

GRASSMANN'S LAW IN GREEK AND ITS DIFFUSION IN WAVES¹

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ABSTRACT

The present paper aims at discussing the chronology of Grassmann's law (GL), bearing in mind the possibility, put forward by KIPARSKY (1973), of a backdating of its operativeness. Thanks to the comparison between some "relic" forms and data taken from 2nd millennium Greek, we will try to speculate in relation to the chronology of this phonetic change. In particular, the hypothesis here advanced is that we are dealing with different "waves" of a single phenomenon, whose effects were prolonged over time, surfacing sporadically in time and space.

Keywords: Grassmann's law; Greek; Mycenaean; Proto-Indo-European; phonetic change; dissimilation of aspiration.

RESUMO

O presente artigo tem como objetivo discutir a cronologia da lei de Grassmann (GL), tendo em vista a possibilidade, apresentada por KIPARSKY (1973), de que a lei já possa ter atuado em Protoindo-europeu (PIE). Graças à comparação entre as formas de "reliquia" e os dados retirados do 2º milênio grego, tentaremos especular em relação à operacionalidade dessa mudança fonética. Em particular, a hipótese aqui avançada é que estamos lidando com diferentes "ondas" de um único fenômeno, cujos efeitos foram prolongados ao longo do tempo, surgindo esporadicamente no tempo e no espaço.

Palavras-chave: Lei de Grassmann; Grego; Micênica; Protoindo-europeu; mudança fonética; dissimilação da aspiração.

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PREMISE

The present paper investigates some chronological aspects connected with Grassmann's law (= GL) in Greek. The reference literature on the well-known phenomenon of dissimilation of consonantal aspiration is extremely wide (lastly, see JATTEAU 2016), and the interpretations are often contradictory. It is therefore not our intention to dwell on the different proposals already provided over the years,² but to concentrate our attention on two specific moments, the pre-historic phase and the Mycenaean one, in order to evaluate – on the basis of the data of our disposal – the diachronic behaviour of GL.

THE DISSIMILATION “LAW” AS ORIGINALLY DESCRIBED BY
HERMANN GRASSMANN (1863)

Grassmann's Law is the well-known sound change by virtue of which – in Sanskrit and in Greek – in an original diaspirate root a (generally regressive) dissimilation process takes place, such as in the following Gk. forms: τίθησι < */t^hit^he:si/, τρυγός < */t^hri^hk^hos/ (cf. nom. θρίξ /t^hrix/ < */t^hrik^h-s/, τρέφω < */t^hrep^ho:/ etc. The process affects in Greek both voiceless aspirated stops and /h/, which, like the aspirates, is characterized by a reduced glottal resistance after release of the closure (OHALA and OHALA, 1972; DEMOLIN, 2007, p. 77-78).

As is well known, Hermann Grassmann wrote on the phonetic law which took its name from him in 1863. In his long article, Grassmann addresses the question of the reconstruction of Indo-European voiceless and voiced aspirated stops, the study and analysis of which provides the necessary prerequisite for the beginning of his research. It is Grassmann himself who clearly describes the Greek dissimilation process as “Lautgesetz” (ivi: 111).

The first part of the scholar's essay ends with the statement that the Germanic *Lautverschiebungen* began with the loss of aspiration. It is instead at the beginning of the second part of the article (entitled *Ueber das ursprüngliche vorhandensein von wurzeln, deren anlaut und auslaut eine aspirate enthielt*) that the scholar, in preparing to discuss the presence of two aspirates at the beginning and at the end of a root, considers it necessary to preface the enunciation of the two statements that gave rise to the so-called “phonetic law”.

«Wenn eine wurzel mit einer aspirate auslautet und mit einem der aspiration fähigen konsonanten beginnt, und der auslaut derselben durch einwirkung irgend eines anders

² For which see POZZA (2019), where the history of the reception of GL among time and scholars is summarized and discussed.

lautgesetzes seine hauchung verliert, so tritt diese auf den anlaut über [...]» (ivi: 110-111).³

«Wenn in zwei konsonantengruppen eines wortes, welche durch einen vokal getrennt sind, aspiraten vorkommen, die derselben wurzel angehören, so wird eine derselben, in der regel die erste, ihrer hauchung beraubt» (ivi: 111).⁴

In the conclusion of the article, finally, Grassmann deals with the exceptions to the first Germanic *Lautverschiebung*. In the light of the results of his study, the exceptions to the regularity of this sound change were recognized as regular (the cases in which the Germanic voiced stops do not correspond, in Sanskrit, to the voiced aspirated, as would be expected, but to the simple voiced, and, in Greek, not to the voiceless aspirated but to the simple voiceless). For example, if we analyse forms such as Goth. *bindan* ‘to bind’: Skr. **bandh-* (*bandhá-* ‘binding’ etc.): Gr. *πενθερός* ‘father in law’, the correspondence between the initials of the words was – before Grassmann – considered problematic: this oddity is easily explained if we attribute to Germanic the same value as Sanskrit for the Indo-European reconstruction and if we consider the two stops of the Gothic form as outcomes of **bʰ* and **dʰ* respectively.

