A Greek Exploitation of Morphological Contrasts

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The functional histories of Modern English 'hale' and 'whole', the northern and southern representatives respectively of Old English ' $h\bar{a}l$ ', attest an exploitation in English of phonetic contrasts [heil]/[houl]. In this paper we are concerned with a somewhat similar but much more sharply defined phenomenon on the morphological plane.

From the beginning of our literary tradition the Greek verbal system exhibits hosts of polymorphic presents, presents with identical or related bases but different terminations or formations: ἄγαμαι ἀγάομαι ἀγαίομαι ἀγάζομαι, ἀλύσκω ἀλυσκάνω ἀλυσκάζω, *ἄνυμι (pass. ἄνυμαι) ἀνύω ἄνω ἀνύτω, ἀρύω ἀρύτω ἀρύσσομαι, ἐρίζω ἐριδαίνω ἐριδμαίνω, ἐρύκω ἐρυκάνω ἐρυκανάω, κοναβέω κοναβίζω, μένω μίμνω, οἰνοχέω οἰνοχεύω, ὀνομαίνω ὀνομάζω, στένω στενάχω στεναχίζω, etc. 1)

These collateral present forms have been developed by various procedures, some of which are as follows:

- I. Presents belonging to different morphological classes or having different nominal bases: $-y^e/_o$ presents $\beta\lambda\dot{\alpha}\pi\tau\omega$ ($<*(\mu)\beta\lambda\alpha\pi_{\ell}\omega$), aidéoμαι (cf. aidώς) beside primary root presents $\beta\lambda\dot{\alpha}\beta$ ομαι aidoμαι; $-\sigma\kappa\omega$ presents φάσκω βάσκω ($<*g^wm-sk^e/_o$ -) beside primary root or $y^e/_o$ presents $\varphi\eta\mu$ ί βαίνω ($<*g^wm-y^e/_o$ -); denominatives $\dot{\alpha}\gamma\omega\nu$ ίζομαι (: $\dot{\alpha}\gamma\dot{\omega}\nu$, $-\tilde{\omega}\nu$ ος), $\chi\lambda\iota\dot{\alpha}\dot{\alpha}\nu$ ομαι (: $\chi\lambda\iota\dot{\alpha}\alpha\nu$ ς) beside other denominatives $\dot{\alpha}\gamma\omega\nu$ ιάω (: $\dot{\alpha}\gamma\omega\nu$ ιάω (: $\dot{\alpha}\gamma\omega\nu$ ιάω στέχω beside nil-grade $\kappa\lambda\dot{\nu}\omega$ στίχω; reduplicated presents $i\sigma\chi\omega$ ($<*\sigma\iota$ - $\sigma\chi$ -), $i\zeta\omega$ ($<*\sigma\iota$ - $z\delta$ -) beside primary root or $-y^e/_o$ presents $\xi\chi\omega$ ($<*\sigma\iota$ - $z\delta$ -), $\xi\zeta$ ομαι ($<*\sigma\iota$ - $z\delta$ -).
- II. Different classes of denominative presents based on the same nouns: ἀρτύω ἀρτύνω (: ἀρτύς), βιάω -άομαι βιάζω -ομαι (: βία), ἡβάω ἡβάσκω (: ἤβη), λυσσάω λυσσαίνω (: λύσσα), ὁπλέω ὁπλίζω (: ὅπλον). But see under (iii) below.
- III. One form being a mere extension or transformation of the other: ἀφάσσω κλητσκω χρητσκομαι transformed from ἀφάω/άφ-

¹⁾ Polymorphism in the verbal system is not an ancient Greek peculiarity: Sanskrit offers many examples (pṛṇáti pṛṇáti piparti : pṛ-, bhárati bibharti : bhṛ-, etc.) which are often not functionally differentiated. See Verkerdi, 'On polymorphic presents in the Rgveda', Acta orientalia academiae scientiarum Hungaricae, XII, 1961, fasc. 1-3, pp. 249ff.

(: $delta \phi \dot{\eta}$), κλητζω (: κλη- $ext{f} \dot{\phi} \dot{\phi}^2$)), χρητζω (: χρή). Some rival formations under (II) above, e.g., $- delta \zeta \omega$ (beside $- delta \omega$), $- delta \zeta \omega$ (beside $- delta \omega$), even with nominal bases available, may, in fact, be deverbatives and belong here.

