

ON THE USE OF ICONIC ELEMENTS IN ETYMOLOGICAL INVESTIGATION:  
SOME CASE STUDIES FROM GREEK\*

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To the memory of my uncle, Morton Bloomfield

Iconic and generally expressive or affective elements in language seem in some ways to occupy a special place in natural language, as well as in linguistic investigations. For one thing, they are often set apart from other elements in a language from both a synchronic and a diachronic standpoint--an observation to be fleshed out with actual examples below. For another, linguists have tended to ignore such elements, often treating them as irrelevant for the purposes of description and theorizing. Moreover, when a linguist does take cognizance of them, all too often they have been misused in particular instances--a few such examples are discussed below.

It is important first, though, to specify just what is meant by 'iconic and generally expressive or affective elements', for it may be that some of the problems that have been encountered in analyzing these forms and

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incorporating them into linguistic descriptions have arisen due to a misunderstanding of just what they are. The classic view of the 'linguistic sign', that stressed by de Saussure (1916), for instance, sees the connection between the *signifié* (signified) and the *signifiant* (signifier), as they combine to make the linguistic sign, as an arbitrary one, in which the form of the *signifiant* is not at all determined by the nature of the *signifié*. However, it is clear that there are elements present in natural language (more accurately, to be sure, in all natural languages) for which the connection between form and meaning is somewhat less than arbitrary, i.e., where the form is at least partly determined by the meaning. Such elements can be termed 'iconic', in the sense of Peirce, e.g., in Peirce (1955), augmented by viewing iconicity as a continuum, thereby allowing for degrees of iconicity. In general, then, for present purposes, any relationship between form and meaning which is other than completely arbitrary can be considered iconic, to a greater or lesser degree.

Included as iconic in this view are a great many different types of linguistic elements. Perhaps the most obvious are onomatopoeic forms, such as the English lexical item *moo* for the sound cows make and the activity of their making such a sound, and other such words derived via an attempt at direct imitation of some naturally occurring noise. Also to be included, though, are sound-symbolic/phonesthematic elements, such as the high front vowel in English *teeny* "extremely tiny", where the meaning signalled, i.e., an extra degree of smallness beyond that expressed by *tiny*, is motivated articulatorily by the extra small passage in the mouth created in the production of the [i:] vowel and acoustically by the high second formant and the generally higher pitch--such as is made by physically small objects (see Ohala 1983, 1984)--found with the vowel, or such as the initial consonant sequence of words having something to do with the nose, e.g., *sniff*, *sneeze*, *snout*, *snot*, *snoop*, *snooty*, etc. These phonesthematic elements are all less directly representational than onomatopes, but still show, via psychological tests, productivity, speaker intuitions, and the like, a high degree of associative representation (see Bolinger 1950, Jakobson & Waugh 1979, Anttila 1977, and references there, for some discussion of these in general).

The list of iconic elements does not end there, however. Interjectional elements can be included as more or less iconic, inasmuch as their form is

often determined by, or at least very closely linked to, the affect or emotion they express. So too can nursery words be considered as somewhat iconic, for their form is conventionally one that seems, to adult sensibilities at least, to be appropriate in talking to children, e.g., with reduplication or maximally contrasting segments. Thus, the match-up in nursery words between form and--here, pragmatic--function is not arbitrary.

Besides the actual classes of iconic forms themselves, various processes related to the formation of such elements, e.g., so-called expressive gemination, can be included in a consideration of iconicity in language. In general, then, these various types of forms and processes that are at least somewhat iconic are all--to use the descriptive phrase of Wescott (1975), who, moreover, proposed the convenient cover term of 'allolinguistic' for iconic and basically affective, highly connotative, elements--'alienated from conventionally structured speech', i.e., from the highly denotative aspects of language that show the 'arbitraire du signe' that de Saussure spoke of.