Hermann Grassmann, therefore, was the first scholar to have noticed that the “irregularity” could sometimes arise in the languages considered more archaic: Greek and Sanskrit, in fact, through dissimilation, avoided the succession of two aspirated stops in the same root. According to LEHMANN (1967, p. 118), «by demonstrating that Germanic actually was “older” in one phonological pattern than was Sanskrit, Grassmann undermined the position of Sanskrit as the language which was the earliest attainable in Indo-European linguistics».

Despite the fact that dissimilation processes are generally considered sporadic and non-systematic phonetic changes, Grassmann’s Law has always been considered a systematic and regular phonetic change among the successive scholars:⁵ HOCK (1991, p. 111), for examples, discusses Grassmann’s law

³ «Given a root with a final aspirate and an initial consonant capable of aspiration, and given also that the final element loses aspiration (by some separate sound law), than that feature is retracted to the initial element» (COLLINGE, 1985, p. 47).

⁴ «Given two consonant-groups in a word, separated by a vowel and themselves aspirated, and provided that they are within the same root, then one (and normally the first) is deprived of its breath feature» (COLLINGE, 1985, p. 47).

⁵ «Dissimulationsregel» in the opinion of MEIER-BRÜGGER (2002, p. 138); LEHMANN (1992, p. 203) considers it an important exception to the sporadic dissimilation processes. See COLLINGE (1985) for the collection and discussion of GL among the other IE phonetic laws. It is impossible, here, to quote all the handbooks or scientific articles which consider the dissimilation of aspirates in Greek a systematic and regular phonetic law, just

considering it «one of the most shining examples of regularity», and even formulates two additional “rules”, trying to establish specific conditions under which this process can apply in a regular fashion.

THE IDEA OF A POSSIBLE BACKDATING OF GRASSMANN’S LAW

Several scholars⁶ have, over time, hypothesized that GL may have been operating since Indo-European, basing their argument either on the fact that languages of ancient attestation such as Greek and Sanskrit showed evident traces of its application or on some Greek relic forms which seem to confirm an earlier stage for the application of the dissimilation process. Grassmann, instead, ruled out the Indo-European date of the law, expressing scepticism about it.

In the context of generative studies, during the 1970s, there were many proposals to backdate the law to prehistoric times: among them, one cannot fail to remember the works of Paul Kiparsky,⁷ who argued that the process of deaspiration took place, in Greek, at a stage when the original voiced aspirated stops were still voiced, thus explaining Greek forms with a dissimilated voiced stop instead of a voiceless one. Kiparsky, in fact, supposes a Greek-Indo-Iranian dialect area in which deaspiration was followed by the Greek innovation consisting in the devoicing of voiced aspirates.⁸

The presence, in Greek, of some relic forms which preserved a voiced dissimilated stop (instead of the expected voiceless one) induced KIPARSKY (1973) to backdate the dissimilation process. From this point of view, in fact, these words preserve evidence of the prehistoric ordering of Grassmann’s law before the devoicing of aspirates (the so-called “reordering”). What is particularly interesting is the fact that these relics (those “fragments of grammar”, “flies in amber” with which historical linguistics works) are mainly nouns or adjectives. Regardless of an accurate etymological analysis of each single form (which goes beyond the scope of the present contribution and

because starting from the moment when it was “formulated” by Grassmann, it was transposed as systematic and regular and, therefore, was discussed in the handbooks of historical linguistics as an absolutely regular phonetic change (even in the presence of numerous exceptions).

⁶ For a detailed review and bibliographic references, see, recently, DE DECKER (2015) and POZZA (2019).

⁷ See, in particular, KIPARSKY(1973).

⁸ But see SCHINDLER (1976, p. 626), who adduced actual evidence (Av. *xumba-* = Skr. *kumbhā-* ‘pot’ < PIIr. **kumbhā-* ‘pot’) that GL could not have applied before the Proto-Indo-Iranian period, and that therefore it cannot be a historically shared change between Greek and Sanskrit.

which is extensively discussed elsewhere,⁹ as well as of course in etymological dictionaries), these “crystallized forms” could represent the evidence of a first wave of application of the phonetic law. Among these forms, most of which are quoted and etymologized by KIPARSKY (1973), even if some etymologies are not always universally accepted,¹⁰ we recall, by way of example:

