What Greek can tell us about the remaking of verb endings

I could not have not written this piece, since I could not imagine not honoring the memory of Tassos Christidis, my first and best Greek friend and a giant on the contemporary Greek linguistic scene for some three decades. At the same time, though, I am deeply saddened, as I write this, knowing that it is one paper of mine on Greek that Tassos will not be reading. Yet through this small contribution, I hope to do homage to his formidable intellect and his broad interests. Even though my topic is not one that Tassos himself ever worked on directly, I am confident that it is one that he would have found interesting, given the breadth of his knowledge of the Greek language (his conception of the *magnum opus*, Christidis 2001, is testimony to that knowledge). It is thus the least that I can do by way of recognizing Tassos and publicly remembering him.

My point of departure is the widespread past nonactive (i.e., middle or mediopassive voice) verbal ending for third person plural (3PL) -ovtousav (-ondusan). This ending is recognized as an innovative replacement for earlier (e.g., Ancient Greek) -ovto (-onto), either through the direct accretion of the active 3PL past ending -sav (-san), as suggested in Joseph (2006), or through the addition of the aorist passive 3PL - $\eta\sigma\alpha\nu$ (-isan), thus indirectly reflecting the 3PL active, inasmuch as the active endings figure in the formation of - $\eta\sigma\alpha\nu$. While some additional changes are needed to give the ultimate form with -u-vocalism (see Joseph 2004, 2006 for some discussion, drawing on Ruge 1984), it suffices to recognize here that -ovtousav has a history that involves influence from the 3PL active ending.

The make-up of this composite ending can be explored somewhat more deeply. In particular, while both - $\sigma\alpha v$ and -ovto in Ancient Greek were associated with both voice and tense categories, being respectively the endings for active past and nonactive past, there is reason to believe that -ovto came to be connected more to the marking of voice and - $\sigma\alpha v$ more to the marking of tense. The argumentation to support this claim is as follows.

In the Ancient Greek diasystem of verbal endings, the -ντ- (-nt-) of -ovτo was found in 3PL endings in the active and nonactive paradigms, in both the present tense and the past tense. In particular, in the Doric dialect, the present active 3PL ending is -οντι (-onti) (Attic-Ionic -ουσι (-ousi) being a development from that by regular sound change), and all over Ancient Greek the present nonactive 3PL ending is -ονται (-ontai); in the past tense the nonactive ending was -οντο, and only in the past active was the pattern of an -ντ- in 3PL endings disrupted, as the ending -ov (-on) is found (from earlier *-ont by a regular sound change). On the way to Modern Greek, however, the $-\nu\tau$ -, in its more modern form [nd], changed in function so that it was no longer a carrier of 3PL marking; rather, based on the fact that the present active 3PL ending came to be -ovv (-un) (though there was fluctuation in Medieval Greek between -ovv and -ovσι), and the Ancient Doric -ovτι did not survive into the Koine and thus not into Modern Greek, and with the added consideration that the past active 3PL was -v(-n) in any case, the value of $-v\tau$ - could no longer be said to be marking 3PL. Rather, the only category of ending where -ντ- consistently occurs, at one stage of post-Classical/pre-Modern Greek, came to be the 3PL nonactive endings, with -οντε (-onde; from -ονται) in the present and -οντο (-*ondo*; from -*onto*) in the past. With regard to $-(\sigma)\alpha v$ (-(s)an), the persistent -α- throughout much of the set of active past endings,³ in Ancient Greek but even more strongly so in Modern Greek, where the sole 1sG ending is - α (vs. Ancient Greek -ov alternating with - α depending on different classes of verb), means that $-\sigma\alpha\nu$ is more closely tied to tense marking per se.

Putting these facts together, one is led to an analysis whereby in the innovative ending - \acute{o} v τ ou σ av, the order of the categories marked at the time the innovation took place⁴ is voice (represented by the [-ondo/u-] part) as innermost and tense (represented by the [-san] part) as outermost. Thus, - \acute{o} v τ ou σ av realizes voice and tense, in that order.

In this light, the development of another variant ending for 3Pl nonactive is of special interest. This other ending (actually one of many occurring in the Greek diasystem, as Minas 1987 details) is $-\dot{\phi}\sigma\alpha\nu\tau\epsilon$ (-osande), indicated by Peloponnesian -osade (with -d from earlier -nd-) and Farasa -ο $\dot{\phi}\sigma\alpha\nu\tau\epsilon$ (-usande) (with -u- from earlier -o-). Its history is like that of $-\dot{\phi}\nu\tau\sigma\sigma\alpha\nu$, in that it appears to be an extended form of an original 3Pl ending. In this case, however, the basis of the ending that came to be extended is 3Pl active $-\sigma\sigma\alpha\nu$ (-osan; note $\dot{\epsilon}\lambda\alpha\mu\beta\dot{\alpha}\nu\sigma\sigma\alpha\nu$ in footnote 1), and it was extended with -nde, the continuation of earlier -nt-, originally associated with marking of 3Pl (as noted above) but eventually a carrier of voice and specifically nonactive voice. The final vocalism of -nde suggests it comes from the nonactive present tense ending, as in $\beta\lambda\dot{\epsilon}\pi\sigma\nu\tau\alpha\iota$ (vleponde) 'they are seen / they are seeing each other'. It is important

