏīna,* etc., that does *not* derive from a singular *'iḏ* (see the end of Section 3.5). However, *akuff* and *aḥqin* differ from broken plurals in general in that they are morphologically less complex than their singulars: *ceteris paribus* (number-marking through apophony), *kaffa* and *ḥaqwa* display an additional bound morpheme, notably the *t*-marker, with respect to *akuff* and *aḥqin.* In this sense, they are unmarked stems, a further morphological property they share with *'iḏīna,* etc.:

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[33] The term *aḥqin* could be regarded as an instance of the circumfixal morpheme *a..i.*, rather than *a..u.*, but such an alternative interpretation would change nothing in an analysis of this term as an inherent plural. In passing, gender inversion allows for a refinement of the traditional analysis of *a..i.a* as a circumfixal morpheme (see Part One, Section 4, fn. 22), which is now better conceived more simply as *a..i.* . In the *kalām al-'arab* described by Sībawayhi (*al-Kitāb*, III, 579), plurals such as *sidirāt* 'lotus trees' occur, characterized by the insertion of *i* between the second and third root-consonants (cp. the singular *sidra* 'lotus tree'). This *i* is likely to be an instance of epenthesis rather than a device of noun plural marking.

[34] For the expansion of a biconsonantal stem through a glide, cp. Tigre *sm > asmāy* 'noun/s'; for its expansion through gemination, cp. Harsusi *ham > hamum* (Ratcliffe 1998: 232). On the root determinative, see Zaborski (1969).

21. Inherent plural = unmarked stem

  a. Inherent masculine sound plural: biconsonantal stem: *aydīna, thudīna, lithīna, ʿiḏīna …*

  b. Inherent broken plural: expanded biconsonantal stem: *akuff, aḥqin, asinna, arḥiya*

The distributional scenario in 21., which refines and rewrites 19., raises several questions, ranging from the mutual relationship between the two kinds of inherent plural to the historical reality of the label of paucity traditionally attached to them. These issues are discussed in the following Section.

3.6. Overall distribution

3.6.1. Synchrony

The inherent plurals summarized in 21. above partly confirm the historical reality of Sībawayhi's description in terms of paucal meaning, i.e., [SOME], for the basic broken and masculine sound plurals of paucity. His description is confirmed *if and only if both kinds of plurals refer to multiple body parts or semantically close referents*, which intrinsically denote a low number. In this respect it is perhaps not accidental that, on a close reading, two examples brought by Sībawayhi to describe the basic broken plural of paucity involve precisely referents of this kind (*arjul* 'feet, legs,' *aqdām* 'id.': see *al-Kitāb*, III, 491 and Part One, Section 3.1.).

 Cases in point are, for multiple body parts, *lithīna, ʿiḏīna, ri'īna, asinna, arḥiya* and *aḥqin* (the latter when metaphorically said of a mountain) and, for semantically close referents, *burīna, mi'īna.* The dialectal data, i.e., the so-called pseudo-dual, also confirms Sībawayhi's description although it does not display a biconsonantal stem.

 Sībawayhi's description is not confirmed for the basic feminine sound plural: the referents consisting of multiple body parts are not necessarily realized as a plural of this kind. In *kalām al-ʿarab* these referents are morphologically realized as basic feminine sound plurals in connection with a masculine sound plural of paucity, but not with a broken plural of paucity. In modern dialects, these referents are not morphologically realized as basic feminine sound plurals at all.

 Finally, the selectional restriction in 20. above confirms only in part the historical reality of Sībawayhi's description regarding the broken plural of multitude. This assessment of Sībawayhi's description can be justified as follows. The impossibility of morphologically realizing the reference to multiple body parts as a plural of multitude means that the latter cannot express the low number value intrinsic to multiple body parts, i.e., [SOME], since it expresses a different number value. However, the number value other than [SOME] that the plural of multitude conveys is not necessarily a high number value, i.e., [MANY]: it may be also a *generic* number value, i.e., [MORE].

Once it has been ascertained that a plural of multitude conveys [MORE], the selectional restriction in 20. above can be straightforwardly explained in terms of a semantic incompatibility between the lexical meaning of a stem denoting [SOME], such as the one referring to multiple body parts, and a circumfixal morpheme denoting [MORE]. With respect to Sībawayhi's description, this scenario of semantic incompatibility between [SOME] and [MORE] provides no clue for an opposition paucal vs. multal meaning, contrary to what Sībawayhi states. In this respect, his description of the broken plural of multitude as conveying a multal meaning, i.e., [MANY], is not tenable. The opposition paucal vs. multal meaning posited by him might be a consequence of his theoretical need to systematize raw linguistic materials.

The semantic incompatibility of [SOME] vs. [MORE], however, clearly shows that originally a plural of multitude did not convey paucity, i.e., [SOME], in line with Sībawayhi's description, which in this respect is historically real.

The overall historical distribution of the basic collective and plural forms conveying paucity in *kalām al-ʿarab* is summarized in the grey cells of Table 6 below (which also include their diminutivized forms when they are clearly attested). This table integrates the outcomes concerning the collective, reached in the previous installment of this study, with the outcomes concerning the (inherent) plurals, resulting from the present installment.

Upon closer scrutiny, the inherent plurals summarized in 21. do not share only the single feature [SOME]. Since multiple body parts are not animate, are related to a common source, and can be conceived in some cases as relatively interchangeable (cp. paws, teeth), they share a more extensive semantic pattern of co-occurrence, in which (I) collection-semantics (low animacy, cohesion, and interchangeability) is paired with (II) [SOME].[35] What is more, the sharing of this pattern goes beyond the inherent plurals in 21. to include the collective of paucity as well, as shown in Section 3.1.

The question of the mutual relationship between the inherent broken and masculine sound plurals of paucity, raised at the end of the previous Section, becomes now even broader, to encompass the mutual relationship among both kinds of inherent plural and the collective of paucity: why should a synchronic redundancy consisting of devices of noun plural marking with identical semantics exist at all?

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[35] Standards of quantification that are etymologically or conceptually related to body parts (see Section 3.2 above) are obviously inanimate but also interchangeable, because of their logical identity (Acquaviva 2008: 119). They are also cohesive, in that they perform the common function of quantifying, as their name suggests (Acquaviva 2008: 26, 173).

