

Earlier Egyptian passive forms associated with reduplication¹

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At first sight, Earlier Egyptian passive forms associated with reduplication of the last root consonant (*sdmm=f*, *ddd(.t)*) would lend themselves to a straightforward interpretation as forms marking the grammatical function of passive by means of partial reduplication. As a consequence, Earlier Egyptian would be a language with three types of morphological passives²: V-passives³ (= “*sdm(w)*-passives”), t-passives (= “*tw*-passives”) and reduplicating ones.

Such an interpretation of passive forms associated with reduplication as instances of a reduplicating passive type leads to a picture that is / would be typologically remarkable in two respects:

- cross-linguistically, reduplication is a possible, but very untypical passive marker (§2);

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2 The notion of morphological *type*, to be distinguished from morphological *form*, is introduced here to allow subsequent analysis and modeling of paradigms, internal and typological. Note that a morphological type may encompass one or more distinct forms, as is the case *e.g.* for the t-passive. The labels themselves are motivated by the characteristic morphology of each type: the t-passive is marked by a morpheme {*t*}, while the V-passive is marked by stem alternation of some sort, involving vowel quality. For a discussion of the morphographemics of V- and t-passives, leading to a contrastive characterization as morphological types (form, semantics, typological and comparative connections), see Stauder (forthc. a).

3 The label “V-passive”, referring to the morphological *type*, does not carry any implication about the number of *forms* comprised by the type. As such, it is neutral with respect to the ongoing debate as to whether the V-passive comprises two forms, at least in the PT (Allen 1984: 348-358) and CT (Schenkel 2004; 2005), or only one (Reintges 2004: 53-62). This is not to say that no positive argument can be made in relation to this issue (see Stauder forthc. a.). However, for the purpose of the present paper – which is devoted to a different issue, the *sdmm=f* / *ddd(.t)* forms – I intentionally keep to a neutral formulation in order that the argument to be developed about reduplicating forms is not made contingent upon a particular stance as to the number of V-passive forms in the PT and CT.

The label “Basic” V-passive, to be used later (§7.2-§7.3), denotes the basic form of the V-passive. Outside the PT and CT, as well as in the hypothesis of a single V-passive, this is *the* (single) V-passive form. In the hypothesis of two V-passives in the PT and CT, this is the form not specifically marked as Prospective. The Basic V-passive’s fundamental value is the one of the morphological type itself, a non-imperfective passive (§3.3), with the effect that the Basic V-passive can be used both in perfective and Prospective environments.

- when a language has multiple passive types, these differ from each other in cross-linguistically recurring ways; the hypothesized third Earlier Egyptian passive type does not conform to any of these patterns of multiple passive distribution within a given language (§3).

Against this background of a single interpretation leading to a twofold oddity, I critically question the implicit inference which leads from “passive forms *associated with* reduplication” to “passive forms *marked by* reduplication”.

None of the extant theses on the *sdmm=f* and *ddd(.t)* gives a specific account of the multiple distributional restrictions bearing on these forms at three levels: text *corpora*, inflectional classes and Tempus-Aspect-Modus. I show that these restrictions cannot be addressed in terms of “reduced productivity” of an archaic layer in the verbal system and thus do require a positive account of some sort (§4).

Building upon these multiple restrictions as necessary *explananda*, I stepwise elaborate an alternative proposal in connection to broader morphological issues of the Earlier Egyptian synthetic conjugation, the V-passive and the Prospective in the PT and CT (§5), leading to a new proposal for the nature of the *sdmm=f* / *ddd(.t)* forms (§6).

This general formulation is then further specified through modeling of the morphological and prosodic peculiarities of the inflectional classes relevant to each form (§7)⁴.

1 Theses on the *sdmm=f* / *ddd(.t)* forms

1.1

Theses on Earlier Egyptian passive forms associated with reduplication can be classified as falling into two groups according to whether they interpret these forms as marking the grammatical function of passive by means of reduplication (type A-theses) or not (type B-theses)⁵.

Theses that posit a passive marker involving reduplication (type A) necessarily imply that the *sdmm=f* / *ddd(.t)* forms are *instances of a morphological type*, distinct

4 Further conventions used in this article are:

- TA(M): the verbal categories of Tempus-Aspect(-Modus).

- Prospective: signaling the conventional nature of language-specific grammatical labeling, conjugational tenses are capitalized. Hence, “Prospective” stands for the Egyptian formal category *sdm=f* / *ir(w)=f* in the Allenian sense (1984: 236sq.), without carrying any necessary implication that the Prospective is a “prospective” in one of the various functional definitions (e.g. Comrie 1976: 64-65). In conjunction with the discussion of other forms (the *sdmm=f* in particular), the label “Prospective” is further used in a functional sense *specific to Earlier Egyptian*, as referring to the distributional environments in which the Prospective form is found.

5 The approach proposed by Schenkel (1985: 490-491) will not be discussed here, given that it crucially relies on a reconstruction of the active Prospective now rejected by the author himself (Schenkel 2000: 51-52).

from both non-reduplicating types, the V-passive and the t-passive⁶. Type B-theses carry no such implication.

Furthermore, type A-theses tend to address the restricted distribution of the $s\bar{d}mm=f$ and the $\bar{d}dd(.t)$ forms (text *corpora*, inflectional classes and TAM, see §4.1) as reflecting the recessive character of the hypothesized reduplicating passive type. Type B-theses may or may not explain the distributional restrictions differently.

1.2

Within the general epistemological horizon of the then dominant *Passivtheorie*, classical approaches underscore the formal similarity between finite and non-finite passive forms associated with reduplication ($s\bar{d}mm=f$, $\bar{d}dd(.t)$), which is put in relation with the formal similarity between finite and non-finite V-passives ($s\bar{d}m(w)=f$ form(s), passive participles).

Taking into account that both the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms and the finite V-passives are similarly banned from imperfective contexts, the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms are aspectually characterized as “perfective” in a way similar to the V-passive (Gardiner 1957: 343). Elaborating upon this tradition, Loprieno (1986: 51-52) argues that the formal category represented by the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms is, along with the V-passive (and the t-passive in Loprieno’s approach), an instance of his “perfective-prospective-passive” semantic archicategory (1984).

These “perfective” approaches to the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms either posit a reduplicating passive type (type A, Gardiner 1957: 343), or interpret the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms as byforms to V-passives (type B, Edel 1955: 264)⁷, or stay neutral in this respect (Loprieno 1986: 51-52).

1.3

Reintges’ approach to the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms is the most explicit type A-approach to date.

The various types of partial and full reduplication – “pluriactional” (e.g. *wnwn* “sway to and fro” : *wn* “hasten”), “imperfective” (the *mrr-* stem) and “passive” (the $s\bar{d}mm=f / \bar{d}dd(.t)$ forms) – are analyzed as standing in complementary distribution to each other (Bendjaballah & Reintges 2007: §2.5, §3.3; Reintges 2003: 182-184). It is then argued that the hypothesized reduplicating passives are distinguished by being generated at a different level than V-passives and t-passives: “the Older Egyptian reduplicative passive represents a stem pattern in its own right with low productivity and stem-specific idiosyncrasies. In this respect, it differs systematically from the

6 This implication is made fully explicit only in Reintges’ account and the specific glossing / label he introduces for the hypothesized type, as “passive 3” (see for instance Reintges forthc.: ch. 4; 1997).

7 Historically, one might recall in this connection the (type B) approach of Sethe (1899: ii, §478), who considered Earlier Egyptian passives associated with reduplication to be varieties of the V-passive, reduplication being understood on a par with reduplication in the *mrr-* stem. Hence, passive forms associated with reduplication are described as “die Ueberreste aus einer Zeit (...), in der betr. Verben noch nicht 3-rad. sondern Verba III.gem. oder IV.inf. waren, wie die gem. Formen der 2-rad. Verben Ueberreste alter Stämme III.inf zu sein scheinen”.

competing passive patterns, which are syntactically derived" (Reintges 2003: 184; see also Reintges *forthc.*: §4.4).