With this relatively broad view now established of what iconicity in language can refer to as far as lexical items and morphological processes are concerned<sup>1</sup>, the matter of the exceptionality exhibited by such elements for linguistic analysis, both synchronic and diachronic, can now be explored. It can be shown that they are typically exceptional in several ways, and that these properties often lead to a number of analytic and descriptive problems.

From a diachronic standpoint, the following problems posed by iconic elements seem typical. It is often the case that iconic vocabulary items undergo irregular sound changes, not found in the noniconic vocabulary. As Malkiel (1986) has noted, for instance, Latin initial [s-] regularly is preserved in Old Spanish, but in a few words, e.g., <çerrar> 'to shut, lock in' from Latin *serare* 'to bar, bolt', it develops into <ç>, phonetically an affricated dental (which he writes as [tʰs]). Malkiel's hypothesis is that the stoppage in [tʰs] has a phonosymbolic value, with the abruptness of the stop onset giving an association with the locking and bolting of a door, so that this sound change would then be one that is restricted just to an item in which the form came to be determined in part by the meaning, i.e., an iconic vocabulary item. Similarly, Kaufman (1986) has reported that in

Huastec (Mayan) languages, the Proto-Huastec elements \*c and \*c' regularly become /c/ and /c'/ in Potosino Huastec, but develop into /tʃ/ and /tʃ'/ in sound-symbolic lexical items.

Yet another commonly found problem is the resistance of iconic lexical items to regular sound changes. Three examples from the history of English illustrate this problem: as is well-known, the English word *cuckoo* and its Germanic cognates, when compared with apparently related forms in other Indo-European languages, e.g., Ancient Greek *κοκκυξ* "cuckoo", Latin *cucu:lus* "cuckoo", Sanskrit *kokila-* "black (or Indian) cuckoo", all show an irregularity, namely the failure to undergo the shift of voiceless stops to voiceless fricatives (part of Grimm's Law). This failure of a putative Pre-Germanic form \*kuku- to change to something like \*huhu-, in accordance with the regularity embodied in Grimm's Law, is presumably tied in with the fact that the form with the voiceless stop is more iconic, in this case more closely representational of the noise that the bird itself makes, than the form with the voiceless fricative. Similarly, there are (at least) two items from Middle English that seem to have undergone a lexical split, on the one hand yielding Modern English forms which developed regularly according to the changes known collectively as the 'Great Vowel Shift', but also yielding semantically related forms that failed to undergo the Vowel Shift. In each case, the resulting lexical item which failed to shift preserves a more iconic link between form and meaning. Thus, while Middle English *tine* "small" regularly<sup>2</sup> gave rise to Modern English *tiny* ([tɪni]) and *pipin* "to pipe; to squeak" regularly gave rise to *pipe* ([paɪp]), they also yielded, respectively, *teeny* ([ti:ni]) and *peep* ([pi:p]), where the high front vowels give a better form-meaning fit than the low central diphthong would.<sup>3</sup>

The resistance of such items to otherwise regular sound changes may be a function of the problem suggested by the the following situation, one that seems to be fairly typical of iconic, highly associative vocabulary in general. There is in English a preponderance of words referring to 'light; visual imagery; sheerness; shine, etc.' that have an initial sequence *g/-*; this initial sequence--whether a full-fledged morpheme (as seems likely to be the best treatment--see Rhodes & Lawler 1981, Janda 1985 for literature and some discussion) or 'submorphemic' (the typical Structuralist stance on these)--has been active enough within the recent history

of English to allow for the creation of new words with *#g/-*. The active nature and presumed psychological salience of *#g/-* is attested to by the fact that at some point *#g/-* words expanded considerably, with many new such forms coming into existence, as the sequence became particularly salient (for whatever reason); even today the appropriateness of the relatively new word *glitzy* also points to the strength of the *#g/-* associative powers.<sup>4</sup> The continued activeness of this sound-symbolic sequence has meant that words with *#g/-* can be renewed or recreated at any time; as a result, one of the key elements in studies of language change, demonstrating continuity between some earlier element and a later altered one, can be hard to achieve. There need not be any continuity between an earlier English form with *#g/-* and a later English one, for as long as the iconicity of the phonestheme were active and strong enough, the *#g/-* could be renewed. Thus, one could argue that the high front vowel for 'smallness' seems to have been renewed in *teeny* and in *peep* with these items being created anew so that in some sense they would not actually be the direct lineal descendents of the Middle English forms cited above. This difficulty with continuity is admittedly a stumbling-block even for the case-studies from Greek to be discussed below.