Basic form				
Traditional description			[SOME]	Reliability of the traditional description
Collective	Collective proper		-	YES
	(Collective of paucity)		X	(Not applicable)
Plural	Sound plural	Masculine sound plural of paucity	X	YES (body parts)
		Feminine sound plural of paucity	-	NO
	Broken plural	Plural of paucity	X	YES (body parts)
		Plural of multitude	-	PARTLY YES
Diminutivized form				
Traditional description				Reliability of the traditional description
Collective	Collective proper		?	?
	(Collective of paucity)		X	(Not applicable)
Plural	Sound plural	Masculine sound plural of paucity	-	NO
		Feminine sound plural of paucity	X	YES
	Broken plural	Plural of paucity	X	YES (body parts)
		(Pl. of multit. not diminutivizable)	-	(Not applicable)

Table 6. Distribution of paucity in *kalām al-'arab* and modern Arabic dialects

3.6.2. Diachrony

Diachronically the inherent broken and masculine sound plurals of paucity and the collective of paucity are not on the same footing.

Sound plurals are historically attested earlier than broken plurals, in Akkadian (see, e.g., Ratcliffe 1998: 152, 221). Accordingly, inherent masculine sound plurals of paucity are older than inherent broken plurals of paucity. Regarding the traditionally recognized, i.e., uncountable, collectives, they are as early as sound plurals, since like the latter they are already attested in Akkadian (see, e.g., Ratcliffe 1998: 221). This means that the collective of paucity, i.e., the countable collective, is a later development.

Of the two kinds of inherent broken plurals of paucity, *a..u.* exhibits the same instance of gender inversion as the inherent masculine sound plural of paucity: *at* co-occurs with [ONE], and its lack co-occurs with [SOME]. For instance, *ḥaqwa > aḥqin* parallels *litha > lithūna.* In this respect *a..u.* is more conservative and older than the broken plural of paucity *a..i.a.*, displaying an opposite kind of gender inversion, in which *at* co-occurs with [SOME] and its lack co-occurs with [ONE] (e.g., *sinn > asinna*).

Returning to the collective of paucity, it shares with the inherent broken plural of paucity *a..u.* (e.g., *aḥqin*) not only the semantic property of denoting [SOME], but also two morphological properties: an unmarked stem and gender inversion. In particular, the latter has the same distribution in the

collective of paucity and *a..u.*: in both of them, *at* co-occurs with [ONE] and the lack thereof co-occurs with [SOME]. For instance, *dhawd* parallels *aḥqin,* and *nāqa* parallels *ḥaqwa.*

It follows that the collective of paucity has been modeled by analogy on the inherent broken plural of paucity *a..u.* . It can hardly be maintained that such a collective has been modeled on *a..i.a*, since one displays the opposite kind of gender inversion with respect to the other: e.g., *dhawd* vs. *asinna* and *nāqa* vs. *sinn.* The overall diachronical scenario is summarized in 22. below:

22.   The expression of paucal meaning: Diachronic development

Stage I   Inherent masculine sound plural of paucity/Collective proper (with no paucal meaning)

Stage II   Inherent broken plural of paucity *a..u.*/Collective of paucity

Stage III   Inherent broken plural of paucity *a..i.a*

In this scenario, the diachronical distribution of the morphological and semantic features of the inherent sound and broken plurals of paucity, as well as of the collective of paucity, shows that their synchronic redundancy and cumulation, i.e., their sharing of the pattern of co-occurrence between [SOME] and collection-semantics (see Section 3.6.1.), is the result of a diachronic stratification, except for the collective of paucity, which arose by analogy.

3.6.3. Typology

The inherent broken and masculine sound plurals of paucity, as well as the collective of paucity, may be considered in connection with the other instances of noun plural marking and, broadly speaking, with the noun number system of *kalām al-ʿarab.*

This language variety plausibly bears traces of a noun number system based on four number values: [ONE], morphologically realized as a singular or singulative; [TWO] as a dual; [SOME] as an inherent broken or masculine sound plural of paucity and, by analogy, as a collective of paucity (see Section 3.6.2); and [MORE] as a feminine sound plural or as a broken or masculine sound plural, other than the inherent one. A noun number system of this sort is well-attested cross-linguistically, as Corbett (2000: 23) remarks: 'Systems with just a paucal in addition to singular and plural are rare. It is much more common to find it with a dual too' (a case in point is Yimas, a Trans-New Guinea language, which attests to a singular, dual, paucal and plural).

In *kalām al-ʿarab* a semantic asymmetry is observed among these number values: while [ONE], [TWO], [MORE], and their morphological realizations apply to referents in many semantic domains (human beings, animals, plants, tools, etc.), [SOME] is restricted to body parts and etymologically or conceptually

related meanings (e.g., standards of quantification), as schematized in 21. above. Another overarching distributional property of [SOME] is that its removal from this four-member system would yield a three-member system that is otherwise attested cross-linguistically: were [SOME] removed, the remaining three-member system consisting of [ONE], [TWO], [MORE] would be grammatical. In fact, three-member noun number systems of this kind are well known in Ancient Greek, Sanskrit, and Slovene, for example (Corbett 2000: 5, 86; cp. also Greenberg's Universal 34).

The aforesaid concomitance of semantic restrictedness and 'removability,' as it were, of the low number value [SOME] are a unitary phenomenon, the so-called 'minor number,' which is attested, for instance, in Avar, a Nakh-Daghestanian language (Corbett 2000: 96-97, 129).

From this typological perspective, the semantic restrictedness of [SOME], i.e., the fact that in *kalām al-ʿarab* it originally applies to multiple body parts, can be viewed along the same lines of the morphological realization of this feature as an inherent plural (see Section 3.4 above): it cannot be deemed a language-specific or anomalous phenomenon. It is rather a distinctive trait of the cross-linguistic category of minor number.

Turning to 'removability,' the other trait of minor number, it can be suggested that the four-member system of *kalām al-ʿarab,* including [SOME], was already decaying in this language variety, which gradually shifted to a three-member system based on [ONE], [TWO], and [MORE]. The latter system corresponds to that canonized by early grammarians and lexicographers. The decay of the original four-member system of *kalām al-ʿarab* seems to have left its traces in three phenomena.

First, leveling: a singular-plural paradigm with no gender inversion (e.g., *ḥaqw > aḥqin, kalb > aklub,* etc.) seemingly replaces an older paradigm characterized by it (e.g., *ḥaqwa > aḥqin*).