1.4

Allen's (type B) approach (1984: 535, n. 393) is part of his broader analysis of the Prospective paradigm and relies on the observation that inflectional classes that have a *sḏmm=f* form are essentially those that never show a graphemic ending <-w> in the active Prospective in the PT and CT. Allen hypothesizes that the non-<-w> inflectional classes mark the Prospective, *active and passive*, by reduplication. Reduplication would surface graphemically only in the passive, as a consequence of a prosodic melody that is hypothesized as different from the active, Prospective active **C₁vC₂vC₃C₃*- <*sḏm*> : Prospective passive **C₁vC₂C₃v:C₃*- <*sḏmm*>. Thus, reduplication as found in the *sḏmm=f* rather than being a voice marker would actually be a TAM marker, marking the Prospective for "strong" inflectional classes. Voice would have been marked by prosodic melody, accompanied or not by a particular vowel melody.

Allen does not make any claim about non-finite passive forms associated with reduplication (*ddd(.t)*). In this sense, his account is only a partial one with respect to the problem posed by Earlier Egyptian passive forms associated with reduplication.

2 Passive morphology and reduplication

2.1

Cross-linguistically, reduplication is only exceptionally a passive marker. In Siewierska's study of the passive (1984), no instance is quoted. In a classical typological overview on the passive, it was suggested that passive morphology does not ever involve reduplication (Keenan 1985: 251). In the most recent version of the same overview, at least one instance of reduplicating passives is now reported (Hanis Coos, Oregon / USA, Keenan & Dryer 2006: 333). In another cross-linguistic survey of passive morphology (Haspelmath 1990: 28-32), only a single example of reduplicating passive (Hausa⁸) is quoted which, however, turns out upon closer investigation not to be a passive, but rather a (stative / resultative) derivational adjective⁹. In sum, although reduplication is indeed a possible passive marker (*cf.* Hanis Coos), it seems to be cross-linguistically very rare in this function, contrasting in this respect with other forms of inflectional marking (affixes, stem alternations).

8 Historically, note that the Hausa "passive participle" was adduced as a possible cognate to the Earlier Egyptian *sḏmm=f* / *ddd(.t)* forms by Vycichl (1957).

9 In the foot tracks of Reintges' analysis (2003: 184-185; *forthc.*: §4.4.2), observe that the Hausa reduplicating forms (Newman 2000: ch. 3) are: strictly non-finite; denominal as well as deverbal; when deverbal, stative / resultative in meaning; when de-verbal, oriented semantically, on S (= subject of intransitive clause) as well as on P (= object of transitive clause). Typologically, the Hausa forms are thus a (mostly deverbal stative / resultative) derivational adjective. On Haspelmath's inflectional-derivational continuum of argument-oriented verb nominalization (1994: 171-172), they occupy a more rightward position than passive participles in the narrow sense.

2.2

This strongly skewed distribution is not accidental. Cross-linguistically, reduplication tends to be associated in a remarkably consistent way with a set of interrelated meanings revolving around the notion of “increased quantity”¹⁰, be it “quantity of referents” or “amount of emphasis” (Moravcsik 1978: 317; see also Mayerthaler 1981: 115)¹¹. As far as verbs are concerned (and leaving aside ideophones), reduplication shows a strong correlation with “verbal plurality” (Dressler 1968; Moravcsik 1978: 316-325). In the Semitic domain, reduplication, mostly in the form of gemination, indeed expresses various sorts of verbal plurality (Kouwenberg 1997: 24-26), as well as, *via* grammaticalization, the more abstract meanings of imperfective (Akkadian *iparras* / Ge'ez *y^eqatt^ll*) and of underlining a high degree of salience or transitivity (D-stem) (Kouwenberg 1997; Zaborski 2003). In Egyptian, similar functions can be made out both for both derivational “pluriactional” reduplication (Bendjaballah & Reintges 2007: §2.2, §4.1; Edel 1955: 193-194) and for the more grammaticalized inflectional reduplication / gemination (*mrr*-stem), for which the original association with plurality is still evident within historical Earlier Egyptian in some uses of non-finite forms (Schenkel 1965; Allen 1984: 443-450; Jansen-Winkel 1997), and, possibly, more indirectly in finite forms as well.

Reduplication is only exceptionally a passive marker because the grammatical function of passive cannot be related to the meaning domains to which reduplication tends to be associated, neither immediately nor *via* re-functionalization to more abstract meanings.

More generally, the cross-linguistic variety of formal means coding a given functional (sub-)domain can be understood in a Greenbergian perspective of dynamic typology, as reflecting the variety of possible diachronic pathways along partially overlapping functional (sub-)domains leading to these constructions (Givón 2002: ch.6). Main sources for passive constructions are: middle constructions of various kinds, reflexives, statives, “indefinite”-subject constructions, left-dislocations, nominalizations (Haspelmath 1990; Givón 2001: §13). None of these sources can be related to the meanings typically associated with reduplication.

2.3

Counterpointing the above skews, (full and partial) reduplication is also a mere *form*. As such, it is only to be expected that reduplication may show less typical meanings, not relatable to “increased quantity” neither directly nor *via* further re-functionalization. These for instance include category-changing or category-defining functions (Aikhenvald 2007: 24, 43, 46), or a non-imperfective aspectual meaning (Indo-European non-periphrastic Perfect). It is thus not surprising that a reduplicating passive marker may indeed occasionally be found (*cf.* Hanis Coos, §2.1).

10 Including attenuative meanings, *i.e.* decreased quantity.

11 Note that, contrarily to other forms of morphology, reduplication not infrequently carries a varying degree of iconicity, which in turn might be related to the particular perceptual salience of its form (Kouwenberg 1997: 39; Jakobson & Waugh 2002: 198-200).

2.4

In sum, unlike other morphological means, reduplication tends to be associated with a series of typical meanings, as well as with more abstract meanings derived from the former. None of these typical meanings can be related to the passive, nor to any of its sources (§2.2). As a consequence, the cross-linguistically rather exceptional character of reduplicating passive markers (§2.1) is not an accident of the data.

On the other hand, there is no systemic ban on reduplication being associated with any particular meaning / function (§2.3). Type A-interpretations of Earlier Egyptian passive forms associated with reduplication as forms marked by reduplication are possible. However, they do carry strong typological markedness.

The cross-linguistic typology of functional correlates of reduplication thus casts suspicion on traditional approaches and suggests a more in-depth investigation of the issue of Earlier Egyptian passive forms associated with reduplication¹².

3 Multiple passives

3.1

As an immediate consequence of the interpretation of reduplication associated with Earlier Egyptian passive forms as a passive marker, Earlier Egyptian would possess three morphological passive types, the V-passive, the t-passive and one type marked by reduplication.

According to a cross-linguistic survey, most languages have either no or only one type of morphological passives (Haspelmath 1990: 28)¹³. When a language has multiple passives, these differ from each other with respect to either subject affectedness (degree of affectedness and / or positive vs. negative affectedness) or, more frequently, aspect (Keenan & Dryer 2006: 340-342).

Subject affectedness plays no role for any of the Earlier Egyptian morphological passive types (Stauder *forthc. a.*). Differences must thus be sought at the level of aspect.

12 Typology should certainly not be understood as mechanically banning (other than trivially impossible) individual configurations for a given language. However, recourse to it does provide a broader perspective pointing to those dimensions in a given interpretation of a given language that are shown to be worth a more in-depth investigation, leading either to a better understanding of their peculiar nature in the broader intralinguistic context, or, alternatively, to a different analysis.

13 In the genetically stratified random sample of 80 languages used by Haspelmath for his investigation, 49 languages have no morphological passive at all, making recourse to syntactic constructions (such as “indefinite”-subject constructions) in the functional domain of the passive. Among the languages that do make recourse to morphological passives, 25 have one morphological type only, while 6 languages have multiple morphological types. Among these, 4 languages have two morphological types and 2 languages have three morphological types. No language in the sample makes use of four morphological types.