IV. Analogy: To analogy, operating within functionally related groups, is largely due in general the existence of rival formations, but the immediate models are in many cases no more clear. ἀρύσσομαι (: ἀρύω, -ομαι) is possibly formed after ἀρύσσω, βαρύθω (: βαρέω) after μινύθω φθινύθω, στενάχω (: στένω) after ἰάχω. Parallel formations are found in semantic groups: κλάζω κλαγγάνω κλαγγαίνω, κράζω κραγγάνω κραγγαίνω; κοναβέω -βίζω, καναχέω -χίζω, ἀμφαρα-βέω -βίζω, etc.

In a number of cases morphological patterns have been brought into play. New present forms have thus sometimes been created to older non-present forms: $-i\pi\tau a\mu a\iota$ ($\pi\varepsilon\varrho\iota$ -, $\dot{\varepsilon}\xi$ -, possibly $\dot{\alpha}\pi o$ -), beside $\pi\dot{\epsilon}\tau o\mu a\iota$, is newly formed to $\ddot{\epsilon}\pi\tau\eta\nu$ $\pi\tau\dot{\eta}\sigma o\mu a\iota$ after $\ddot{\epsilon}\sigma\tau\eta\nu$ $\sigma\tau\dot{\eta}\sigma o\mu a\iota$: $\ddot{\iota}\sigma\tau a\mu a\iota^3$); after verbs in $-\dot{\epsilon}\omega$, fut. $-\dot{\eta}\sigma\omega$, aor. $-\eta\sigma a$ (e.g. $\varphi\iota\dot{\lambda}\dot{\epsilon}\omega$ $\varphi\iota\dot{\lambda}\dot{\eta}\sigma\omega$, $\dot{\epsilon}\varphi\dot{\iota}\dot{\lambda}\eta\sigma a$) have been formed $\dot{\epsilon}\dot{\lambda}\varkappa\dot{\epsilon}\omega$ (beside $\dot{\epsilon}\dot{\lambda}\varkappa\omega$) from the fut. $\dot{\epsilon}\dot{\lambda}\varkappa\dot{\eta}\sigma\omega$, aor. $\dot{\epsilon}\dot{\lambda}\varkappa\dot{\eta}\sigma a\iota$, which show an $-\eta$ - extension to the stem 4), and possibly $\mu a\chi\dot{\epsilon}o\mu a\iota$ (beside $\mu\dot{\alpha}\chi o\mu a\iota$) from the fut. $\mu a\chi\dot{\eta}\sigma o\mu a\iota$ if it is not a denominative (to $\mu\dot{\alpha}\chi\eta$) 5).

The aorist seems particularly to have been the source of many such creations: $d\gamma alo\mu al$ (beside $d\gamma a\mu al$), $\kappa\epsilon\rho al\omega$ (beside $\kappa l\rho r\eta\mu l$) are possibly formed from the aorists $d\gamma d\sigma\sigma a\sigma \vartheta al$, $\kappa\epsilon\rho d\sigma\sigma al$ after the paradigmatic relation $ral\omega$: aor. $rd\sigma\sigma al^3$). The new nasal presents in $-d-rr\bar{\nu}\mu l$, $\kappa\epsilon\tau dr\bar{\nu}\bar{\nu}\mu l$ (beside $\kappa lr r\eta\mu l$, aor. $\kappa\epsilon\tau d-\sigma(\sigma)al$), $\kappa\epsilon\delta dr\bar{\nu}\bar{\nu}\mu l$ (beside $\kappa ll r\eta\mu l$, aor. $\kappa\epsilon\delta d-\sigma al$), etc. have been drawn from the aorists after the old pattern $\ell rr\bar{\nu}\mu l$: $\ell rr\bar{\nu} rr\bar{\nu} l$: $\ell rr\bar{\nu} rr\bar{\nu} l$: $\ell rr\bar{\nu} rr$

²⁾ Schulze, Quaest. epic., 283f.

³) Cf. Brugmann-Thumb, Griech. Gramm. ⁴, 324; Schwyzer, Griech. Gramm. I, 681.

⁴) On such futures and agrists, see Risch, Wortbild. der hom. Sprache, 217 ad fin., 296 ad fin.; Chantraine, Gramm. hom. I, 415f., 446; Schwyzer, op. cit., 752, 782.

⁵) See Frisk, Griech. etym. Wörterbuch II (Lfg. 12), s.v. μάχομαι.

⁶⁾ Cf. Risch, op. cit., 284.

⁷⁾ On this type, see Lejeune, Phonétique grecque, 105; Schwyzer, op. cit., 697.

⁸⁾ See Risch, op. cit., 237.