Second, semantic ambiguity (see Part One, Section 3.1.): a plural of paucity seemingly replaces a plural of multitude in the expression of [MORE], as in *ajniḥah,* whose referent 'wings' is not intrinsically few under the most natural reading. Likewise, a plural of multitude seemingly replaces a plural of paucity in the expression of [SOME], as in *ḥiqāʾ,'* whose referent 'flanks of the mountain' is intrinsically few under the most natural reading.

Third, semantic extension: the broken plural of paucity *a..u.* that originally refers to paired or multiple body parts may refer by analogy to body parts in general (e.g., *alsun* 'tongues') and by further analogy to natural entities (e.g., *aklub* 'dogs,' *anjum* 'stars'). The pivot for the latter kind of analogy seemingly is the spatial contiguity of these referents (Ullmann 1964: 218). Murtonen (1964: 25) underlines the spatial contiguity that links body parts to animals, plants, etc., when he states that 'the earliest elements in any language are names for concrete objects and phenomena in the immediate neighbourhood of human beings, such as nearest relatives, parts of the body, beings and phenomena

in the surrounding nature.' This 'analogical' facet of the shift from a four- to a three-member system leads to a better understanding of the historical reality of the plural of paucity in its origin and evolution, as illustrated in 23.:

23   The historical reality of the plural of paucity

Origin: multiple body parts, *lexical* meaning: [SOME]: *ʻiḍīna, aḥqin …*

Development:

a.   Semantic extension: standards of quantification: *mi'īna …*

b.   Spatial contiguity: any body part, surrounding nature: *alsun, aklub, anjum …*

The shift from a four- to a three-member system probably also accounts for morphological doublets attested in *kalām al-ʻarab*, such as *ḥaqwa/ḥaqw* (with respect to *aḥqin*), and lexical doublets such as *ʻiḍīna/aʻḍā'*: they can be explained in terms of diachronic stratification, with the first variant belonging to the older four-member system and the second variant belonging to the recent three-member system.

4. The distribution of the diminutive

4.1. Collection-semantics as a major environment of the diminutive

According to the current understanding, the diminutive in *kalām al-ʻarab* displays two oppositions on the level of meaning.

On the one hand, [SMALL] in singular marking, as in *ruwayjil* 'little man,' is opposed to an unexpected [SOME] (paucal meaning) in plural marking, as in *tumayrāt* 'a few dates' and *dhuwayd* '3-to-10 (she)-camels.' On the other hand, the addition of a nuance of physical or metaphorical smallness in singular marking, as in *ruwayjil* 'little man,' is opposed to a quite unexpected doubling function in plural marking, as in *tumayrāt* 'a few dates' and *dhuwayd* '3-to-10 (she)-camels' (cp. *tamarāt* 'a few or more dates' and *dhawd* '3-to-10 or more (she)-camels').

Since both [SOME] and the doubling function occur in an environment corresponding to collection-semantics (see Section 3.1 and Part One, Section 7.2.), the latter is clearly the cause of these unexpected semantic facets of the diminutive. A thorough study of collection-semantics may therefore explain not only the puzzling semantic behavior of the aforesaid diminutivized forms, but also the still unclear semantics of the diminutivized forms summarized in the white cells of Table 6 above. A thorough study of this sort includes a componential and distributional analysis of collection-semantics as it manifests itself in *kalām al-ʻarab* and, to a certain extent, cross-linguistically.

Starting from a cross-linguistic perspective, a collection can be semantically analyzed, minimally, as the combination of cohesion and interchangeability (cp. Section 3.1.). However, a collection may optionally include features such as divisibility into the minimal units forming it, and their visual perceptibility (Grimm 2018: 546-547). A collection that is neither divisible nor has perceptible minimal units is a substance: e.g., *gold, water*. It is a granular aggregate when it is a foodstuff or any other multiple referent that has perceptible minimal units, but is not divisible: e.g., *rice* (whose perceptible minimal units are grains). Finally, it is a non-granular aggregate when it is a divisible multiple referent, which has perceptible minimal units: e.g., *cattle*.

The aforesaid kinds of collection-semantics and member-semantics are individuation types giving rise to a scale of individuation.[36] Three remarks are in order here. First, while a collection is divisible (non-granular aggregate) or indivisible (substance, granular aggregate), the minimal unit it consists of is always indivisible, like a member: this is why Chierchia (1998: 54) defines both a minimal unit and a member as an individual.[37] Second, a non-granular aggregate shares divisibility into individuals and their perceptibility with a traditional plural, i.e., a plural conveying member-semantics: *men* is divisible into *man + man + man*, etc. (members) etc., just as *cattle* is divisible into *cow + cow + cow*, etc. (minimal units). Third, individuation types are bundles of features, which can be identified through morphological diagnostics (cp. Grimm 2018: 549, and especially his Table 20). A member is an unmarked stem expanded through a plural marker to express [MORE]. Both non-granular and granular aggregates are unmarked stems that can be expanded through a singulative marker to express [ONE], but only a granular aggregate can also be expanded through a singular marker for this purpose. The difference between a singulative and a singular marker is that one must refer to a cohesive, interchangeable item (a minimal unit), and the other must not (a member, besides a minimal unit). For instance, the English ending *s* is a singular marker, as it occurs in *ants* (minimal unit) and *boys* (members). Finally, a substance is an unmarked stem that cannot be expanded using any of the aforesaid number markers.

Having fine-tuned the definition of collection-semantics on cross-linguistic grounds, it is now time to determine how its different individuation types manifest themselves in *kalām al-'arab*. They can

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[36] Grimm (2018:546) refers to divisibility and indivisibility as 'spatial separation' or lack thereof. Grimm (2018: 548) also deals with divisiveness, which is not to be confused with divisibility. In the literature, divisiveness or, alternatively, divisivity overlaps to a good extent with what is called here interchangeability. Finally, Grimm (2018: 546-547) labels a non-granular aggregate as a 'collective aggregate,' but this term is avoided here since it refers to a bundle of features whose morphological realization does not necessarily correspond to a collective. This can be the case for Arabic (see immediately below), but not for English, as is shown by the word *naml* and its gloss 'ants.'

[37] While sharing indivisibility, a minimal unit and a member differ as to cohesion and interchangeability.

be determined chiefly through morphological diagnostics, but a semantic study of the referents involved in such types is also helpful. What is traditionally referred to as a collective (e.g., *'arab* 'Arabs,' *naml* 'ants') qualifies as a non-granular aggregate because of its unmarked status, and its ability to be expanded through a singulative *at* and a singular *iyy*. This analysis is justified by the fact that *iyy* refers to individuals with high animacy who are not interchangeable, i.e., members (e.g., *'arab-iyy* 'an Arab'), whereas *at* does not (e.g., *namla* 'an ant').