3.2

Multiple passives that differ from each other with respect to aspect do so in cross-linguistically recurring ways. These revolve around reduced dynamicity and perfect(ive) aspect (Comrie 1982; Keenan & Dryer 2006: 340-341)¹⁴.

The underlying rationale is straightforward. The passive is oriented on the Endpoint, rather than the Initiator, of a state-of-affairs. As such, it is oriented on an argument that typically registers a change of state rather than bringing it about. It is no surprise therefore that statives constitute a major diachronic source for passive constructions. The evolution from stative to passive goes through a resultative stage (Nedjalkov 1988) and so naturally leads to a passive aspectually marked as perfect(ive) (Comrie 1976: 84-86). By contrast, other diachronic sources – middle constructions of various kinds, reflexives, “indefinite”-subject constructions, left-dislocations, nominalizations (Haspelmath 1990; Givón 2001: §13) – are aspectually neutral in terms of the passives they lead to (Stauder *forthc.* a, b). As a consequence, any aspectual skew in a given language will be towards reduced dynamicity and / or perfect(ive)¹⁵.

In a complementary way¹⁶, the perfect(ive) skew of passives may be interpreted with respect to the topology implied by the speech event. Both voice and TAM can be conceptualized – among other approaches – as deictic categories with respect to predication, anchoring the predicated state-of-affairs to the center of deixis constituted by the speech event and participants. Cross-linguistically recurring grammatical features and text frequency witness to a privileged association between the (proximal) speech-event participants (first and second persons) and the typically agentive Initiator of a transitive state-of-affairs, while the Endpoint will show a privileged association with the (more distal) non-speech-event participants (“third” person¹⁷) (Silverstein 1976). Passives, being oriented on the more typically distal Endpoint (Woods 2008: 45-109), will tend to show a naturally close association with the more distal perfective and prospective, rather than the proximal imperfective¹⁸.

14 The following is kept to maximal succinctness. For a detailed account of the complex interplay of voice and aspect in Earlier Egyptian, see Stauder (*forthc.* a and b). My approach develops Loprieno’s founding proposals (1984; 1986), from which it both inherits in essential ways, and differs.

15 This is evidenced *e.g.* in the preferential interpretations of Standard Average European “periphrastic passives”. Note that these forms historically incorporate a stative / resultative derivational adjective. By way of contrast, out-of-reflexive passives are aspectually neutral as a type.

The voice-aspect skew is often particularly evident in participial paradigms, where it tends to be reinforced in relation to the time-stability of nouns. In two-term paradigms of the (cross-linguistically common) type *writing* : *written*, ^{Latin}*scribens* : *scriptus*, ^{Arabic}*kātib* : *maktūb*, *etc.*, the Endpoint-oriented passive participle will have a preferential resultative interpretation, while the Initiator-oriented active participle will have a preferential (general) imperfective interpretation (Haspelmath 1994: 154-157).

16 The following connection is formulated here in a merely suggestive way and will be developed in full explicitness in Stauder (*forthc.* b).

17 Or rather “non-personne” (Benveniste). Compare the suggestive characterization of the non-speech-act participant in the Arabic grammatical tradition as “the absentee” (*al-ghā’ib*).

18 Still in a rather suggestive way, compare this idea of distance with respect to the topology implied by the speech event with Loprieno’s (1984; 1986) notion of “Abgeschlossenheit” shared by perfective, prospective and passive.

3.3

In Earlier Egyptian, the finite V-passive is counterpart to both the *sdm.n=f* and the Prospective in a way that is a direct illustration of the topological model just outlined. By contrast, the t-passive is aspectually neutral (Stauder forthc. a; Reintges forthc.: §6.1) and is used as a passive counterpart to all active forms that are passivizable in Earlier Egyptian.

Furthermore, the different diachronic sources that can be reconstructed for Earlier Egyptian morphological passives (Stauder forthc. a.) are in full conformity with the typological regularities outlined above. The perfective-prospective, *i.e.* non-imperfective¹⁹, V-passive derives from an erstwhile stative²⁰, while the aspectually neutral t-passive is probably re-grammaticalized from an intransitivizing source of some kind (reflexive? de-objective? middle of some kind?). In a way typical for non-imperfective out-of-stative passives²¹, the V-passive, rather than the t-passive, underlies²² the paradigm of non-finite passive forms as well.

3.4

Cross-linguistically, TA-determined patterns of multiple passive distribution within a given language revolve around reduced dynamicity and / or the perfect(ive) domain (§3.2). The two morphological types of Earlier Egyptian passives that are used in all text *corpora* and with all inflectional classes, the V-passive and the t-passive, fully conform to this prediction: they differ with respect to aspect, and do so in a way that revolves around the perfect(ive) domain (§3.3). Contrasting with this plain typological conformity of the distribution of the two main morphological passive types, the hypothesized marginal reduplicating type does not seem to allow for any typologically satisfying account.

In his type A-approach (§1.3), Reintges characterizes the *sdmm=f* form as marked by a portemanteau morpheme syncretizing voice and future marking (2003: 179-181; forthc.: §6; Bendjaballah & Reintges 2007: §4.3), as part of his broader analysis of the Earlier Egyptian tense system along a [$\pm$ FUT.] opposition (Reintges 1997: ch.7)²³.

19 Alleged cases of finite V-passives on the *mrr*-stem (Westendorf 1959; 1962: 186-187) are explained as participles (Stauder forthc. a).

20 In connection with the particular aspectual load of the V-passive, it might be illustrative to recall that Ancient Greek has specific passive forms only in the aorist and the future, *i.e.* in the perfective and the prospective domains. Furthermore, these forms, marked in *-(th)ê-*, ultimately go back to a stative source, the **-ê-* inflectional class often associated with stative meaning (cf. ^{Latin}*sed-ê-re* “to sit”) (Andersen 1991: 65-70).

21 Compare with *e.g.* *the book has been written*, ^{Latin}*liber scriptus est*, ^{Ivrit}*ha-sefer kativ* : *the written book, liber scriptus, ha-sefer ha-kativ*.

22 Note that it is not claimed here that the *sdm(w)=f* is historically a passive participle in predicative use (for classical formulations of the latter thesis, see Westendorf 1953: ch. 1; Edel 1955: 326-327, or, more recently, Hannig 1988), but only that both *sdm(w)=f* and passive participles are built on the same underlying stem and so represent instances of one morphological type. That passive participles and “*sdm(w)=f*” forms belong to a single morphological type is argued on combined grounds of compared graphemic analysis and typology (Stauder forthc. a).

23 The relation with *non-finite* forms, which show similar reduplicating morphology (*ddd(.t)*) although they are clearly *not* future, remains opaque in Reintges’ (forthc.: §8) account: “Participial

While a general [$\pm$ FUT.] analysis of the Earlier Egyptian tense system is perfectly possible typologically (cf. e.g. Hopi), the voice-aspect connection that may lead to portemanteau morphology always revolves around the perfect(ive) domain, ultimately as a consequence of the Endpoint-orientation of passives (§3.2). To my knowledge, there is no empirical evidence nor functional grounds for a similar direct passive-future connection.

In the Gardiner-Edel-Loprieno tradition (§1.2), emphasis is laid on the unity of the reduplicating formal category (type B-approach) / of the hypothesized reduplicating passive type (type A-approach). Observing that the finite *sdmm=f* form is found in environments similar to the Prospective, while the non-finite *ddd(.t)* form is used like Unmarked / Perfective participles, the formal category / hypothesized reduplicating type is characterized as “perfective” in a way similar to the V-passive (Loprieno 1986: 51-52; Gardiner 1957: 343; Edel 1955: 264).

Against the typological background outlined above, this analysis carries the following implication. If V-passives and a hypothesized reduplicating type do not differ in terms of aspect, they should do so in terms of subject affectedness, which they do not either. As a consequence, the Gardiner-Edel-Loprieno interpretation implies that passive forms associated with reduplication and V-passives are instances or realizations of one and the same type.