- 1. This process of extending 3PL endings with $-\sigma\alpha v$ is attested throughout the history of Greek at least in the active voice (cf. Classical Attic ἔγνωσαν (égno:san) 'they knew' vs. (earlier) Pindaric ἔγνων (égno:n) and Hellenistic ἐλαμβάνοσαν (elambánosan) 'they were taking' vs. earlier ἐλάμβανον (elámbanon: Chantraine 1973, §353; Pantelides 2003). Moreover, a similar process with active 3PL -αν (-an) underlies the variant nonactive 3PL ending -ονταν (-ondan; from earlier -ovto + -av(-onto + -an)). See Minas 1987, 48 on -ονταν, and, more generally, the wide variety of nonactive endings to be found around Greek (I thank Io Manolessou for bringing Minas's fine work to my attention). 2. The derivation of -όντουσαν from the aorist passive is endorsed by Minas (1987, 49), accepting the earlier view of Hatzidakis (1905-7), though he also agrees that active forms may have directly played a role as well, following
- 3. For instance, for the athematic past tenses of Ancient Greek, the 1sg ending is -a, the 2sg is -ac, the 1pl is -amev (-amen), the 2pl is -ate (-ate), and the 3pl is -av (-an). The thematic past tenses admittedly show alternations between -e- and -o- (1sg -ov (-on) vs. 2sg -ec (-es), for instance).
- 4. This statement must be phrased this way since at the point at which active -(σ) αv spread to nonactive forms, one has to question whether -(σ) αv is really associated with the marking of voice at all.

to note here, though, that unlike -óntongan, which has its voice marker occurring before (to the left of) the tense marker, instead -ógante shows the reverse order of elements, with tense situated before voice.

This ordering is anomalous within the overall context of verb endings in Modern Greek, where voice markers tend to be more interior and tense markers more exterior. In particular, other extended endings have tense-related material added at the end, after the voice-related material. Thus IPL - μασταν (-mastan) is from earlier -μαστε (-maste) with the accretion of the ostensibly 3PL active ending -αν (-an), and 1sG -μουνα (-muna) is from earlier -μουν (-mun) with the accretion of the 1sG active ending -α (-a). Of course the value of these accretions, once they can be used in nonactive forms, must be judged as different from their original active associative value. However, at the point at which they were extended into nonactive forms, they were carriers of the active voice and thus in a sense, yielded forms with the ordering of elements such that voice preceded tense.

The question thus is how to explain this seemingly anomalous situation with a different ordering of elements in -όσαντε from that found in -όντουσαν. It can perhaps be resolved if it is assumed that speakers, when innovating, care more about getting appropriate pieces expressed and into the mix, as it were, than they do about observing ordering regularities concerning these elements. This is not to say that anything goes, but recognizes rather that getting the informative pieces into the form is the paramount consideration. While this may seem like an overly bold conclusion to draw from a single example, it finds support from an entirely parallel case from Latin involving marking for tense and for another key verbal category.

In Latin, the future imperative 3PL ending is -untō with person/number marker -unt inside of (i.e., to the left of) the mood marker -tō. However, that order does not conform to the order of person/number/mood markers found in other forms of the paradigm, e.g., 2PL -tōte, where -te marks person/number; relevant here too is the fact that the 2sg future imperative ending is -tō, that is to say, -tō-Ø, with mood marker -tō-) and that -te occurs in other 2PL imperatives (e.g., present imperative amāte 'love!'). Thus, -tōte rather transparently involves marking for MOOD inside of marking for TENSE. Moreover, other mood markings occur inside of the 3PL person/number marker, as in the present subjunctive ament 'that they love' where -e- is the subjunctive marker and -nt marks 3PL. Thus, 3PL -untō stands out in the paradigm as having TENSE inside of MOOD, so that, as with -όντουσαν, the order is the opposite in this 3PL form. Thus again, it seems that the order is not fixed in general (though it is for particular forms) and that speakers in putting together a 3PL form were faced with what to do with the -t- of the future imperative $-t\bar{o}$ and the -t- of the 3PL -unt; a possible solution would involve "sharing" of -t-, i.e., -un-T- \bar{o} , where the -T- is meant to represent an "ambimorphemic" element shared between the tense marker and the mood marker, and would thus yield the attested -untō. That "sharing" solution is possible only if the morphemes are ordered with TENSE before MOOD for in the opposite order -tō-unt there is no way to have a single -t- serve double duty. The sharing solution thus provides a rationale for stringing the morphemes together in some order, even if the order is anomalous relative to other forms in the paradigm or in related paradigms. In this solution, therefore, speakers make a reasonable guess as to how to make the morphemes "work" in the form.