The inherent plural qualifies as a granular aggregate because of its unmarked status (see the end of Section 3.4., 3.5.) and its ability to be expanded only through a singulative *at* (e.g., *'iḍa* 'limb,' *ḥaqwa* 'flank'). For the same morphological reasons, *dhawd* and *tamarāt* 'dates,' the basic form of *tumayrāt*, are also granular aggregates. In particular, the unmarked status of *tamarāt* is deduced from its ability to be expanded through a further plural marker besides the sound ending *āt* (see the end of Section 3.4.): in *tamarāt, āt* co-occurs with the infixal plural marker *a*, as first observed by Greenberg (see Ratcliffe 1998: 71-72, 221-223 for an updated discussion). A semantic consideration also corroborates this interpretation. Upon closer scrutiny *tamarāt* refers to a foodstuff (cp. *rice* above), not just fruit: the early lexicographer Abū Ḥātim (d. 255/869) defines *tamr* as dry dates that are processed (i.e., gathered and dried out) and stored collectively (Lane 1863, s.v. *TMR*). Finally, *mā'* qualifies as a substance due to its inability to be expanded by a singulative marker, etc., except for the Tamīmi dialect (see Part One, Section 4.3.).

These three individuation types related to collection-semantics, as well as the one related to member-semantics, are basic forms that function as environments of [SOME] and [SMALL] to yield diminutivized forms. It should be recalled in this regard that in *kalām al-'arab* two kinds of basic forms are attested (see the end of Section 3.1.): those that already encode [SOME] or [SMALL] as a lexical meaning (Class I) and those that do not (Class II). All the individuation types under scrutiny are observed in both kinds of basic forms, which results in the distributional scenario summarized in Tables 7. and 8.[38]

It is apparent that collection-semantics is the prevailing environment of the diminutive.

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[38] All the basic and diminutivized forms mentioned in these tables are illustrated in this section, in the next section, or in the first installment of this study, except for *shuway'irūna*, which is attested in *al-Kitāb* (III, 493-494). The widespread use of this term, beginning with the early treatises of literary criticism (e.g., by al-Jumaḥī, d. 232/847), confirms its authenticity. Finally, the term *shujayra* 'little tree,' reported by the early lexicographer Abū Ḥanīfa (*Lisān al-'Arab,* I, 90), exemplifies a diminutivized minimal unit derived from a non-granular aggregate (*shajar/a* 'tree/s'). This instance of a diminutivized form is authentic, given the dialectal parallel *ḥmeyyme* 'un petit morceau de carbon,' from the non-granular aggregate *ḥmūm/e* '(morceau de) charbon' (data from Ḥassāniyya Arabic: cp. Taine-Cheikh 1988: 90).

Semantic environment		Forms		Semantic structure					
Collection	Individuation type	Basic	Diminutivized	A	B	C	D	Basic	Diminutivized
NO	members	ṣaghīrūna	(ṣukhārū)	[MORE]	NO	YES	**YES**	[SMALL]	[SMALL]
YES	non-granular aggregate	—	dhubāb		YES	YES	**YES**	-	[SMALL]
YES	granular aggregate#1	ʿidūna	—		YES	YES	**NO**	[SOME]	?
YES	granular aggregate#2	arjul	urayjil		YES	YES	**NO**	[SOME]	?
YES	granular aggregate#3	dhawd	dhuwayd		YES	YES	**NO**	[SOME]	[SOME]
YES	substance	ḥaṭīm	ḥuṭām		YES	NO	**NO**	[SOME]	[SOME]
YES	minimal unit	—	dhubāba	[ONE]	YES	?	NO	[SMALL]	[SMALL]
NO	member	ṣaghīr	ṣughār		NO	?	NO	[SMALL]	[SMALL]

Key to symbols: A: number   B: cohesion, interchangeability   C: perceptibility of minimal units   D: divisibility

Table 7. The semantics of the diminutivized forms, from basic forms of Class I

Semantic environment		Forms	Semantic structure				
Collection	Individuation type	Diminutivized	A	B	C	D	Diminutivized
NO	members	shuwayʿirūna	[MORE]	NO	YES	YES	?
YES	non-granular aggregate	—		YES	YES	YES	?
YES	granular aggregate#4	tumayrāt		YES	YES	**NO**	[SOME]
YES	substance	muwayha		YES	NO	**NO**	[SOME]
YES	minimal unit	jufayna	[ONE]	YES	NO	NO	[SMALL]
NO	member	ruwayjil		NO	?	NO	[SMALL]

Table 8. The semantics of the diminutivized forms, from basic forms of Class II

4.2. A relic diminutive

A systematic examination of all the individuation types that undergo diminutivization in *kalām al-ʿarab* reveals that their morphological realizations include, besides *.u.ay.*, a relic diminutive marker *.u.ā.*, attested as early as Akkadian (Fox 2003: 229-230).

Such morphological realizations are briefly illustrated in the following. The basic form *ḥaṭīm* and the corresponding diminutivized form *ḥuṭām* refer to a substance, as they cannot be expanded using a marker (see the previous Section). The early lexicographer al-Liḥyānī (second half of the eighth century) glosses *ḥaṭīm* as 'herbage remaining from the preceding year, because dry and broken in pieces'[39] (*mā baqiya min nabāt [...] ʿan-i l-liḥyānī: Lisān al ʿArab*, XII, 138), where the verb *baqiya* 'remaining' denotes a part of the collection *nabāt* 'herbage,' corresponding to [SOME] in modern componential terms. Another early lexicographer, Abū Ḥanīfa (d. 282/895), defines *ḥaṭīm* and *ḥuṭām* as semantically

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[39] Lane's (1863, s.v. *ḤTM*) translation.