This implication is deeply meaningful, as it will become clear later on (§5, §5.7).

4 Explanandum: multiple distributional restrictions

4.1

Earlier Egyptian passives associated with reduplication show distributional restrictions on three levels: textual distribution (i.), inflectional classes (ii.), and TAM (iii.). Finite and non-finite passive forms associated with reduplication contrast on all three distributional levels.

(i.) The *sdmm=f* form is restricted to the PT and CT²⁴. By way of contrast, the *ddd(.t)* form is used freely within the whole of Earlier Egyptian, including Old Kingdom tomb biographies (e.g. Urk. I 223, 12), Middle Kingdom and Second Intermediate Period private stelae (e.g. BM 574, 13; Louvre C11, 5), documentary texts (e.g. pKahun 22, 6), literature (e.g. Sinuhe B 262), and 18th dynasty inscriptions (e.g. Urk. IV 325, 17)²⁵.

(ii.) The *sdmm=f* form is regularly found with both 3-*rad.* and 2-*rad.*, possibly also with II-*red.*²⁶ and with some IV-*inf.*²⁷ (Allen 1984: 349; Gardiner 1957: 377; Edel 1955: 264-265). By way of contrast, the *ddd(.t)* form is attested only with 2-*rad.*²⁸.

formation has a side-effect in the bleaching of the inherent future reference of passive 3s (*scil.* the hypothesized reduplicating type) in finite verb constructions.”

24 For the alleged cases in the medical texts, see Westendorf (1962: 126, n. 4).

25 For fuller references, see Gardiner (1957: 277) and Edel (1955: 315).

26 If not a V-passive on the Prospective stem, see Stauder (forthc. a).

27 If not an alternative conjugation of these verbs as 3-*rad.* in this particular form.

(iii.) While the *sdmm=f* is used only in Prospective environments, the *ddd(.t)* is used like the Unmarked / Perfective participle.

Distributional restrictions relating to passive forms associated with reduplication can be summarized in the following table:

	finite (<i>sdmm=f</i>)	non-finite (<i>ddd(.t)</i>)
textual distribution:	PT / CT	[[all Earlier Eg.]]
inflectional classes:	3-rad., 2-rad., (II.red.?), (IV.inf.?)	2-rad.
TAM:	Prospective	Unmarked / Perf.

By way of contrast, both V-passives and t-passives show no restriction in textual distribution and are freely formed with all inflectional classes. The aspectually neutral t-passive is compatible with all TAM-environments. The only distributional restriction associated with non-reduplicating passive forms lies in the exclusion of the out-of-stative V-passive from finite imperfective environments, which is easily explained on typological grounds (§3.2-3.3).

4.2

In any of the environments in which passive forms associated with reduplication, finite or non-finite, may be used, there is always a possibility of using a non-reduplicating form as well. However, this alternative does not entail reduced productivity of the forms associated with reduplication. And indeed, there is no sign that *e.g.* in future environments, in the PT and CT, for a 3-rad., the *sdmm=f* is any less productive than the V-passive *sdm=f*. Nor is there any sign that *e.g.* in literary texts, for a 2-rad., an Unmarked / Perfective non-finite form associated with reduplication should be any less productive than a form not associated with reduplication. More generally, within a given text type, for a given inflectional class, in a given TAM environment, passives associated with reduplication are freely used and fully productive. As a consequence, the above distributional restrictions cannot be dismissed as instances of “reduced productivity” of a supposedly recessive formal category. Any approach to the *sdmm=f* / *ddd(.t)* forms thus needs to give a positive account of the five distributional restrictions bearing on passive forms associated with reduplication, contrasting with the lack of similar restrictions bearing on the V-passive and the t-passive.

4.3

Type A-theses to the *sdmm=f* / *ddd(.t)* forms carry an even heavier burden of explanation: by interpreting reduplication associated with passive forms as a passive marker, they – implicitly or explicitly – posit a reduplicating passive type and thus call for

28 It has been claimed that 3-rad. may exceptionally show *ddd(.t)* forms (Reintges 2003: 179; Edel 1955: 316). This is probably not the case, given that the adduced instances involve a 3-rad.-II.aleph. > 2-rad., *tʃs* > *ʃs*. As to *h3mm* (PT 1254d^N), this is probably not a passive participle at all (see Allen 1984: 56).

some account for the threefold distributional *contrast* between finite and non-finite forms *within* the hypothesized reduplicating type, *i.e.* along the horizontal dimension of the above table.

4.4

In order to address the above distributional issues, type A-theses, hypothesizing a reduplicating passive type, make recourse to the notion of “reduced productivity”. This is often conceived as manifestation of the recessive character of a supposedly more archaic layer of forms lingering over as *membra disiecta* mainly into early funerary corpora (see *e.g.* Gardiner 1957: 343; Lefebvre 1940: 152; Bendjaballah & Reintges 2007: §4.3)²⁹. Such an approach however does not account specifically for any of the above *explananda* (§4.2, 4.3).

In a complementary way, emphasis is laid on morphological specificities of inflectional classes (Loprieno 1986: 51; Reintges 2003: 182-184³⁰; Bendjaballah & Reintges 2007: §2). By itself, this is plausible, but it needs considerable further specification (§5-§6) if one is to satisfactorily apprehend any of the above *explananda*.

Contrarily to other approaches, Allen’s (type B) proposal (§1.4) immediately explains the distributional restrictions by which the *finite* passive form associated with reduplication (*sdmm=f*) contrasts with V- and t-passives. Under the hypothesis that reduplication actually marks the Prospective, reduplication will evidently be found only in the environments typical of the Prospective, and in those text *corpora* in which the Prospective is fully alive, the PT and CT. Although the restriction to

29 The idea of an “archaic character” of the “reduplicating passives” seems to stem from the restricted textual distribution of the *sdmm=f* form (§4.1 (i.)). The argument then implicitly infers from a *form* (*sdmm=f*) to a morphological *type* (passives associated with reduplication as a type, comprising both *sdmm=f* and *ddd(t)*). Nothing is said on why non-finite passive forms associated with reduplication should have out-survived their finite counterparts well into the early New Kingdom, beyond the claim that the *ddd(t)* forms might have survived longer due to lexicalization.

30 In the most specific attempt to date in this direction, Reintges argues that morphological restrictions bearing on passive forms associated with reduplication are due to interaction with “stem-specific idiosyncrasies”, particular attention being paid to the mutual exclusiveness of the hypothesized reduplicating passives, the derivational “pluriactinal” reduplication and the inflectional reduplication / gemination (*mrr*-stem).

However, this non-combinability of the various types of reduplication does *not* entail that the hypothesized reduplicating passive type is generated at a different, deeper level than V-passive and t-passives. Non-cyclicity of reduplication may be due to various factors, including prosodic ones, as recalled by Reintges itself. Non-combinability of “passive reduplication” with derivation reduplication may indeed be due to the sheer length of derivationally reduplicated stems. Non-combinability of “passive reduplication” with the *mrr*-stem may also be due to semantic grounds, given the close (§3.4 *fine*) – and indeed not incidental (§5.6-5.7) – association of the form with the out-of-stative V-passive (§3.3). The notion of a “non-syntactic derivation” of the *sdmm=f* / *ddd(-t)*, as opposed to V- and t-passives, seems *ad hoc*, designed to account for morphological restrictions. Rather, actual uses of finite and non-finite passive forms associated with reduplication do put them on a par with V- and t-passives in every respect: they are exclusively functionalized within pragmatic voice (Stauder *forthc.* a), do not interact with lexical semantics, and are not sensitive to any subject-affectedness constraints. Passives associated with reduplication, rather than “systematically differing from competing passive patterns” (Reintges 2003: 184), are fully inflectional, just as V- and t-passives are.

specific inflectional classes does not follow in a similarly explicit way, the connection with the Prospective is clearly involved again, considering that inflectional classes that may have a *sdmm=f* are essentially those that never show a graphemic ending <-w> in the active in the PT and CT (see further §5.2, §6, §7.2).