– ἀγαθός ‘good’ (Goth. *gōþs*, Old Eng. *gōd*, Engl. *good* etc.), with the variants ἀκαθός (Hesychius) and χάσιος (documented in a gloss) < **sm₂-g^had^h*-. According to the main etymological dictionaries (EWG; DELG; GEW)¹¹ the etymology of the form – morphologically isolated, in Greek – is unknown. In the opinion of KIPARSKY (1973, p. 133) the variant ἀκαθός confirms his analysis, because it shows that the original archetype was a diaspirate root and not a root of the type **ged^h*-, which would have instead given, as a result, a form of the type ***get^h*-. According to Beekes (EDG), the older comparison with the above-mentioned forms should be dismissed (as these would require a root **g^hed^h*-), and the word should thus be interpreted as Pre-Greek.

– βόθρος, βόθυνος ‘hole, trench’ (Lat. *fodiō*, Lith. *bedù* ‘to dig’, Hitt. *padda*- ‘to dig; to bury’, Toch. A *pat-/pāt* ‘to plow’ etc.) < **b^hed^h*- ‘to dig, prick’ (LIV; IEW). The main etymological dictionaries explain the initial voiced stop as analogical to βαθός ‘deep’ (but see *infra*). – βρεχμός ‘front part of the head’, βρέγμα id., with secondary -γμ-, cf. βρέγμα and βρεγμός (Old English *brægan* ‘brain’, Engl. *brain* etc.) < **b^hreg^h*- ‘brain’. Another possibility is reconstructing an IE **mreg^h-m(n)o-* (see GEW; IEW; EWG). According to EDG, both **b^hreg^h*- and **mreg^h*- are potentially reconstructable, while a proto-form **breg^h*- is highly unlikely, considering the scarcity of Indo-European roots with initial *b*-.

– βυθός ‘depth’ (Skr. *budhná-* ‘bottom, ground, base’, Lat. *fundus* ‘bottom, foundation’ etc.) < **b^hud^h*- (see DELG; GEW; GG). For EDG we are dealing instead with a Pre-Greek word. KIPARSKY (1973, p. 132), as discussed above, suggests a reordering of GL and the devoicing of IE voiced aspirated stops: «Latin *fundus* shows that the root was **b^hud^h*-; the Greek forms thus constitute a case where the synchronic capacity of the initial segment prior to the devoicing of aspirates led to actual doublets in Greek

⁹ Among others, see SZEMERÉNYI (1960), Miller (1974; 1977), IVERSON (1985), COLLINGE (1985), STANLEY (1985), PÂRVULESCU (1993), POZZA (2007; 2010; 2019), DE DECKER (2015).

¹⁰ The etymologies proposed by Kiparsky have never met unanimous consensus among scholars. See, lastly, DE DECKER (2015: 148), who – after having punctually discussed all the roots mentioned by Kiparsky that would represent an evidence in favour of the Indo-European dating of the law – lists a series of elements that would seem to contradict the scholar’s theory.

¹¹ If not otherwise specified, the reference to the etymological dictionary corresponds to the lemma mentioned.

after the devoicing took place». The parallel form πυθμῆν ‘ground, foot of a vessel’ (from an earlier *φυθμῆν) could represent – when analysed within this chronological hypothesis – a confirmation of the alternations of the outcomes of GL.

– δεῖσα ‘slime, filth’ (cf. Arm. *geš* ‘wet’, OCS *žizda*, Russ. *žiza* ‘slop’ etc.) < **g^heið^hia*. KIPARSKY (1973, p. 132) reconstructs a diaspirate root, which is compatible with the initial voiced stop only if we assume that Grassmann’s law applied before the devoicing of the voiced aspirated stops. However, only Kiparsky postulates such a diaspirate root (IEW reconstructs **g^ueið^(h)-*), GEW **g^heið-*).

– δρύπτω ‘tear’, which KIPARSKY (1973) interprets as related to θρύπτω ‘break in pieces, spoil’ < **d^hrub-(b^h)-*, according to a reanalysis due to “reordering”. However, in the opinion of EWG, Latv. *drupt* should be compared, hence the Greek verb would come from **dru-p-*, an enlargement of the root **der-* ‘to tear, shatter’ (LIV; IEW). In the opinion of GEW, it is an expressive formation from δέρω, δρέπω (**drep-* ‘cut off, tear off’, as an enlargement of **der-*), while θρύπτω, instead, derives from **d^hrub^h-ið* (cf. Latv. *drubaža* ‘piece’, *drubaza* ‘wooden chop’, Old Ir. *drucht* ‘drop’ < Proto-Celtic **drub-tu-*). The problem, however, is that Latvian forms ending in *-p-* are also documented, such as *drup-u-*, *drup-t-* ‘to decay, fall’, and also in Germanic languages forms such as ON *drjúpa* ‘to drip’ are attested, in which the ending /p/ remains unexplained. DELG suggests an expressive lexical group from δέρω, related to δρέπω, with an unexplained (familiar?) vocalism. BEEKES (EDG, s.v.) argues that the Greek word was unlikely to have been reshaped after θρύπτω.