equivalent when glossing the term *hazm* in a line of poetry: 'Abū Ḥanīfa [...] said [...] *hazm* [...], that is *ḥaṭīm, ḥuṭām*' (*abū ḥanīfa [...] qāla [...] hazm [...], wa-huwa ḥaṭīm, ḥuṭām*: al-Mukhaṣṣaṣ, X, 200-201). Turning to *dhubāb*, this stem is attested in early Arabic lexicography with the two meanings 'fly' (*Kitāb al-'Ayn*, VIII, 178; cp. also *al-Kitāb*, III, 604) and 'flies' (*al-Nawādir*, 50), and in the latter case it can be expanded through a singulative marker, i.e., *dhubāba*, thus qualifying as a non-granular aggregate. This semantic oscillation is authentic, as it finds a parallel in the Biblical Hebrew *zəbûb*, 'fly' < 'flies' (Fox 2003: 229). In componential terms, the stem subject to this semantic oscillation conveys the same substantive meaning in both singular and plural, its only variation being number. Accordingly, the diminutive marker that is part of this stem must convey the same substantive meaning for both number values. Since the former member of this semantic oscillation clearly conveys [SMALL], i.e., '(intrinsically small) fly,' so does the latter, i.e., '(intrinsically small) flies,' and not 'some flies.' Finally, in *Tāj al-'Arūs* (XII, 322) *ṣughār* is said to be semantically equivalent to *ṣaghīr*, and their semantic equivalence is traced back to the dialectal usage (*alladhīna yaqūlūna*) recorded by Sībawayhi. Both forms function as an adjective ('small'), which can be substantivized to signify 'child.' This data is reliable, since *ṣughār* finds a parallel in the Akkadian *ṣukhārū* 'lads, servants' (Fox 2003: 230), a sound plural whose stem is *ṣukhār*.

4.3. The semantics of the diminutive in noun plural marking

The diminutivized individuation types follow a pattern of complementary distribution in the domain of multiple reference: [SMALL] refers to a divisible multiple referent, while [SOME] refers to an indivisible one, as is illustrated in bold in Tables 7. and 8. above.

In particular, *any* individuation type follows this pattern, as is illustrated in the grey cells of Tables 7 and 8. The systemicity of this pattern allows for the following inductive generalization: the instances of the individuation types where the occurrence of [SMALL] and [SOME] is so far unclear can be assigned either feature, based on their reference to a divisible or indivisible multiple referent. These instances are marked with the symbol '?' in Tables 7 and 8 and tabulated in the white cells of Table 1. Thus, a diminutivized masculine sound plural of paucity such as *shuwayʿirūna* (*al-Kitāb*, III, 493-494) denotes 'small poets' in a metaphorical sense, i.e., 'poetasters,' rather than 'a few poets,' since 'poets' are a divisible multiple referent. The same holds for *futayyūna* (*al-Kitāb*, III, 491), which denotes 'small young ones,' not 'a few young ones.' Conversely, a diminutivized broken plural of paucity such as *urayjil* (*al-Kitāb*, III, 491) cannot mean 'small paws,' since paws are an indivisible multiple referent. Rather, *urayjil* denotes paws that are few in number, with the caveat that the most natural reading of 'few' is the low number value 'four' implied by this kind of referent. That is, *urayjil* encodes [SOME] as a lexical meaning.

In this respect, it 'repeats' a number value that already occurs in its basic form *arjul*, which amounts to saying that in *urayjil* the diminutive performs a doubling function (on which see Section 1.).

This pattern of complementary distribution confirms only in part the historical reality of Sībawayhi's description. The early grammarian states that both the diminutivized broken and masculine sound plurals of paucity convey paucal meaning, i.e., [SOME] (see Part One, Section 3.2., and Section 4.1., Text 3.). Yet the pattern under scrutiny confirms his description only insofar as the diminutivized broken plural of paucity refers to multiple body parts, as illustrated in the white cells of Table 6 above. In this respect, it is totally expected that the diminutivized broken plural of paucity *ṣubayya* means 'small boys' in a line of poetry cited by Sībawayhi himself, in spite of the latter's claim that it signifies 'a few boys' (cp. Part One, Section 3.2.).

Sībawayhi's description therefore posits a uniform semantics in terms of [SOME] for the diminutivized plurals of paucity in *kalām al-'arab* that does not result from the linguistic materials themselves, and must be explained otherwise. Such a uniform semantics might be due to Sībawayhi's need to systematize raw linguistic materials: he might have exclusively assigned [SOME] to the diminutivized plural of paucity, to create a clear-cut opposition between it and the diminutivized singular, which always conveys [SMALL].

4.4. The semantics of the diminutive in noun singular marking

The distributional analysis of the basic and diminutivized individuation types can be extended to the domain of the single referent, i.e., [ONE], which may be either cohesive, interchangeable (minimal unit), or not interchangeable (member), but in any case, is *indivisible* ('individual'), as illustrated in Section 4.1. Including the *indivisible single* referent in the picture reveals a pattern of identity between this domain and a subdomain related to the multiple referent ([MORE]): this subdomain is the *divisible multiple* referent, consisting of the non-granular aggregate and of members. In fact, the *divisible multiple* referent, like the *indivisible single* referent, conveys [SMALL]. This is illustrated in the cells in bold in Table 9. below.

Semantic environment	Forms			Semantic structure			
	Class I	Class II					
Individuation type	Diminutivized	Basic	Diminutivized	A	E	Basic	Diminutivized
members	shuwayʻirūna!	ṣaghīrūna	(ṣukhārū)	[MORE]	**individual**	[SMALL]	[SMALL]
non-granular aggregate	—	—	dhubāb		**individual**	—	[SMALL]
granular aggregate#1	—	ʻidūna	—		*collection*	*[SOME]*	—
granular aggregate#2	—	arjul	urayjil!		*collection*	*[SOME]*	*[SOME]*
granular aggregate#3	—	dhawd	dhuwayd		*collection*	*[SOME]*	*[SOME]*
granular aggregate#4	tumayrāt	—	—		*collection*	—	*[SOME]*
substance	muwayha	ḥaṭīm	ḥuṭām		*collection*	*[SOME]*	*[SOME]*
minimal unit	shujayra	—	dhubāba	[ONE]	**individual**	—	[SMALL]
member	ruwayjil	ṣaghīr	ṣughār		**individual**	[SMALL]	[SMALL]

Key to symbols: A: number   E: locus of indivisibility   !: meaning derived by inductive generalization

Table 9. The semantics of the diminutivized forms, from basic forms of Classes I, II - Reformulation

The substantial identity between the domain and subdomain under scrutiny is due to their sharing the same feature, namely an indivisible single referent. In fact, *a divisible multiple referent can be reduced to an indivisible single referent*, since the latter consists not only of a member but also of a minimal units. Therefore, from the viewpoint of indivisibility, [SMALL] ultimately refers to an indivisible single item.