Note, however, that the hypothesis that reduplication is the Prospective morpheme in “strong” inflectional classes has no independent backing other than to allow generating the reduplicating graphemic surface of the *sdmm=f* form. Furthermore, with the Unmarked / Perfective *ddd(.t)*, the very same formal feature can certainly not be accounted for as a Prospective morpheme. Thus, Allen’s approach does not integrate *non-finite* passive forms associated with reduplication.

5 Towards an alternative approach

5.1 [in favor of a type B-approach]

Although the interpretation of Earlier Egyptian passive forms *associated* with reduplication as instances of a passive type *marked* by reduplication would seem straightforward, this *is* an interpretation, and not a necessary implication.

Type A-approaches (§1), which presuppose such an interpretation, are burdened by the following problems:

- The hypothesis of a reduplicating passive marker carries very strong typological markedness (§2).
- While the contrast V-passive *vs.* t-passive is fully interpretable as the contrast of an out-of-stative non-imperfective passive with an aspectually neutral passive, there is no way of integrating the hypothesized reduplicating type within what is known of the cross-linguistic typology of multiple passive distribution within a given language (§3).
- All versions of the reduplicating passive hypothesis (type A) fail (§4.4) to apprehend the main *explanandum* – multiple distributional restrictions (§4.1) – in any specific way, both as opposed to the distributionally non-restricted V- and t-passives (§4.2), and contrasting the diverse restrictions bearing on finite *sdmm=f* and non-finite *ddd(.t)* to each other within the hypothesized reduplicating type (§4.3).

The above sums up in a critical way, suggesting that the cumulative difficulties plaguing any of the variants of type A-approaches are systemic in nature. It is thus proposed here that an alternative approach should be developed, renouncing the crucial assumption underlying all type A-approaches, namely that Earlier Egyptian passive forms *associated* with reduplication should necessarily be passive forms *marked* as such by reduplication.

5.2 [*sdmm=f* somehow connected with the Prospective paradigm]

Under the assumption of a connection of some sort with the Prospective paradigm, the three levels of distributional restriction bearing on the *sdmm=f* are immediately related to each other:

- The *sdmm=f* is found in future environments only, just as the Prospective.
- The *sdmm=f* is essentially restricted to the PT and CT, the only text *corpora* where the Prospective is fully productive³¹.
- There is a (near-)complementary distribution between inflectional classes that have a *sdmm=f* and inflectional classes that may show a graphemic ending <-w> in the active Prospective in the PT and CT.

Hence, as already implicit in Allen's argument (§4.4), the *sdmm=f* would indeed be best interpreted as standing in some kind of relation to the overall Prospective paradigm.

5.3 [*sdmm=f* somehow connected with the Prospective paradigm, bis]

The connection of the *sdmm=f* with the Prospective paradigm can be argued from yet another perspective. Although voice and aspect are not orthogonal dimensions of linguistic function, the voice-aspect connection necessarily goes through the perfect(ive) passive (§3.2), with the effect that an aspectually marked passive in a given language minimally covers the perfect(ive) domain.

In particular, there is no direct connection between the passive and the Prospective domain that would bypass the perfective. Thus, the restriction of a given passive form to Prospective environments only, as is the case with the Earlier Egyptian *sdmm=f*, must somehow be mediated by an instance that is external to the passive function of the form under consideration. In the present case, there is only one natural candidate for playing such a mediating role, namely the broader structure of the overall Earlier Egyptian Prospective paradigm, whatever the details might be.

5.4 [explananda independent for finite *sdmm=f* and non-finite *ddd(.t)*]

Passive forms associated with reduplication are not instances of a reduplicating passive type (§5.1). Hence, the distributional contrast between *sdmm=f* and *ddd(.t)* need not be directly addressed as such, contrarily to what obtains in type A-approaches that hypothesize such a morphological type (§4.3). Rather, the distributional issues need only be addressed in so far as *directly contrasting to* the distributionally non-restricted V- and t-passives (§4.2). To this end, the *sdmm=f* and *ddd(.t)* forms can be considered independently from each other.

This independence of *explananda* bearing on finite and non-finite passive forms associated with reduplication is indirectly confirmed by the fact that all three distributional *explananda* pertaining to the *sdmm=f* immediately relate to each under the single assumption that the *sdmm=f* be somehow connected with issues of the Prospective paradigm (§5.2). Note that this assumption is born out independently by the argument put forward above (§5.3: conditions on TA-marked passives).

31 Contrarily to the active Prospective, which may be found outside the PT and CT in older texts, the *sdmm=f* is restricted to the PT and CT. This need not be a problem, however, given that productivity of a given category need not be fully symmetrical for active and passive. The crucial issue here is that the *sdmm=f* is effectively found where and only where the Prospective active is *fully* productive.

This leaves as still to be explained the distributional restrictions pertaining to the *ddd(.t)*, as considered for themselves. Since the *ddd(.t)* has no connections to the Prospective paradigm, it is only to be expected that the form will be used freely in all Earlier Egyptian text *corpora*, beyond the PT and CT to which the *sḏmm=f* is essentially restricted. Distributional issues relating to the *ddd(.t)* thus boil down to two questions (§4.1 (ii.), (iii.)), which are to be addressed directly, *i.e.* not taking into account the contrast with the *sḏmm=f* (the horizontal dimension in the table of §4.1): restriction to 2-*rad.*, and restriction to Unmarked / Perfective environments.

5.5 [reduplication: not a grammatical function, but a morphophonological one]

Any interpretation of reduplication associated with Earlier Egyptian passive forms as a morpheme marking the grammatical function of passive is systemically plagued with multiple difficulties (§5.1). On the other hand, while a good case can be made for an interpretation of the *sḏmm=f* as somehow connected to the Prospective paradigm (§5.2-5.3), reduplication associated with passive forms itself cannot be comprehensively analyzed as a Prospective *morpheme* either, given that it is also found with the Unmarked / Perfective *ddd(.t)*. More generally, the peculiar distribution of Earlier Egyptian passive forms associated with reduplication makes any comprehensive interpretation of reduplication either as a voice marker or, alternatively, as a TAM-marker, problematic.

In order to avoid the dilemma “voice or TAM”, one is thus led to question the very assumption that the formal category under discussion should be characterized in terms of *coding a grammatical function* at all. Rather, there is a strong suggestion that a *morphophonological raison d'être* should be sought for reduplication associated with Earlier Egyptian passive forms.

5.6 [passive forms associated with reduplication standing in relation to V-passives]

While the *sḏmm=f* and *ddd(.t)* forms contrast in a threefold way in terms of distributional restrictions (text *corpora*, inflectional classes, TAM), there *is* one common denominator between the two forms.

The *sḏmm=f* is to be interpreted somehow in connection with the Prospective paradigm (§5.2-5.3). On the other hand, the *ddd(.t)* is a non-finite form. Leaving aside the *sḏmm=f*, the primary passive counterpart to the Prospective is a V-passive³². Similarly, leaving aside the *ddd(.t)*, non-finite passives are instances of the morphological type of the V-passive. Hence, both finite and non-finite passive forms associated with reduplication stand in paradigmatic relation to V-passives, finite and non-finite.

32 Reference is made here to the *type*, staying neutral as to the debate on the number of V-passive forms in the PT and CT (see n. 3). What matters for the purpose of the present argument is that the t-passive built on the active Prospective stem is a secondary formation, still uncommon in the Old Kingdom (an often quoted early example is PT 2205^N *n nḏrw.t(i) N in [3krw]*).

5.7 [passive forms associated with reduplication as V-passives]

As recognized in the Gardiner-Edel-Loprieno tradition, the *sdmm=f* / *ddd(.t)* forms cover parts of a TAM-domain that may intuitively be apprehended as “perfective” (§1.2). Against the cross-linguistic typology of multiple passives, however, such an aspectual characterization – identical to characterization of the V-passive – implies that these the hypothesized reduplicating type and the V-passive should in fact be one and the same type (§3.4 *fine*).