– Θελγίνες ‘Telchines’ (beside Θελκῖνες), θέλγω ‘to charm, fascinate’ < **d^helg^h-* ‘to beat, hit’ (cf. Old English *dolg* ‘wound’). According to GEW, the etymology is unknown. According to BEEKES (EDG, s.v.), the etymology of the word is unexplained. The hypotheses are unfortunately mostly unconvincing.

– θιγεῖν (inf. aor. of θιγγάνω ‘to touch, reach’, cf. Goth. *digandin*, Lat. *fiṅgō*, Skr. *dēhmi* etc.) < **d^heiǵ^h-* ‘to knead and build with clay’ (LIV; IEW; cf. also τεῖχος ‘wall’); according to GEW, the internal double *-γγ-* comes from an original *-χ-* (< **ǵ^h*), which became voiced after the nasal. The aorist θιγεῖν, again according to GEW, has a voiced stop analogically built on the present. In the opinion of DELG, this seductive etymology supposes that an aspirated **ǵ^h* (Greek *χ*) became a voiced /g/ after nasal (cf. θάμβος) and then passed to the aorist θιγεῖν (for **θιγεῖν). If analysed within the framework outlined here, the internal voiced stop could represent an instance of a backdating of GL, because it could be simply traced back to a previous **d^heiǵ^h-*, with a progressive dissimilation (as in the two following examples), started when both the aspirated stops were still voiced.

– φείδομαι ‘to save, to pardon’, which is to be interpreted, according to Kiparsky (1973), as a doublet of πείθομαι < **b^heid^h*- ‘to persuade, trust’ (LIV; IEW); according to LIV, EDG and EWG, the verb comes from **b^heid-* ‘to split, crack, chop’ (Lat. *findō*, Goth. *beitan*, OHG *bīzan*, Skr. *bhinādmi* etc.).

– φεύγω ‘to flee’ (Lat. *fugiō*, Goth. *biugan*, Old English *būgan* ‘to bend; to flee’, Lith. *būgti* ‘to be frightened’ etc. < **b^heug^h*- ‘to bend’, LIV; IEW). The discussion about the etymological interpretation of the inherited documented forms is extensive, since both **b^heug^h*- and **b^heug-* are potentially reconstructable. EDG does not quote the Germanic form, which points to an original diaspirated root. LIV separates the Greek forms and the Germanic ones, postulating two different roots for them.

Finally,¹² βαθύς too could be interpreted as a relic form corradical with βόθρος and βόθυνος (all derived from the same diaspirate root **b^hed^h*- ‘to dig, prick’), if we imagine a previous (and phonetically expected) archetype *βεθύς/βοθύς which, remodelled due to the analogy on a compact group of adjectives in -ύ- (structurally and semantically related), changed to the documented βαθύς (from which also βάθος).¹³

The new formation, therefore, is thought to have originated, according to a “product-oriented” morphological process (in the sense of Zager 1980), i.e. towards the morphological model characterized by bisyllabicity, root apophony in -α-, oxytonesis, and semantic affinity. An original *βεθύς/βοθύς would therefore have shifted into a specific lexical category, semantically compact and regularly structured, that of the adjectives in *-ύ- (see βαρύς ‘heavy’, βραχύς ‘short, small’, πλατύς ‘large’, παχύς ‘thick’, ταχύς ‘quick, fast’, βραδύς ‘slow’ etc.), all characterized by a strong sharing of formal and functional features, as part of a radial scheme (in the sense of BYBEE and SLOBIN 1982) of dimensionality (within time and space).¹⁴ The organization

¹² Some scholars quote also the form θυγάτηρ ‘daughter’ (Skr. *dubhitār*, Av. *dugədar-*, *duydar*, Goth. *daútar*, OHG *tohter*, Toch. B *tkācer*, Lyc. *kbatra* ‘daughter’, Hitt. *duttariyatila-* ‘a female functionary’ etc.) < **d^hug^h(^h)eter-* ‘id’ (IEW). According to PÂRVULESCU (1993), the word probably comes from **d^heug^h*- ‘to produce something of utility’ (cf. Skr. *dubé* ‘to give milk’) and would have meant ‘(female) worker’. The nowadays universally accepted reconstruction (cf. NIL and also WERBA, 2007), instead, is **d^hugh₂tér*, with a laryngeal, and whose traces may be found in Old Indic, Greek, Tocharian and perhaps in Hitrite (even if there is no solid evidence for the vocalization of **h₂* anywhere in Anatolian, cf. See MELCHERT 1994: 69-70 and KLOEKHORST 2008: 902-904).