A few of the formation types, particularly nasal and $-\zeta \omega$, are very productive, and collateral forms of these types occur very frequently. Noteworthy are the forms in $-\dot{\alpha}\zeta\omega$ (collateral with $-\dot{\alpha}\omega$) and $-\dot{\iota}\zeta\omega$ (collateral with $-\dot{\epsilon}\omega$) whose development falls under (I)–(IV) above 9).

The functional implication

In a number of cases, so far as we can establish from our literary tradition, no functional differentiation is observed between the rival forms, although the original state of affairs in such cases may have been different. Where the forms are functionally distinguished no consistent pattern is observed within a class, and the functional relations exhibited by forms in any class in question can be very widely varied. In the former case this polymorphism seems to have become a very useful instrument in the hands of the epic poets, who employed the rival forms as mere metrical variants.

How the choice between two rival forms may be determined by metrical considerations can be seen in, e.g., the Homeric phrases χεῖρας ὀρεγνύς (II. i. 351, end of verse) beside χεῖρας . . . ὀρέγοντας (Od. xii. 257, middle of verse) where, with their positions in the verse maintained, ὀρέγων and ὀρεγνύντας would have been impossible, and μακρά βιβάσθων (Il. xiii. 809, etc., always end of verse) beside μακρά βιβάς (Hom. Il. vii. 213, middle of verse) where the latter would have been impossible at the end of the verse. It can further be seen in the employment of one formation in certain forms to the exclusion of the other. For example, in Homer both κραδάω and κραδαίνω are found only in participles: the former only in the active (κραδάων II. vii. 213, xiii. 583, etc.), the latter only in the passive (πραδαινομένη II. xiii. 504, etc.). It is quite obvious here that πραδαινόμενος serves as a very useful variant for the metrically impossible κραδάομενος. Again, beside the imperfect σμερδαλέον κονάβιζε (Il. ii. 466, etc.) is found regularly the agrist σμερδαλέον κονάβησε (Il. ii. 334, etc.). Cf. μοχθίζοντα (II. ii. 723) but μοχθήσειν (II. x. 106). Also, the aorist ἀντίἄσα (cf. Il. i. 67) and the future ἀντιάσω (cf. Od. xxii. 28) are attested in Homer, but the metrically unsuitable present ἀντιάζω (note present form in Pind. N. 1. 68, Soph. Aj. 492, etc.) is not; on the other hand, the present ἀντιάω (ἀντιόω with 'diectasis') is found (cf. Il. vi. 127, etc.).

This being the situation, we now find that the metrical usefulness of certain forms has led to new creations. Such new creations are

⁹⁾ See Schwyzer, Mél. Pedersen, 63[ff.] with literature.

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some nasal presents created under the influence of uncontracted $-\dot{a}\omega$ forms and attested usually with 'diectasis': $\dot{\epsilon}\varrho\nu\varkappa a\dot{r}\dot{a}\omega$ (: $\dot{\epsilon}\varrho\nu\varkappa\dot{a}\nu\omega$), $i\sigma\chi a\dot{r}\dot{a}\omega$ (: $i\sigma\chi\dot{a}\nu\omega$), $\pi a\mu\varphi a\dot{r}\dot{a}\omega$ (: $\pi a\mu\varphi a\dot{r}\nu\omega$)¹⁰). Metrical suitability has also been partly responsible for the spread of $-i\dot{a}\omega$ forms where the uncontracted termination $-i\dot{a}\omega$ ($-i\dot{o}\omega$) is preceded by a heavy syllable: $\dot{a}\nu\nu\dot{a}\omega$ (: $\dot{a}\nu\nu\dot{a}\omega$), $\dot{\delta}\eta\varrho\dot{a}\omega\mu a\iota$ (: $\dot{\delta}\eta\varrho\dot{a}\omega\mu a\iota$), $\mu\eta\nu\dot{a}\omega\mu a\iota$ (: $\mu\eta\nu\dot{a}\omega\mu a\iota$), etc. To it has also been due the formation of some $-\dot{\epsilon}\nu\omega$ compounds: $\dot{o}\nu\nu\dot{a}\nu\dot{a}\omega\omega$ (: $\dot{o}\nu\dot{a}\nu\dot{a}\omega\dot{a}\omega\omega$), $\pi o\nu\nu\dot{a}\nu\dot{a}\omega\dot{a}\omega\omega$ (: $\pi o\nu\nu\dot{a}\nu\dot{a}\omega\dot{a}\omega\omega$). Cf., beside $\beta\iota$ - $\beta\dot{a}\sigma\vartheta\omega\nu$ artificially created to $\beta\iota\beta\dot{a}\varsigma$, by-forms in $-\dot{\epsilon}\vartheta\omega$: $\varphi a\dot{\epsilon}\vartheta\omega$ (: $\varphi\dot{a}\omega$), $\vartheta a\dot{\epsilon}\vartheta\omega$ (: $\vartheta\dot{a}\lambda\lambda\omega$), $\nu\varepsilon\mu\dot{\epsilon}\vartheta\omega\mu a\iota$ (: $\nu\dot{\epsilon}\mu\nu\mu a\iota$), $\dot{\eta}\nu\varepsilon\dot{\epsilon}\vartheta\upsilon\mu a\iota$ (: $\dot{a}\nu\dot{\epsilon}\varrho\omega\mu a\iota$), etc. which frequently offer an anapaestic rhythm very easily accommodable in the epic verse. This is a metrical exploitation of these forms.