This seeming paradox can now be reintegrated in a meaningful way. Passive forms associated with reduplication, finite and non-finite, do stand in close paradigmatic association with V-passives, finite and non-finite (§5.6). Furthermore, there is a strong suggestion that reduplication associated with Earlier Egyptian passives, rather than expressing a specific grammatical function – be it voice or TAM – has a morphophonological *raison d'être* (§5.5).

Weaving these threads together, it would now appear that passive forms associated with reduplication, finite and non-finite, are in *fact realizations of V-passives, under specific morphophonological circumstances*, yet to be determined.

6 General scenario

There is a strong case against interpreting Earlier Egyptian passive forms associated with reduplication as instances of a reduplicating passive type (§5.1). The above suggests that the *sdmm=f* and *ddd(.t)* forms not only stand in close paradigmatic association with V-passives (§5.6), but in fact are realizations of V-passives (§5.7), under particular morphophonological circumstances (§5.5).

For the *sdmm=f*, such a morphophonological *raison d'être* for reduplication (/ for reduplication surfacing graphemically) is to be sought in connection with the overall Prospective paradigm in the PT and CT (§5.2-5.3). For the *ddd(.t)*, it has to account for the twofold restriction of the form, to the 2-*rad.*, and to the Unmarked/Perfective participle (§5.4).

Although the details of the morphophonological processes at play cannot be reconstructed in a realistic way (§7.1), the distribution of the two forms is remarkable enough, each in its own way, to further support the above thesis. For the *sdmm=f*, I suggest that the morphophonological *raison d'être* for reduplication has to do, in some way or another, with the (near-)complementary distribution of inflectional classes that may have a *sdmm(=f)* and those that have an active Prospective form regularly marked in <-w> in the PT and CT (§7.2). For the *ddd(.t)*, I suggest that it is not coincidental that the reduplicated form be restricted to the (short) Unmarked / Perfective participles in the prosodically shortest of main inflectional classes (§7.3).

7 Multiple scenarii

7.1

Any detailed specification of the morphophonological factors at play is highly tentative, due to the lack of (/ lack of generally accepted) reconstructions either for the

Prospective active or for the finite and non-finite forms comprised by the V-passive type. The involved graphemics are complex indeed and no *communis opinio* may be emerging in the near future. Thus, in order to avoid making the following discussion contingent upon specific reconstructions of the Prospective active and the V-passives, only two rather minimal assumptions are made regarding the morphology of these forms³³:

- the distinctive morphology characterizing the V-passive as a type is assumed to have involved *stem alternation of some sort* (Stauder forthc. a.);
- the distribution of the <-w>-marked active Prospective across inflectional classes as observed in the PT (Allen 1984: 721-723) and the CT (/ part of the CT) (Schenkel 2000: 50-51) *is relevant in the language reflected by the PT and part of the CT*³⁴.

To be sure, the morphophonological conditions hypothesized to have been at play would have applied to *specific* forms, with the effect that a *realistic* description of these conditions is ultimately out of reach. However, the two minimal assumptions just made may suffice to propose possible morphophonological scenarii under which the *sdmm=f* and *ddd(.t)* forms can indeed be *modeled* as realizations of V-passives, as the above strongly suggests to have been the case (§5-6). These multiple scenarii may then be summed up in a formulation capturing the morphophonological conditions at play in a more general way, underspecified enough to be neutral with respect to specific reconstructions.

7.2

For modeling reduplication as associated with the *sdmm=f* form, the crucial observation is the following:

Inflectional classes that have a *sdmm=f* form are in (near-)complementary distribution with those that may show a graphemic ending <-w> in the active Prospective in the PT and CT (§5.2).

Thus, a preliminary minimal modeling of the morphology of the *active* Prospective is in order.

33 For the purpose of the discussion to come, I distinguish four levels, that will be addressed by using the following terminological conventions:

- “root”;
- “lexical form”: root (+ derivational process(es));
 e.g. mri, smn, mnmn
 [= “stem” in the Semiticist’s sense of “derivational stem”; often used in this sense in Egyptology, *e.g.* by Schenkel (2000)];
- “stem(s)”: lexical form + inflectional stem alternations;
 e.g. whatever stem(s) lie(s) behind <mr-> vs. whatever stem(s) lie(s) behind <mrr->
 [= “stem” as often used in general linguistics]
- “form”: stem (+ inflectional suffix(es)).

34 Rare instances of <-w>-marked 3-*rad.* in texts posterior to the PT and CT may reflect another linguistic variety (register, place, time) and / or different graphic conventions, all the more so if one considers the general obsolescence of the Prospective outside the PT and CT and after the Old Kingdom.

7.2.1

In the PT and CT, inflectional (sub-)classes fall into two groups according to graphemic endings in the active Prospective. Some inflectional (sub-)classes *regularly* show a graphemic ending <-w> in the PT and CT (henceforth: “group II”), while other inflectional (sub-)classes do not, as a rule, show such a graphemic ending <-w> in the PT and CT (henceforth: “group I”):

- group I (<-∅>): 3-rad., 2-rad., II.red.
- group II (<-w> or <-∅> (both common)): ult.inf.³⁵, caus., long

In order to interpret the graphemic ending <-w>, observe that it is regularly excluded from some of the main inflectional classes, notably the “strong” 3-rad. and 2-rad. As a consequence, it does not represent a suffixal morpheme in the same sense as e.g. the perfective / *accompli* morpheme {n} in the *sdm.n=f* or the passive morpheme {t} in the t-passive. The segment underlying the grapheme <-w> cannot be interpreted as a phonologically conditioned reflex of the “weak” segment at the right of the lexical form of *ult.inf.* either, since it is regularly found with *caus.* and *long* verbs. The graphemic ending <-w> thus stands for an *extra-segment* of some sort, resulting in a *stem extension* for the active Prospective in group II-verbs.

As already observed by Schenkel (2000: 60-61), the split between inflectional classes that may regularly show a graphemic ending <-w> in the active Prospective in the PT and CT and those that do not as a rule show such an ending seems to correlate with another morphological dimension: the lexical forms of group II-verbs all involve derivational root augmentation of some sort, -i for *ult.inf.*³⁶, s- for *caus.*, reduplication for *long*. By contrast, the lexical form of 3-rad. and 2-rad. does not involve such derivational root augmentation, while the root augmentation in *II.red.* leads to a lexical form that apparently patterns like 3-rad. in the active Prospective. This all suggests a morphophonological *raison d'être* for the stem-extending extra-segment not uncommonly represented by <-w>.

The extra-segment <-w> allows for a distinctive Prospective form for group II-inflectional classes, i.e. verbs the lexical form of which involves derivational root augmentation of some sort. The very nature of <-w> – a distributionally constrained *extra-segment* – would suggest that a distinctive Prospective form underlies the undistinctive graphemic surface of group I-inflectional classes as well. The latter verbs – for which the lexical form does not involve any derivational root-augmentation – would have been able directly to accommodate the distinctive Prospective morpheme. The stem extension of group II-verb may then be interpreted either as alternative form of marking, or as stem-lengthening strategy allowing to accommodate the very same marking of group I-verbs, a discontinuous morpheme of some sort, that would have been blocked by the already over-determined lexical form of group II-verbs.

35 The actual situation might have been more complex yet, at least in the CT, with a sub-class of the *III.inf.* never or only rarely showing a graphemic ending (Schenkel 2000: 53-60).

36 This is intentionally formulated at a very general level, given that the exact nature and morphological and / or phonological *raison d'être* of this segment does not matter for the present purpose.

It does not matter for the present purpose whether the actual form of group I-Prospective is to be reconstructed as involving a discontinuous morpheme **CvCv:C-* (Schenkel 2000: 51-52), **CvCvCC-* (Allen 1984: 535, n. 393), or *anything else*. The crucial point is that such a stem alternation would not have been amenable to direct accommodation onto verbs which are root-augmented in some way at the level of their lexical form. As a consequence, the Prospective of the latter verbs would have been stem-extended by an extra-segment **-vw* (Schenkel 2000: 52), or *anything else*, regularly surfacing as *<-w>*.