¹³ See in particular the discussion presented by POZZA (2007 and 2010).

¹⁴ The semantic value conveyed by the adjective suffix would seem essentially limited to physical qualities such as shape, size (depth, width, thickness, largeness, smallness) etc.. Slowness and speed would be part of the same semantic space based on a “space-time dimensionality”, according to the well-known linguistic metaphor which interprets the passage of time as a relative motion in space.

of the lexicon into schemes would make it possible to explain, according to the prototypical categorization processes, the analogical mechanism at the origin of the formation of βαθός.¹⁵

Moreover, the interpretation just presented also brings greater clarity to the analysis of βυθός ‘depth’ (cf. *supra*) compared to the parallel form πυθμῆν ‘ground, foot of a vessel’ (from an earlier *φυθμῆν), which could represent a confirmation of the alternations of the outcomes of GL over time. According to this perspective, these forms would no longer conflict with the chronology of the phonetic “law” since the “regular” forms (those in which the dissimilation outcome is represented by a voiceless deaspirated stop), therefore, would fall in a single, gradual process, which continued for several centuries. Compared to the “crystallized” forms, the “regular” historical ones (which are not included in the data analysed in this work) can be interpreted as “secondary”, since they are located in that phase in which the Greek language had reached a substantial morphological settlement and represent, in order of time, the last type of formations affected by the dissimilation between aspirates (among other things, the fact that the GL intervenes also on the reduplicated syllable shows the relative persistence of its effects).¹⁶

Even if many of the above-mentioned etymologies are problematic, and in some cases also obscure, the evidence, as argued by KIPARSKY himself (1973, p. 133), «is not plentiful but nevertheless suggestive». Seen in this perspective, therefore, this initial stage would represent a first “wave” of the phenomenon, before it was fixed, later on, in the most common form, by creating sequences of voiceless and voiceless aspirated stops. A decade after Grassmann’s article, in fact, ANGERMANN (1873, p. 32) already argued that the deaspiration could have taken place in two different phases.

The above-mentioned forms, therefore, could rightfully be included among those that – in presenting a voiced stop as a result of dissimilation –

¹⁵ As for the poetic form βένθος ‘depth’ (attested since Homer), whose medial vowel is usually traced back to an original sonant *n, it cannot be excluded that this could be a Homeric creation probably influenced by coeval neuter substantives in -ος such as πένθος ‘pain’, ἔγχος ‘spear’ etc., all characterized by the (same) sequence “apophonic /e/ vocalism : nasal : aspirated stop”. Moreover, from a metric point of view, it can be observed that a long vowel followed by a short one would have better fit with the verse. The forms in which the form is documented are part of formulaic expressions (such as βένθεσι λίμνης, κατὰ βένθος ἄλός etc.), where the lexeme is characterized by a dactylic structure. Therefore, the shift from an original *βέθος to the documented βένθος would be due both to metric reasons and analogical levelings. See POZZA (2010, p. 378-380) for the etymological interpretation of βῆσσα ‘valley, mountain gorge’ and its Doric variant βᾶσσα.

¹⁶ For the analysis of the the morphological nature of the process that generates non aspirated segments in the reduplicant cf. DE ANGELIS (2018 and forthcoming).

would attest the effectiveness of the “law” in a more ancient phase with respect to the Greek innovation of devoicing original aspirated stops.

GL AND MYCENAEAN WRITING

The problem of tracing GL in Mycenaean script is particularly intricate. Many scholars have tried to interpret GL in relation to Linear B,¹⁷ although the dominant position, put forward firstly by RUIJGH (1967), followed by LEJEUNE (1965 and 1966) and many others (see DRIESSEN 2000, p. 179; MEISSNER 2008, p. 513; DE DECKER 2015, p. 148-150 and the bibliography therein for an update review) is that of a post-Mycenaean dating. The first problem to face is represented by the textual typology of the tablets, which tends to strong uniformity and which demonstrate many limitations in the graphic representation of sounds. For example, the fact that the Mycenaean spelling did not have specific signs for the aspirated stops necessarily leads us to face the problem from a different point of view.

The only sign of the syllabary suited to representing a sound which in Greek undergoes GL – as outcome of both sibilant and *y – is *25 (a_2), with the value of /ha/.¹⁸ The phonetic status of *h* in Mycenaean began to interest – in the 1960s – RUIJGH (1967) and LEJEUNE (1965 and 1966). Both scholars accepted the possibility of reconstructing intervocalic *-h-*, although with some caution. In his *Phonétique historique* (p. 90), Lejeune admits the possibility that the aspiration was perceived as “weak” at the time of Mycenaean tablets.