In a sense, what these two cases, Modern Greek -όντουσαν and Latin -*untō*, suggest is that speakers employ a *Gestalt* strategy of interpretation and production when dealing with the creation of new material via concatenation. This strategy can be seen in two other phenomena, both involving ordering of elements.

First, within Indo-European it is clear that demonstrative "pieces" could be concatenated to form larger demonstrative words; thus Greek τούτο (*tou*-

to) 'this' (NEUTER) appears to be made up of the definite element (later to be the article) το (to) with a deictic element v (u) (as in Sanskrit asa-u 'this') and the το repeated, and Latin hic 'this' is composed of a deictic hi- and a deictic -c, from *ke-. This latter element *ke- figures in the Greek demonstrative κείνος (keinos) 'that', from *ke-eno-, and interestingly, this same combination, but in the reverse order, is found in Umbrian enuk 'that way', ostensibly from *eno-ke. Thus it would appear that the specific order of these deictic elements is less important than their simply being present and concatenated.

Second, this strategy is not unlike the "jumbled word effect" reported on in the media in the past few years (see especially Grainger & Whitney 2004) by which fluent reading is possible with passages in which the letters in words are jumbled up, as in the title of the Grainger & Whitney article, "Does the huamn mind read words as a whole?", i.e., "Does the human mind read words as a whole?". Whatever perceptual principle allows fluent reader to ignore the internal order of letters in a word as long as the ends are intact, and thus to read huamn as human (etc.) without any difficulty, can underlie the ability to produce and/or understand anomalously ordered morpheme sequences such as -όντουσαν and -untō.

The wide-ranging conclusion suggested here is an appropriate endpoint, inasmuch as it is in keeping with Tassos Christidis's wide-ranging intellect and intellectual curiosity. Thus even if hopelessly speculative, it can stand as a fitting tribute to his memory.

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Brian D. Ioseph

Η σύνθεση της κατάληξης του τρίτου πληθυντικού προσώπου του μη ενεργητικού αορίστου -όντουσαν της νέας ελληνικής, μια νεωτεριστική αντικατάσταση του πρωιμότερου -οντο προσαυξημένο με το -σαν εγείρει ενδιαφέροντα μορφολογικά ζητήματα, ιδιαίτερα αν μελετηθεί σε σχέση με μια άλλη παραλλαγή της, την -οσαντε. Στην αρχαία ελληνική και οι δύο τύποι (-σαν και -οντο) συνδέονταν και με τη φωνή με και τον χρόνο του ρήματος, ωστόσο το -οντο κατέληξε να δηλώνει περισσότερο τη φωνή και το -σαν περισσότερο τον χρόνο.

Έτσι, στην κατάληξη -όντουσαν δηλώνεται πρώτη στη σειρά η ΦΩΝΗ (-οντο) και έπειτα ο ΧΡΟΝΟΣ (-σαν). Αντίθετα το -οσαντε, επίσης νεωτεριστικός εκτεταμένος τύπος μιας αρχικής κατάληξης τρίτου πληθυντικού, αναπαριστά το ενεργητικό τρίτο πληθυντικό -οσαν που έχει επεκταθεί με το -ντε, συνέχεια του πρωιμότερου -ντ- το οποίο ήταν φορέας μη ενεργητικής φωνής. Συνεπώς ο τύπος -όσαντε εμφανίζει αντίστροφη σειρά στοιχείων από το -όντουσαν, με τον χρόνο να τοποθετείται πριν από τη φωνή.

Η διαφορετική κατάταξη των στοιχείων στις δύο παραπάνω καταλήξεις εξηγείται αν αναγνωρίσουμε ότι οι ομιλητές, όταν νεωτερίζουν, υιοθετούν μια προσέγγιση Gestalt για την παραγωγή και ερμηνεία τέτοιων σύνθετων τύπων: αυτό σημαίνει ότι τους ενδιαφέρει περισσότερο η έκφραση των κατάλληλων στοιχείων παρά η κανονικότητα της σειράς με την οποία εμφανίζονται. Εδώ αναφέρω κάποια αντίστοιχα παραδείγματα που οδηγούν στο ίδιο συμπέρασμα: η προστακτική μέλλοντα της λατινικής, οι δεικτικοί σχηματισμοί της ινδοευρωπαϊκής και το φαινόμενο των λέξεων με τα ανακατεμένα γράμματα που δεν παρεμποδίζει την ανάγνωση στο πλαίσιο του κειμένου στο οποίο εμφανίζονται οι λέξεις αυτές.