7.2.2

Against the above background, variable scenarii may now be outlined by which the *sɔmm=f* indeed appears as a morphophonologically conditioned realization of a V-passive.

(i.) The active Prospective involves stem alternation of some sort, leading to stem extension in group II-verbs (*supra*). The V-passive also involves stem alternation of some sort. For group I-verbs, this results in a “morphological complication” when the V-passive morpheme is accommodated with the Prospective stem.

This “complication” can be conceived either as a mutual blocking of the two different forms of stem alternation (the Prospective morpheme and the V-passive one) that have to be accommodated simultaneously. Alternatively, the two morphemes could have been accommodated, but without resulting in a form distinctive with respect to the Basic V-passive. Whatever the details: in order to accommodate (/distinctively accommodate) the V-passive morpheme with the Prospective stem, group I-verbs undergo stem lengthening by means of reduplication of the last root consonant.

For group II-verbs, there is no “morphological complication”: since the Prospective stem is already stem-extended in the active by the extra-segment underlying *<-w>*, it can accommodate (/distinctively accommodate) the V-passive morpheme.

Thus:

active Prospective:

- group I: stem alternation of some sort
- group II: (in relation with derivational root augmentation?)
→ stem-extension by whatever underlies *<-w>*

accommodating Prospective and V-passive morphologies:

- group I: *blocking / insufficient distinctiveness*
→ stem-lengthening by reduplication of last root consonant
- group II: direct accommodation

In this scenario, the (near-)complementary distribution between inflectional classes that have a *sɔmm=f* in the passive and classes that can be *<-w>*-marked in the active would thus reflect the fact that the latter, but not the former, are already stem-extended in the active, and therefore do not need any further stem-lengthening in the passive.

(ii.) Assuming that the finite V-passive is a single morphological category (Reintges 2004: 53-62), a possible alternative scenario can be sketched along the following lines.

For whatever reason, the accommodation of V-passive morphology with Prospective morphology cannot be done directly. This induces stem lengthening of some sort.

In group I-verbs, stem lengthening is achieved through reduplication of the last root consonant. In group II-verbs, which are already stem-extended by whatever is represented by <-w>, further stem lengthening is blocked.

(iii.) Alternatively, one may follow Allen's proposal of reduplication as a Prospective morpheme in group I-verbs (§1.4).

Reduplication would have been blocked for group II-verbs due to their lexical form, involving derivational root augmentation of some sort. Group II-verbs would thus have had a different Prospective formation, to which the graphemic ending <-w> is a witness.

Under the specific prosodic melody of the V-passive morpheme, the characteristic Prospective reduplication would surface graphemically in group I-verbs, while group II-verbs would not show reduplication, since this would have been blocked already in the active.

7.2.3

Under scenarii (i.) and (ii.), reduplication in the *sdmm=f* is a secondary stem lengthening strategy by which group I-verbs accommodate (/ distinctively accommodate) Prospective and V-passive morphologies.

With group II-verbs, this stem lengthening either would have been useless, given that these verbs were already stem-extended in such a way as to accommodate (/ distinctively accommodate) the V-passive morphology directly (i.). Or, reduplication might have been blocked on formal grounds (ii.).

Under scenario (iii.), reduplication is itself the Prospective morpheme for group I-verbs, surfacing graphemically only in the passive. Group II-verbs would have had a different Prospective formation involving no reduplication.

These scenarii all account for the (near-)complementary distribution between inflectional classes that may regularly have a graphemic ending <-w> in the PT and CT and those that have a finite passive form associated with reduplication in the same *corpora*. None involves positing a reduplicating passive morpheme.

7.3

For modeling reduplication as associated with the *ddd(.t)* form, the crucial observation is the following:

The *ddd(.t)* form is restricted to the prosodically shortest of main inflectional classes, in the shortest form of the paradigm of passive participles.

7.3.1

Being the shortest among main inflectional classes, the *2-rad.* has less space for accommodating distinctive morphology than other inflectional classes³⁷. At least in some varieties of Earlier Egyptian, this prosodic shortness of *2-rad.* leads to left-lengthening in various forms, either on a regular basis or as alternative morphologization of a given form³⁸.

Among non-finite forms, Unmarked / Perfective participles seem to have been shorter than Distributive / Imperfective ones³⁹. And indeed, as far as the active is concerned, Unmarked / Perfective participles do show some peculiarities: they can be <*i.*>-marked in the PT (Allen 1984: 426-428; Mathieu 1996: §4)⁴⁰, and may have been vocalized in *-*i*- (Osing 1987: 340-341), at least for some members of the class.

7.3.2

Against this background, I suggest for passive Unmarked / Perfective participles of *2-rad.* that reduplication in the *ddd(.t)* form is a stem lengthening strategy aimed at accommodating passive morphology⁴¹ so as to ensure / strengthen distinctiveness vs.

37 This is what matters as far as modeling the *2-rad.* as an inflectional class in historical Earlier Egyptian is concerned. On the still debated issue of the Semitic / Afroasiatic connections of Earlier Egyptian *2-rad.*, see the recent assessment by Quack (2003).

38 The classical example is the Imperative (*i.wn, wn*, cf. $\Delta\Upsilon\Omega\text{N}$). Especially in the PT, *2-rad.* also occasionally show <*i.*>-marked *sdm=f* forms outside Subjunctive environments (Allen 1984: 722), perhaps representing left-extended stems. To be distinguished from these are cases where the <*i.*> represents an initial vocalic support solving an otherwise initial consonantal cluster. This certainly happens in forms accented after the last root consonant, the Subjunctive (*i.nd=f, *^vn'daf*, cf. the pattern of Coptic *t*-causatives) and the Pseudoparticiple, at least in interlocutive persons (*i.rh.k(i), *^vr'ha:kv*, cf. Akkadian). Such strings with initial vocalic support may well have been just one possible morphologization of these forms, besides anaptyctic insertion (**n'^vdaf, *r'^vha:kv*) and acceptance of the consonantal cluster (**'ndaf, *'rha:kv*).

For both left-lengthening proper (as in the Imperative) and cluster-solving vocalic support (as in the Subjunctive and the Pseudoparticiple), varieties of Egyptian would have differed, according to register, place and time. Within a given variety, left-lengthening and cluster-solving vocalic support might have been either the regular form or alternative morphologizations of the form. The crucial point is that all these cases ultimately point to the very quality defining the *2-rad.* as an inflectional class for its own, namely the prosodic shortness of its members.

39 This results from combined inference from inflectional classes that graphemically display stem alternation (<*mr-*> : <*mrr-*>) (i.), the general tendency for graphemic endings to be written out more often in the Distributive / Imperfective, pointing to more post-thematic material (ii.), as well as a general form-function markedness principle (iii.). As to (ii.), note in particular the graphemic ending <*-w*> associated with passive participles, which is rare in the Unmarked / Perfective while it is very common in the Distributive / Imperfective. This contrast in frequency is probably significant, given that it seems to obtain consistently across text corpora, both in Middle Egyptian (Gardiner 1957: contrast 275, 277) and in the PT (Allen 1984: 430-431).

40 Compare also the lexicalized phrases *igr.t* "Necropolis" < *i.gr.t* "the silent one", *i.hmw-sk* "the Circumpolar stars" (< "those ignoring destruction").

41 The form of passive Unmarked / Perfective participles is a priori unknown. Note however that both classical reconstructions ultimately imply an underlying ***CaCi:u:C-*, either indirectly (Osing 1987: 346, explicitly suggested by the author himself) or directly (Vycichl 1959; Ray 2003). A pattern similarly involving stem alternation is argued for in Stauder (forthc. a.), based on combining graphemic analysis with typology. For the present purpose, the notion of a form somehow marked by stem alternation suffices.

the active in the (short) Unmarked / Perfective participle, in the shortest of inflectional classes (§7.3.1).