It is notable, as evidenced by Melena (2014: 74), that the majority of words with a_2 use the sign initially or at the beginning of the second member in a compound. The use of *25 in initial position is extremely uncommon both in Thebes and in Cnossos. Furthermore, the distribution of $-a_2/ -a$ shows that scribes at Pylos write $-a_2$ with great consistency, while scribes from Crete tend to use $-a$. For this reason, it has been hypothesized that there was a different spelling convention in Crete.¹⁹ Data from the tablets are often misleading: the sign *a* appears in many lexemes, where – on the basis of the reconstruction – a_2 would be expected (cf. alternations as *pa-we-a₂ / pa-we-a; te-tu-ko-wo-a₂ / te-tu-ko-wo-a; a₂-ke-te-re / a-ke-te-re; ke-re-a₂ / ke-re-a*). In other cases, where a notation of *hiatus* for etymological reasons or due to the presence of parallel spellings is expected, it appears noticed through the insertion of glides /j/

¹⁷ Cf. lastly BARTONĚK (2003, p. 147-148) and the bibliography therein.

¹⁸ For a recent survey on the sign a_2 and the etymological analysis of the voices in which it is attested, see PIERINI (2014).

¹⁹ On this purpose COLVIN (2006, p. 46) recalls: «the local scribes may have avoided sign *25 because they were aware of the sound [...] that it had been originally used for».

and /w/:²⁰ *i-ja-te* instead of **i-a-te* /i^hatērl/ or *i-je-re-u* /i^herēusl/ (that presents, twice in Pylos archive, a graphic variant *i-e-re-u*). Conversely, *hiatus* is notated where the aspiration is not expected: *ki-ti-e-si* ~ *ki-]ti-je-si* (*hapax* in PY Na 1179) /ktiensi/. All these alternations and irregularities would indicate a state of uncertainty, deriving from the first hints of the incipient disappearance of the intervocalic *-h-*, already in progress in the late Mycenaean period.²¹ Examples like *ja-ke-te-re* ~ *a₂-ke-te-re* lead to the hypothesis that the spelling #JV- was a notation perceived as outdated.

Myc. h and GL-failure? Some data from tablets

The first datum – as evidenced firstly by RUIJGH (1967, p. 44-45) – supporting a post-Mycenaean chronology of the law, is the change /**s*/ > /h/. A significant example of this is the Mycenaean word *te-o*, gr. θεός; a form **thehos* must be reconstructed in which the second *h* (< **s*) does not have a dissimilatory power (again RUIJGH 1967, p. 45). Subsequently, LEJEUNE (1972, p. 57) came back to the problem, mostly on /**s*/ > /h/, leaning also towards a post-Mycenaean dating of the law.

The other piece of evidence in favour of the absence of GL in Mycenaean tablets comes from the derivatives of ἔχω ‘to have’. In some cases, the presence of a *hiatus* in the morphemic boundary presupposes the presence of initial *h-*, which evidently has not been deleted as a result of the dissimilatory process triggered by the following *-kh-* (PLATH 20011-2002; DE LAMBERTERIE 2012), as in the following forms:

– *ko-to-no-o-ko* (**κτοινω-νόχος*) ‘owner of a κτοίνη’, testified *passim* at Pylos, in which the sequence *o-o* – if there were no *h* – would have undergone a process of contraction. It is certainly a compound of ἔχω, since the expression is equivalent to forms such as *ko-to-na e-ko-te* (PY Aq 64.12);

– *a-pi-e-ke* PY Un 2.2 (**ἀμφί + ἔχει > ἀμπέχω* ‘wrap, cover, clothe’);

– the compound adjective *po-ro-e-ke* PY Ta 713.2 and 715.2 (**πωρο-ἔχης* ‘having a marble/stone support’);

– the very problematic form²² *e-ke-ra₂-wo* (PY Un 718.2), attested also in genitive and dative (*e-ke-ra₂-wo-no* and *e-ke-ra₂-wo-ne*) and in the variant *]e-ke-ri-ja-wo* (PY Qa 1292), which is used in Pylos archive to refer to a person with a noble title. The term is mainly interpreted as appellative, compounded by ἔχω, /^hEk^hellāwōnl/ gr. Ἐχέ-λαος ‘who holds/dominates people’ (LEUKART,

²⁰ On the use of /j/ and /w/ see lastly DEL FREO (2016, p. 142 ff.).

²¹ PETRAKIS (2016, p. 100 n. 174) suggests that such interchangeability <je> / <e> and <jo> / <o> had an orthographic – rather than phonetic – character.

²² For AURA JORRO s.v. «sin intrpr. gr. satisfactoria».