However, the chief interest of this paper lies in the functional distribution observed within a small but important group of presents in the $-\epsilon\omega/-\ell\zeta\omega$ class. As has been noted above $-\epsilon\omega/-\ell\zeta\omega$ collateral forms occur very frequently. In Homer the following sets are found: $aiv\dot{\epsilon}\omega - \ell\zeta\omega$, $aiv\dot{\epsilon}\omega - \ell\zeta\omega$, $\delta\epsilon\iota\pi v\dot{\epsilon}\omega - \ell\zeta\omega$, $\kappa\alpha v\alpha \chi\dot{\epsilon}\omega - \ell\zeta\omega$, $\kappa\alpha u\dot{\epsilon}\omega u\dot{\epsilon}\omega - \ell\zeta\omega$, $\kappa\alpha u\dot{\epsilon}\omega u\dot{\epsilon}\omega$

¹⁰⁾ Cf. also ἐστιχόωντο; -τάω forms: ἐρχατόωντο εὐχετόωντο, εὐχετάασθαι, λαμπετόωντι, ναιετάουσι, ἐσχατόωντα, ἐσχατόωσα, etc., on which see Leumann, Hom. Wörter, 178ff.

¹¹⁾ Cf. further μυθολογεύω νηπιαχεύω ἐπιδημεύω etc. These verbs are chiefly poetic and mostly confined to the present tense. On their development, see Chantraine, op. cit., 368; Fraenkel, Griech. Denom., 177. In the group where rival forms in -έω are available, this development must be seen not as a device for avoiding contraction (so Fraenkel, ibid.)—cf. contracted impf. οἰνοχόει Hom. II. i. 598, etc.—but as due to the rhythmical shape of the -εύω forms.

¹²⁾ This sharp differentiation contrasts with the fine distinctions of aspect that have been established within some classes, e.g., in $-\vartheta \omega$ (see Chantraine, Mél. Vendryes, 93 ff.; cf. Laroche, La racine nem-, 12), $-\varkappa \omega/-\gamma \omega/-\gamma \omega/-\gamma \omega$ (see Meillet, BSL 26, 1925, 1 ff.; Chantraine, BSL 33, 1932, 77 ff.), reduplicated—type $\mu l \mu \nu \omega$ (see Vendryes, MSL 20, 1918, 117 ff.), and some nasal forms (see Vendryes, $A\nu\tau l\delta\omega \rho \sigma \nu$, 266 ff.). Even in these cases, it must be admitted that the distinctions are by no means rigid.

of sets in the post-Homeric classical period. The Homeric sets thus seem to witness a new development which, however, was not thoroughgoing, but which nevertheless seems clearly to show how functional necessity or an exploitation of morphological contrasts can break down a system of functionally indistinguishable binary forms.

Of the denominative $-\epsilon\omega/-i\zeta\omega$ collateral forms listed in the post-Homeric classical period, 40 per cent show this development, the $-i\zeta\omega$ presents functioning as (quasi-)causatives to the $-\epsilon\omega$ ones: $\sigma\iota\tau\dot{\epsilon}\circ\mu\alpha\iota$: $\sigma\iota\tau\dot{\epsilon}\zeta\omega$ - $\sigma\iota\alpha\iota$, $dr\vartheta\dot{\epsilon}\omega$: $dr\vartheta\dot{\epsilon}\zeta\omega$, $d\rho\epsilon\mu\dot{\epsilon}\omega$: $d\rho\epsilon\mu\dot{\epsilon}\zeta\omega$ ¹³), $\epsilon\dot{\epsilon}\mu\epsilon\nu\dot{\epsilon}\omega$: mid. $\epsilon\dot{\epsilon}\mu\epsilon\nu\dot{\epsilon}\zeta\omega$, $\pi\lambda \delta\upsilon\tau\dot{\epsilon}\omega$: $\pi\lambda \delta\upsilon\tau\dot{\epsilon}\zeta\omega$, $\sigma\tau \delta\iota\chi\dot{\epsilon}\omega$: $\sigma\tau \delta\iota\chi\dot{\epsilon}\omega$, $dr\alpha-\chi\omega \rho\dot{\epsilon}\omega$: $dr\alpha\chi\omega \rho\dot{\epsilon}\zeta\omega$, $e\dot{\epsilon}\delta\alpha\iota\mu \delta\upsilon\dot{\epsilon}\omega$: $e\dot{\epsilon}\delta\alpha\iota\dot{\epsilon}\omega$