This scenario immediately accounts for all *explananda* relating to the distribution of the *ddd(.t)* forms (§5.4 *fine*). The form is restricted to the 2-*rad.* because other inflectional classes are prosodically “long enough” to accommodate the passive morphology in a distinctive way. It is not found in the Distributive / Imperfective participle because this form is, again, “long enough” to directly accommodate passive morphology in a distinctive way. As to the existence side by side of both reduplicating and non-reduplicating forms of 2-*rad.* Unmarked / Perfective passive participles, this is probably best interpreted in terms of more or less explicit formal distinctiveness *vs.* the active⁴².

7.4

The scenario relative to the *ddd(.t)* form (§7.3) obtains in conjunction with the general necessity of ensuring distinctiveness *vs.* the active. By way of contrast, the scenario relative to the *sḏmm=f* form (§7.2) obtains in conjunction with the more restrictive condition of a fully productive Prospective paradigm, which is the case only in the PT and CT. This immediately accounts for the fact that the *sḏmm=f* is itself restricted to PT and CT, while the *ddd(.t)* is found throughout the whole of Earlier Egyptian (§4.1 (i.)).

In particular, there is no need to posit any *membra disiecta* hypothesis to the distribution of reduplication associated with Earlier Egyptian passive forms, as is done in type A-approaches. Reduplication is not itself an archaic feature, but a secondary strategy aimed at accommodating passive morphology through stem lengthening. It is “archaic” – if one wishes – only with the finite *sḏmm=f* form, and even there only indirectly, in as much as its very *raison d’être* presupposes a fully productive Prospective paradigm, which is limited to the PT and CT.

7.5

According to the scenarii presented here, partial reduplication in both the *sḏmm=f* and the *ddd(.t)* forms would be a secondary morphological strategy aimed at accommodating morphology in a distinctive way through stem lengthening.

Cross-linguistic evidence supports the possibility of such a scenario. Partial reduplication can achieve stem lengthening, contributing to distinctiveness of form,

42 Furthermore, note that the finite Basic V-passive of 2-*rad.* does not ever involve reduplication (e.g. *wn (passim)*, *sꜣw* (Hamm. 110, 6), never *ꜥwnn*, *ꜥsꜣ*), contrarily to the Unmarked / Perfective passive participle of the same inflectional class. Thus there is a formal contrast between *finite* Basic and *non-finite* Unmarked / Perfective V-passives, i.e. between finite and non-finite *short* V-passives, the former never reduplicating, while the latter often do. In the scenario proposed here, emphasizing distinctiveness *vs.* the active, this contrast may be understood in relation to the active forms, finite and non-finite, from which both passive forms would have had to be kept distinct. While the active Unmarked / Perfective participle of 2-*rad.* may have been, at least partly, vocalized in **-i-*, it is plausible that none of the finite *sḏm=f* form(s) of 2-*rad.* would have had such a distinctive **-i-* vocalization. As a result, the V-passive morphology accommodated onto short forms in short inflectional classes would have been immediately distinctive in the finite paradigm, while it might have been less immediately distinctive in the non-finite paradigm.

outside of any association with the typical meanings of reduplication or any re-functionalization thereof (§2.2), as is the case in *e.g.* the Indo-European non-periphrastic Perfect. In close vicinity to Earlier Egyptian, reduplication is a possible morphological process in the Semitic domain⁴³, with varying intralinguistic distribution (*e.g.* the Classical Arabic IXth stem with verbs denoting colors or physical defects, *‘hmarra* “become red”).

A specific parallel to the scenario suggested for the *ddd(t)* form may be found with the Biblical Hebrew *poel* formation with verbs of the *‘ayin’waw* inflectional class (~ “*med.inf.(waw)*” / “hollow verbs”), *e.g.* *qu:m* → *qomem* (Joüon & Muraoka 2006: §80h, §59a). The *poel* formation compares with Earlier Egyptian *ddd(t)* in the following:

- the pattern is essentially restricted to a specific inflectional class⁴⁴, characterized by prosodical shortness: the lexical form of the stem of *‘ayin’waw* verbs is monosyllabic (*qu:m*) just as the basic unsuffixed stem of Earlier Egyptian *2-rad.* would have been;
- the pattern achieves stem lengthening through reduplication of the last root consonant; this allows it to accommodate the distinctive morphology of the *po^{ce}el* pattern, the discontinuous morpheme {*-o-e-*}.

Although a realistic reconstruction is out of reach for Earlier Egyptian (§7.1), a very similar morphophonological process is hypothesized here for the *ddd(t)*, on the basis of the analysis of the distributional restrictions to which the form is subject (§5.4 *fine*, §4.1), combined with what is known of the participial paradigm and general inflectional peculiarities of the *2-rad.* (§7.3).

8 Conclusion

8.1

A seemingly straightforward interpretation of the *sdmm=f / ddd(t)* forms would analyze the graphemically salient feature of reduplication associated with these forms as representing a passive marker. Such an approach however is made suspicious by the very strong typological markedness carried by a reduplicating passive marker (§2).

More critically, while the contrast V-passive *vs.* t-passive is easily interpreted as the contrast of an out-of-stative, non-imperfective passive type with an aspectually neutral passive type, there seems to be no way to integrate the hypothesized third

43 Note that this implies only Egypto-Semitic commonality of a morphological *possibility*, due to a broader similarity of morphological *processes* in these languages, and not commonality of *form*, as can be shown to be the case *e.g.* for the morphemes {*n*} or {*t*} (Stauder *forthc.* a.).

44 Verbs of the *‘ayin’waw* (~ “II.red”) inflectional class sometimes show a formation closely similar to the above: *s-bb* → *sōbeb*. In this inflectional class however, reduplication is already present in the lexical form of the verb and the *po^{ce}el* formation is an infrequent byform to the more usual *pi^{ce}el* (yielding *sibbeb*), contrasting with the *poel* of *‘ayin’waw* verbs, which is the more usual form. This is of course not to say that the two forms may not have influenced each other by analogy (Joüon & Muraoka 2006: §82e).

passive type to any known cross-linguistic pattern of multiple passive distribution within a given language (§3).

Furthermore, classical interpretations do not allow one to apprehend the multiple contrasting distributional restrictions bearing on the *sdmm=f* and *ddd(.t)* forms in any specific way (§4).

Adding up, the above results in making a strong case against interpreting Earlier Egyptian passive forms *associated* with reduplication as passive forms *marked* by reduplication (§5.1).

8.2

The analysis of the multiple distributional restrictions bearing on the *sdmm=f* and *ddd(.t)* forms within the broader context of Earlier Egyptian synthetic conjugation strongly suggests that Earlier Egyptian passive forms associated with reduplication not only stand in close paradigmatic relation to V-passives (§5.6), but in fact are realizations of V-passives (§5.7), under particular morphophonological circumstances (§5.5).

While a realistic reconstruction for such morphophonological circumstances is at present out of reach (§7.1), an underspecified model can be formulated (§6). For the *sdmm=f*, I suggest that the *raison d'être* for reduplication is to be sought in connection with the overall Prospective paradigm in the PT and CT (§5.2-5.3), and, more specifically, with the (near-)complementary distribution of inflectional classes that have a *sdmm=f* and those that have an active Prospective regularly marked in <-w> (§7.2). For the *ddd(.t)*, I suggest that it is not coincidental that reduplication is restricted to the (short) Unmarked / Perfective participles in the prosodically shortest inflectional class (§5.4, §7.3).

In both cases, reduplication would achieve stem lengthening aimed at accommodating (passive) morphology distinctively.

8.3

With both the *sdmm=f* and the *ddd(.t)* forms, reduplication is the graphemically distinctive feature that allows for the reader's inference (both ancient and modern) of voice and aspect. In the interpretation proposed here, however, this does not imply that in the underlying phonic string, reduplication is itself the portemanteau morpheme involved. Although reduplication effectively ends up being a part of the distinctive morphology of the *sdmm=f* and *ddd(.t)* forms, it does so only in conjunction with the specific passive morphology it helps accommodate.

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