1992, p. 394 ff.). Problems arise from the interpretation of the phonogram ra_2 and from its alternative spelling <ri-ja>. In this perspective, however, it should be postulated that the sign ra_2 , originally indicating a post-palatal liquid, represents a geminated consonantal nexus (<ri-ja> is an inverse spelling for /ll/). A second interpretation²³ is *e-ke-ra₂-wo* as /Enk^bellawōnl < /Enkhes-lawōnl (MELENA, 2001, p. 73), ‘he who profits (ἀπολαύω) from his spear (ἔγκος)’, where ra_2 can represent /rral/ or /llal/ (< r/l+y or /rsal/, /sral/, /slal/, /lsal/).

According to GARCÍA RAMÓN (2014), the appellative is /Enk^berr^hawōnl (*|en-k^berrjā-wōnl), assuming the existence of a base *|en-k^berrjā-l: *ἔγχειρία, an abstract term which designates ‘the act of undertaking, bringing, initiating’ and which has no direct descendants in the first millennium Greek²⁴ (where we can find only some derivatives of ἔγ-χειρέω as ἔγχειρήσις, ἔγχειρήμα etc.). It is notable that ἔχειρία is attested in the compound ἔκε-χειρία ‘truce, armistice’ (cfr. GARCÍA RAMÓN, 2014, p. 44).

Besides the ἔχω-compounds, a *hiatus* involving the presence of an underlying -h- is attested in the forms *o-pi-a₂-ra* (PY An 657) and *a-pi-a₂-ro* (PY passim), toponyms indicating the coastal region of the Pylos realm, see Gr. ἔφ-αλος ε ἄμφι-αλος. In these names the root *seh₂-l- can also be identified. Another example is the compound (or better a juxtaposition) *a₂-ro[]u-do-pi* (PY Ta 642), which could be interpreted as *halos-hudophi* > **haloshudōr* ‘with sea water’. Probably the word is referred to a decorative motif. It has been always compared with the Homeric epithet of Thetis ἄλοσύδνη ‘daughter of the sea’ (*Il.* 20. 217). In the first member we can recognize the root for ‘sea’ (*seh₂-l-).

In the light of data analysed, one can suppose that the lack of dissimilation could be related with the presence of *h*,²⁵ which could initially have been unable to trigger dissimilation. On the other hand, at least two forms, if their

²³ According to PALAIMA (2006, p. 63) the term is an attribute of *wanaks* and it is able to emphasize the strong connection of *wanaks* with the martial art.

²⁴ According to GARCÍA RAMÓN (2014, p. 41-42), «Se trata, pues, de una cuestión de semántica inseparable [...] de la dinámica de la formación de palabras, que puede abordarse sobre la base de que la existencia de un derivado en micénico no plantea inconveniente alguno de tipo fonético ni morfológico».

²⁵ As further evidence of the non-operation of the law in the time frame between Mycenaean and Homeric texts, some metrical hints in Homeric epic could demonstrate that, in some diaspirated roots, initial *h* was still felt as a full consonant in the meter (see DE DECKER, 2015, p. 151-155). An interesting example is the word ἄλοχος ‘bride’ (< *sm-log^hos). In Homeric poems, when a word ends in VC and it is followed by ἄλοχος, it shows the vowel as long (as if it were followed by two consonants). This proves the existence of the initial *h* and that it lengthened the short vowel by position (see also BELARDI, 1973, p. 216).

interpretation is correct, would seem to retain two original aspirated stops, without GL: *da-pu₂-ri-to-jo* and *pu₂-ti-ja*.

The form *da-pu₂-ri-to-jo* (*δαφυρινθοιο = Gk. λαβύρινθος ‘labyrinth’) is attested in KN Gg 702.2 and Oa 745.2. Probably, the hapax *da-pu-ri-to* in KN Xd 140.1 (with the alternation *pu/pu₂*) is an alternative form. The etymology has been extensively debated: the term is a pre-Greek word (probably Minoan), connected with the Carian epithet Λαβρανδεύς ‘of Labraunda’, or with the Lycian word λάβρυς ‘axe’.²⁶ The word was perhaps inherited from Linear A (see the form DU-PU₂-RE). The fluctuation between /d/ and /l/ could be due to the influence of some Anatolian language (see Valério 2017: 54-55).

On the basis of such alternations as *pu/pu₂* – which are widely documented (see also *pu-ti-ja / pu₂-ti-ja*) – MELENA (1987, p. 226-227 and 2004, p. 71) hypothesized that the signs for voiced labials could indicate that the aspirated stops inherited from Proto-Indo-European were still voiced at the time when the script was borrowed from Linear A (and this could also point to a possible existence of pre-nasalized stops in Linear A). For that reason, *pu₂* can represent both /b/ and /b^h/ (later evolving into /p^h/). The forms *pu₂-ti-ja* (PY An 656.13; Jn 601.3) and *pu-ti-ja* (PY An 340.10; Qa 1294) are generally interpreted as an anthroponym /P^hu:t^hiias/. Due to the ambiguity of the Mycenaean writing system, the interpretation of the proper name could be *Φυτίας or *Φυθίας, but also *Πυθίας or *Πυτίας etc.