Remarkably, the viewpoint of indivisibility also captures the subdomain not considered so far, that of the *indivisible* multiple referent. Since the latter corresponds to a granular aggregate or to a substance, a pattern of complementary distribution emerges, where [SMALL] refers to an *indivisible* single item (minimal unit, member, non-granular aggregate, members), and [SOME] to an *indivisible* collection (granular aggregate, substance). This pattern of complementary distribution, based on the examination of both singular and plural marking, replaces that outlined in the previous Section, based on the examination of plural marking alone. This revised pattern emerges from the comparison of the cells in bold and the ones in italics in Table 9. above.

A further refinement of this pattern is possible if one considers that, just as an indivisible collection consists of minimal units, a *small* indivisible collection consists of *few* minimal units.[40] In componential terms, [SOME] is not a semantic primitive, being rather the sum of [SMALL] and an indivisible collection, which by its own nature consists of [MORE], i.e., of a *multiple* set of minimal units.

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[40] In the literature similar remarks are found, but *indivisibility is not taken into account*. Cp. Fück (1936: 628): 'eine kleine Mehrreit von drei bis zu zehn Einheiten.' Cp. also Corbett (2000: 22): 'The paucal is used to refer to a small number of distinct real world entities. It is similar to the English quantifier 'a few' in meaning.' For instance, the Khalīlian gloss of *dhawd* focuses on the perception of this referent as 'some entities' ('*l-dhawd* is from three to ten [taken] out of a camel herd': see *al-ʻAyn*, VIII, 55 and Part One, section 4.3); while Musil's gloss (1928: 336, 341) of the same referent as 'little herd' focuses on its perception as a 'small collection.'

This is schematized in 23.b.ii. below. Accordingly, the pattern of complementary distribution under scrutiny is reconceptualized as one and the same feature [SMALL], which *always refers to an indivisible referent*, regardless of whether the latter occurs in the environment of [ONE] (individual) or [MORE] (indivisible collection). This semantic behavior of [SMALL] is known as 'permeability' in the literature (see, e.g., Dror 2016: 106, 120), where it is invoked to explain semantic contrasts such as *a small family* vs. *small people*, where *small* refers respectively to a collection or members, as shown by the respective paraphrases 'a small group' and 'small persons.' This is summarized in 23.a.:

23.   a.   Permeability of [SMALL]

[SMALL] refers to the first available indivisible referent: an indivisible collection (substance, granular aggregate) or, alternatively, an individual (minimal unit, member)

b.   The internal structure of [SOME]

i.   [SMALL] = [SMALL] + [ONE]INDIVIDUAL

ii.   [SOME] = [SMALL] + [MORE]INDIVISIBLE COLLECTION

c.   Isomorphism (one form—one meaning)

u.ay. = [SMALL] in all environments[41]

Permeability is illustrated in Table 10 below.

Semantic environment	Forms			Semantic structure		
	Class I	Class II				
Individuation type	Diminutivized	Basic	Diminutivized	E	Basic	Diminutivized
members	shuwayʻirūna!	ṣaghīrūna	(ṣukhārū)	individual	[SMALL]	[SMALL]
non-granular aggregate	—	—	dhubāb	individual	—	[SMALL]
granular aggregate#1	—	ʻidūna	—	collection	[SMALL]	—
granular aggregate#2	—	arjul	urayjil!	collection	[SMALL]	[SMALL]
granular aggregate#3	—	dhawd	dhuwayd	collection	[SMALL]	[SMALL]
granular aggregate#4	tumayrāt	—	—	collection	—	[SMALL]
substance	muwayha	ḥaṭīm	ḥuṭām	collection	[SMALL]	[SMALL]
minimal unit	shujayra	—	dhubāba	individual	—	[SMALL]
member	ruwayjil	ṣaghīr	ṣughār	individual	[SMALL]	[SMALL]

Key to symbols: A: number   E: locus of indivisibility   !: meaning derived by inductive generalization

Table 10. The semantics of the diminutivized forms, from basic forms of Classes I, II - Reformulation

[41] 23.c. is not meant to register the obvious fact that .*u.ay.* conveys [SMALL], but that the latter is the only meaning of this marker, since [SOME], whenever occurring, can be reduced to [SMALL].

Permeability has two important implications for the understanding of the meaning of the diminutive in *kalām al-ʿarab*. First, the distribution of [SOME] in the diminutivized plurals and collectives and, generally speaking, in their corresponding basic forms, far from being random or an invention of the grammarians, simply depends on the presence of an indivisible collection, or lack thereof. In this respect, *collection-semantics is the crucial factor in determining the semantics of the diminutive*, as alluded to in Section 4.1. Second, the relationship between [SMALL] and [SOME] is one of identity: the two features do not vary in nature, they vary in their distributional environment, as schematized in 23.b above. *Their substantial semantic identity is reflected in their identical morphological realization*, with generally one form *.u.ay.* for one meaning [SMALL] (isomorphism), as is schematized in 23.c. above. The relic form *.u.ā.* behaves in the same manner (see, e.g., *ṣughār, ḥuṭām* in Table 9. above).

The substantial identity between [SMALL] and [SOME] should not obscure their diachronic differentiation: [SMALL] referring to an individual develops metaphorical and pragmatic nuances, such as the aforesaid pejorative *shuwayʿirūna* 'poetasters,' while [SMALL] referring to an indivisible collection evolves into a full-fledged number value, for which the notation [SOME] has been used consistently throughout this study. That [SMALL] referring to an indivisible collection is also a number value, which stands for three to ten entities or the like, is shown by its *countability*. The claim is usually found in the literature that this kind of [SMALL] refers to a quantity in collectives (see, e.g., Fück 1936: 628, Taine-Cheikh 1988: 90-91). If one were to concede this, a more specific definition would nonetheless be required: [SMALL] may refer to an *indivisible* or *divisible* quantity, not only in collectives, but also in plurals. Even so, this definition is not satisfactory, as it neglects the number value status of this kind of [SMALL].

4.5. Double marking

In the first installment of this study it was argued, based on data such as *tumayrāt,* 'some dates,' *dhuwayd* 'some she-camels,' and *ʿubadiyy* 'a man from ʿAbīda,' that in *kalām al-ʿarab* the diminutive actually adds no extra meaning of physical or metaphorical smallness to the basic noun to which it is added (see Section 1.).