These $-i\zeta\omega$ formations are, of course, subject to analogical influences, and one or two verbs are clearly seen to belong to some semantic groups. $\sigma\iota\tau\dot{\epsilon}o\mu\alpha\iota\ \sigma\iota\tau\dot{\epsilon}\zeta\omega$ ($:\sigma\iota\tau\circ\varsigma$), cf. $\dot{\alpha}\varrho\iota\sigma\iota\dot{\epsilon}\zeta\omega$, belong to the same semantic eategory as $\delta\epsilon\iota\tau\iota\tau\dot{\epsilon}\omega$ $\delta\epsilon\iota\tau\iota\dot{\epsilon}\omega$ ($:\delta\epsilon\iota\tau\iota\sigma\iota$); with $\dot{\eta}\varrho\epsilon\mu\dot{\epsilon}\omega$ ($:\dot{\eta}\varrho\epsilon\mu\dot{\epsilon}\omega$) may be mentioned the semantic opposite $\sigma\varphi\alpha\varrho\alpha\iota\dot{\epsilon}\omega$ ($:\sigma\varphi\alpha\varrho\alpha\iota\dot{\epsilon}o\mu\alpha\iota$). In many cases, however, the models are no more clear. What is clear is that when once such a functional contrast attendant upon a morphological opposition is established in some words, it can easily be exploited to meet speakers' needs when they arise.

If the post-Homeric classical sets are new (as indeed they may be), one of the earliest models is certainly $\delta \epsilon \iota \pi \nu i \zeta \omega$ (after $\xi \epsilon(\iota) \nu i \zeta \omega$ 'entertain as a guest'?): $\delta \epsilon \iota \pi \nu i \omega^{15}$).

¹³⁾ $\eta \varrho \epsilon \mu l \zeta \omega = \eta \varrho \epsilon \mu \dot{\epsilon} \omega$ also occurs in Xenophon (Lac. 1. 3), and, if secondary, can be accounted for by such a development as 'cause oneself to rest, etc.' > 'rest, etc.'

¹⁴⁾ Note also in this period other causatives in the $-l\zeta\omega$ class: beside primary root presents, $\gamma \epsilon \mu l\zeta\omega$ $\dot{\epsilon}\vartheta l\zeta\omega$; beside $-\dot{\epsilon}\omega$, partially $\dot{\delta}\gamma \nu l\zeta\omega$; beside $-\dot{\epsilon}\omega$, partially $\dot{\delta}\gamma \nu l\zeta\omega$; beside $-\dot{\epsilon}\omega$, $\beta \epsilon \mu \beta \bar{\iota}\nu l\zeta\omega$ $\nu \sigma \iota l\zeta\omega$ $\psi \dot{\delta}\sigma \nu l\zeta\omega$. A few $-\dot{\epsilon}\zeta\omega$ verbs also function as causatives to the verbs beside which they occur: $\dot{\epsilon}l\varkappa \dot{\epsilon}\zeta\omega$ beside $\dot{\epsilon}l\varkappa\omega$, $\dot{\delta}\epsilon\varkappa \dot{\epsilon}\zeta\omega$ beside $\dot{\delta}\dot{\epsilon}\chi o\mu \alpha l/\dot{\delta}\epsilon\varkappa$ - and the uncertain $\dot{\delta}\epsilon\varkappa \dot{\epsilon}\omega$ (see Ath. Mitt. 18, 1893, 229), $\beta \iota \beta \dot{\epsilon}\zeta\omega$ beside $*\beta \iota \beta \dot{\epsilon}\omega$, $\sigma \iota \gamma \dot{\epsilon}\zeta\omega$ beside $\sigma \iota \gamma \dot{\epsilon}\omega$. These, however, present much less striking or significant patterns.

¹⁵⁾ This paper gives some of the substance of my doctorate thesis, 'A study in the changes in the Greek present formations,' University of London, 1966.