A BRIEF REMARK ON THE EPIGRAPHIC EVIDENCE

The epigraphic evidence regarding GL in Greek has been deeply and widely studied,²⁷ and it does not fall within the scope of this paper. Nevertheless, it should be observed that the epigraphic dossier reveals a late stabilisation of the law, together with several dialectal and further (and sometimes “opposite”) sound changes, as aspirate assimilation processes (cf. θυφλός etc.), floating of the aspiration between the segments of the root (especially in the case of loanwords, cf. κίθών/χιτών etc.), “reverse” dissimilations (as in the case of φείδεσθαι etc.), or simply GL-failure etc. While the classical texts attest, without exception, the outcomes of dissimilation, the inscriptions of some

²⁶ For a complete survey on λαβύρινθος and word-initial lambdacism, see VALÉRIO (2017, p. 56).

²⁷ See in particular MILLER (1974, 1977) and SANCHEZ GARRIDO (1988) etc. Cf. also DE ANGELIS (2018 and forthcoming) and POZZA (2019) for some specific insights and bibliographical references.

dialectal areas behave less coherently, demonstrating a late application of the sound shift.

All these “irregularities” cease to exist, at a certain époque (its definitive affirmation, which took place very slowly was stabilised only after V sec. BCE, even if it is difficult to define the exact period),²⁸ and the law seems to stabilise definitively (especially in the formation of the perfect and of reduplicated forms in general, cf. *πέφευγα* from *φεύγω* or *τίθημι*). As therefore will be observed in the concluding remarks, the idea that GL has, in a certain sense, “struggled” to stabilise itself, in Greek, fits well with the presence of rare frozen forms (such as those discussed in § 2), that only represent some traces of its ancient effectiveness.

CONCLUDING REMARKS

As observed in this brief discussion, some documentary data suggest (even with all the necessary caution) that GL may have operated, in Greek, both before the desonorization of the PIE voiced aspirated stops and in the historical phase. Many were also the hypotheses concerning a possible application of GL to Mycenaean, where – in absence of a graphic distinction between voiceless, voiceless aspirated and voiced stops (except that for /d/) – the only clue is represented by the presence of the sign *25 *a*², which indicates /ha/.

As far as the Greek documentary phase is concerned, several scholars²⁹ have tried to analyse and explain the various (mostly epigraphic) oscillations – which, despite the substantial regularity of the phenomenon in the historical Greek phase, complicate the general picture – in the light of a whole series of phenomena strictly connected with GL: secondary assimilation of aspiration, restructuring of the original diaspirate root, analogical levelings, aspiration throwback, graphic mistakes etc. What can certainly be noted is that dissimilation processes are generally labeled as sporadic and non-systematic sound changes.

“Relic” words, such as those described above, would allow us to identify the existence, in a certain sense, of two different sound shifts which occurred at different times and in different ways, or a prolonged effectiveness of the phenomenon (starting before the devoicing of the aspirated voiced stops in Greek and ending after it). The “regular” outcomes could then be interpreted as part of a single, gradual process, which struggled to find regular application,

²⁸ For a law chronology see in particular SACHEZ GARRIDO (1988), according to whom the definitive stabilization of GL took place only in the Hellenistic period.

²⁹ Among others, MILLER’s works (1974 and 1977) represents a very important reference point for the analysis of the documentary data.

if not in a rather late period. The “initial” phase of the “application” of GL – the one which can be postulated thanks to the “relic” forms quoted above – would essentially represent a first “wave” of the phenomenon, at a time where the original voiced aspirated stops had not yet become voiceless. Then, in historical times, when the general Greek process of devoicing of the original voiced aspirated stops was completed, the dissimilation process stabilised in the most regular form, yielding the (common) sequences of voiceless and voiceless aspirated stops.

Therefore, forms which present traces of a possible backdating of GL would no longer be in contrast with the chronology of the phonetic phenomenon, since they would represent a first manifestation of it, preceding the subsequent processes of leveling and normalization.

In general, as masterfully evidenced by MORPURGO DAVIES (2012, p. 103) it is very difficult to reconstruct with a high degree of plausibility diffusion processes which belong to a prehistoric period. More difficult is to state if same or similar changes, which occur in different ancient phases or dialects of a same language, are independent innovations or a result of a diffusion. What is certain is that one possible way to overcome the apparent chronological paradox by which GL is characterized is to explain this linguistic change through its gradual diffusion in different waves.

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