The substantial identity between [SMALL] and [SOME] schematized in 23.b.-c. above falsifies this interpretation. Such an identity makes it clear that the diminutive indeed adds an extra meaning of physical or metaphorical smallness to *any* diminutivized form whose basic form does not encode [SMALL], including *tumayrāt*, which now qualifies as a 'small (indivisible) collection of dates.' This is shown under the columns 'Class I' and 'Semantic structure' in Table 10. above.

At the same time, however, the substantial identity between [SMALL] and [SOME] also corroborates the above interpretation, since it clarifies that the diminutive adds *no* extra meaning of physical or metaphorical smallness to *any* diminutivized form whose basic form already encodes [SMALL], including *dhuwayd*, which actually means 'a small (indivisible) collection of she-camels' even before diminutivization (cp. *dhawd*, which conveys the same meaning). This is shown under the columns 'Class II' and 'Semantic structure' in Table 10 above. In this kind of diminutivized form, the diminutive often 'repeats' and retains [SMALL] of the basic form, thereby performing a sort of doubling function involving this feature. This is shown in the grey cells of Table 10. above.

A particular instance of the doubling function involves [SMALL] *as a number value* (see the end of the previous Section). In the first installment of this study (Part One, Section 7.2.), the basic form *dhawd* was shown to ambiguously convey both the number values [SOME] and [MANY] or, more accurately, [MORE] at a certain language stage, with the diminutive being added to solve this semantic ambiguity, through the 'repetition' and insertion of [SOME] only. In light of the foregoing, *dhawd* is better viewed as a granular aggregate that by its own nature conveys [MORE], and its semantic oscillation in number value as a function of the presence or absence of [SMALL]. Accordingly, the diminutive solves the semantic ambiguity of *dhawd* by simply 'repeating' and retaining [SMALL]. This is schematized in 24.a. below:

24.a.   *dhawd* [SMALL] [MORE]   b.   banū$_X$ 'abīda [SMALL] [MORE]

'abīd [MORE]

dhawd [SMALL] [MORE] / [MORE] ?   'abīdiyy [SMALL] [ONE] / [ONE] ?

dhuwayd **[SMALL]** + [SMALL] [MORE] / [MORE]   'ubadiyy **[SMALL] [ONE]** + [SMALL] [ONE] / [ONE]

/ = or   **[FEATURE]** = inserted feature   [FEATURE] = ungrammatical reading

The doubling function observable in the grey cells of Table 10 does not include *'ubadiyy* 'a man from 'Abīda,' for the simple reason that this diminutivized form instantiates a different kind of doubling function, one that does not simply involve [SMALL]. In Part One, Section 6., the basic form *'abīdiyy* in the singular was shown to ambiguously refer to two ethnonyms, *'abīd* and *'abīda*, with the diminutive being added to solve this semantic ambiguity, thus yielding *'ubadiyy*, a diminutivized form that 'repeats' and retains only the instance of [ONE], i.e., the singular, that refers to *'abīda*. While the details of this process were not totally clear, it was nonetheless apparent that this kind of diminutive was morphologically realized as *.u.a.* only when it occurred in the environment of [ONE] (cp. *qurashiyy* vs. *quraysh*), and that

it found a semantic parallel in the dialectal *msê'îdi* 'a man from Masâ'îd.' Further details can now be provided to facilitate a thorough understanding of this kind of doubling function.

In *kalām al-'arab*, a lexical field of small animals is attested: *ju'al* 'scarab beetle,' *ṣurad* 'shrike,' *juradh* 'rat,' *khuzaz* 'male hare,' etc. (see *Kitāb al-'Ayn*, I, 229, IV, 136, VI, 94, VII, 97 and Fox 2003: 220). In these stems, a marker *.u.a.* that occurs in the environment [ONE] conveys [SMALL]. In the stem *'ubad* of *'ubadiyy*, the same marker *.u.a.* occurs in the same environment, so distributionally it can be assigned the same semantic content [SMALL]. In *'ubadiyy*, this feature metaphorically refers to smallness in age, according to a widespread cross-linguistic pattern that construes tribe members as 'sons, children' (Jurafsky 1996: 548, 553): *'ubadiyy* is likely to signify 'a child of 'Abīda.'[42] This interpretation, based on distributional and cross-linguistic arguments, is supported by a close reading of Sībawayhi's text, where *'abīda* ' 'Abīda,' the basic form of *'ubadiyy*, co-occurs with the annexee *banū* in the construct state *banū 'abīda* (see *al-Kitāb*, III, 335-6 and Part One, 4.1.): in the annexee *banū*, tribe members are construed as 'sons, children,' as much as in *'ubadiyy.*

This refinement in the description of the paradigm of *(banū) 'abīda, 'ubadiyy* highlights that it indeed contains a metaphorical [SMALL] ('child/ren'), but neither in the collective stem *'abīda* nor in its singular marker *iyy*. This metaphorical [SMALL] rather occurs *outside them* as a synthetic alternant, namely the diminutive marker *.u.a.* in the enviroment [ONE], and as an analytical alternant, namely the lexeme *banū*, in the environment [MORE]. Thus, two instances of [ONE] are observed in *'ubadiyy*: one is the singular *iyy* related to the collective *'abīda*, and the other is the singular diminutive *.u.a.* related to the plural lexeme *banū*. This quite peculiar semantic structure of *'ubadiyy* is straightforwardly accounted for through its comparison with its basic form *'abīdiyy*. In the latter, the singular *iyy* is combined with a stem *'abīd* that can be ambiguously derived from the collective *(banū) 'abīda* or from the collective *'abīd*, so that the [ONE] of *iyy* ambiguously refers to a tribesman of the 'children of 'Abīda' or to a tribesman of the 'Abīd. *Ceteris paribus*, in *'ubadiyy* the singular diminutive marker *.u.a.* is added, which crucially conveys a feature [ONE] co-occurring with [SMALL], and therefore restricts the reference of the [ONE] of *iyy* to which it is added. The [ONE] of *iyy* now can only refer to a tribesman of the 'children of 'Abīda,' since this is the only meaning compatible with [SMALL] of *.u.a.* . This is schematized in 24.b. above.

In *'ubadiyy*, the singular diminutive *.u.a.* thus characterized clearly 'repeats' and retains the feature [ONE] of the singular *iyy* to solve the semantic ambiguity between 'a child of 'Abīda' and 'a

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[42] In this sense, the distributional argument made in Part One, Sections 5, 6 that *'ubadiyy* cannot convey the literal meaning 'little man from 'Abīda' remains valid.

member of 'Abīd.' To the extent that it exhibits two instances of [ONE], with one disambiguating the other, *'ubadiyy* performs a doubling function involving [ONE]. In this instance of doubling, the pre-existing feature subject to ambiguity is [ONE], while the feature that is inserted through diminutivization as a disambiguating device is [SMALL]. Plainly, the pre-existing and inserted features involved in this process are not one and the same thing. In this respect, this kind of doubling function clearly differs from that involving [SMALL] as a number value, where [SMALL] is at once the pre-existing feature subject to ambiguity as well as the disambiguating device.

Despite this difference, the two kinds of doubling functions converge in a major respect: in both, a number value is 'doubled' through diminutivization, namely [SMALL] and [ONE] or, in traditional terms, the paucal and the singular. This is illustrated in the last lines of 24.a.-b. above. In this sense, what has been provisionally defined throughout this study as the 'doubling function' can be identified with the phenomenon of double number marking that manifests itself in *kalām al-'arab*, at least in the cases of *'ubadiyy, dhuwayd,* and *urayjil,* which semantically falls within the same individuation type as *dhuwayd.* Consequently, in *dhuwayd* and *urayjil,* what has been defined so far as 'the diminutive that adds no extra meaning' is now reconceptualized as a number marker (developing out of an original diminutive: see Section 4.4.), which 'doubles' a pre-existing number marker:

25.   Double number marking in *kalām al-'arab*

Double plural marking: *dhuwayd, urayjil*: $[SMALL]_{NUM} + [SMALL]_{NUM} [MORE]_{NUM}$

Double singular marking: *'ubadiyy:* $[SMALL] [ONE]_{NUM} + [SMALL] [ONE]_{NUM}$

NUM = number value $[SMALL]_{NUM} + [MORE]_{NUM}$ = paucal

5. Conclusions

5.1. Outcomes

The category of plural of paucity described by Sībawayhi is historically founded in the case of a restricted set of referents: multiple body parts, e.g., *arjul* 'paws.'

The plural of paucity thus characterized conveys paucity intrinsically, as a lexical meaning: e.g., the most natural reading of *arjul* in the sense of 'paws,' is 'four paws.' Paucity is a number value, as it triggers countability of the body part referents to which it applies, e.g., *arjul.* Plausibly, the resulting category of plural of paucity in *kalām al-'arab* is not language-specific.

Semantically, a restricted set of referents conveying paucity is cross-linguistically an instance of minor number, so the plural of paucity can be defined accordingly. The inherent plural of paucity

brings to light a four-member number system for *kalām al-'arab* (singular, dual, paucal, plural), which includes this category as a minor number. Morphologically, body part referents can be realized in Italian in peculiar ways, such as gender inversion and unique exponence, in which case an inherent plural obtains: the plural of paucity that displays similar traits, e.g., *asinna < sinn*, with *i* as a unique exponent, can be defined accordingly.

Like the plural of paucity, the category of plural diminutive described by Sībawayhi is also historically founded in the case of nouns referring to multiple body parts. Sībawayhi describes the plural diminutive as conveying paucity. Since the nouns referring to multiple body parts already convey paucity intrinsically, and since this meaning qualifies as a number value, Sībawayhi's description implies that in this kind of noun the plural diminutive simply 'repeats' a number value; i.e., it is an instance of double plural marking in typological terms: e.g., *arjul* 'paws' > *urayjil* 'paws.' Otherwise, i.e., in the case of individuals, the plural diminutive conveys smallness like the singular diminutive: e.g., *ruwayjil* 'little man' and *shuway'irūna* 'little poets' (in a metaphorical sense, i.e., 'poetasters').

Upon closer scrutiny, paucity expresses two semantic facets: multiple body parts are (I) an indivisible collection and (II) a small amount. In this sense, paucity is smallness that refers to an indivisible collection. This reanalysis realigns the plural diminutive of body part referents with the plural and singular diminutive referring to individuals, as it makes the former type of diminutive convey smallness like the latter. Smallness referring to either an indivisible collection or individuals is known in the literature as permeability.

5.2. Research perspectives

Morphologically, the inherent plural of paucity in *kalām al-'arab* can be realized as a biconsonantal masculine sound plural, e.g., *'iḍīna* 'limbs,' which can sometimes be marked by a broken plural, e.g., *aydīna* 'hands.'

This phenomenon is traditionally labeled *jam' al-jam'*. This and other traits lead to an identification of the inherent masculine sound plural of paucity with the dialectal pseudo-dual: e.g., *aṣāb'ēn* 'digits' parallels *aydīna*. *In particular, instances of inherent plurals of paucity such as aydīna 'hands' and aṣāb'ēn 'digits' raise the possibility of identifying the traditional notion of jam' al-jam' with double plural marking.*

Semantically, the inherent masculine sound plural of paucity fine-tunes the traditional distinction between collective and plural on a scale of individuation, in which low number (cp. a granular aggregate such as *'iḍīna*) is as significant as animacy (cp. members such as *shu'arā*'). *This raises*

the possibility of defining the masculine sound plural in terms of individuation, i.e., animacy and low number, rather than of animacy alone, contrary to standard assumptions.

Shifting from a synchronic to a diachronic perspective, it may be tentatively suggested that semantically the inherent broken plural of paucity develops into a broken plural of paucity in general (i.e., not referring to multiple body parts) by analogy, via spatial contiguity, thus extending to body parts in general (e.g., *alsun* 'tongues') and to surrounding natural entities (e.g., *aklub* 'dogs,' *anjum* 'stars'). Morphologically, a defining trait of the inherent plural of paucity is the biconsonantal stem— either bare, as in the masculine sound plural, or expanded through a glide or a geminated consonant, as in the broken plural.

This process of expansion raises the possibility that the broken plural of paucity originates from the biconsonantal masculine sound plural of paucity through the addition of a glide or geminated consonant. This hypothesis in turn could refine the traditional assumption that the broken plural originates out of a collective by specifying that *the broken plural originates out of an indivisible collective, i.e., a granular aggregate.* This origin would explain *the broken plural's underivability from a singular and its countability as features it inherits from a granular aggregate morphologically realized as a biconsonantal masculine sound plural, e.g., 'iḍīna.*

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