Related to these various diachronic problems are a number of synchronic peculiarities that iconic elements exhibit. In particular, it is common for special phonotactics or unusual segments to be found only in iconic vocabulary. For example, even though Ancient Greek was relatively free in terms of the two-consonant clusters it permitted word-initially, the sequence *#ϕv-* ([p<sup>h</sup>n-]) is found only in the onomatopoeic form *ϕναι* (e.g., Aristophanes *Fragmenta* 885), a word for a bird-noise. Similarly, in Iroquoian, Mithun (1982) reports that the labials [m, p, b] are found only in onomatopoeic words and in very recent loans; in Sanskrit, Dressler (1969) notes, the palatal voiced aspirated stop /jh/ occurs only in onomatopoeia and loan words; in Huastec, according to Kaufman (1986), /s/ and initial /r/ are restricted to so-called symbolic roots, those that are purely imitative or onomatopoeic or nonauditorily associative; and in Wasco-Wishram, as noted by Sapir (1911) and echoed in Silverstein (1986), /tθ/ occurs only in hyperdiminutives, and /j/ and /qb/ occur only in superaugmentatives, where hyperdiminutives and superaugmentatives are at opposite ends--though equally of extreme affectivity--of a size-symbolic consonant gradation system.

Given such synchronic and diachronic peculiarities found with iconic elements, it is not surprising that many linguists involved in diachronic investigations have ignored them, misused them, or felt that nothing much really could be or even need be said about them. Yet, often, interesting things can be said about such elements diachronically and such observations can have significant consequences.

For example, Ernout-Meillet (1959: 851) say, regarding the Latin word *pappa* "food", only that it is a "mot expressif du langage enfantin", and pursue its etymology and relations within Latin no further. On the other hand, Hamp (1985: 110) has taken the view that "having declared a form a 'nursery word', we must still identify its origin and development, including its Lautgesetze" and derives it via "nursery apocoptation ..... with normal colloquial gemination replacing vowel length" from the root of *pa:-bulum* 'food' and *pa:-nis* 'bread'. Hamp's further investigation of the apparent nursery word, taking it seriously as a form that the linguist must deal with and ultimately explain in this case has led to the uncovering of reasonable connections with other forms in Latin, and to the identification of processes by which Latin nursery forms were created.

Another relevant example comes from the recognition that the Hittite asseverative particle *imma* 'indeed' was cognate with the Latin particle *immo*: 'rather', an etymological connection that was proposed by Götze & Pedersen (1934) and endorsed by Ernout & Meillet (1959). They all, moreover, derived these forms from a Proto-Indo-European \**immo*:, which they took to be formed by "expressive gemination" from \**i-mo*: (where \**i*- is the deictic pronominal stem and \*-*mo*: is the source of Hittite *ma* 'but'. By accounting for the \*-*mm*- by recourse to expressive gemination, however, they are essentially cutting off all lines of further explanation for this form. Even if the result of such an expressive process, one must surely wonder why this form underwent this process and why the expressive gemination was generalized so that no trace of \**imo*: is to be found. It remained for Melchert (1985) to take the gemination problem seriously and propose a solution to it that was truly explanatory, in the sense that it left no loose ends. In particular, he suggested that the Latin and Hittite forms derive from \**id-mo*:, where the first element can be identified with the Vedic Sanskrit asseverative particle *id* and where the \*-*mm*- is thus

the *lautgesetzlich* outcome of the original cluster with a nasal. Here, then, searching for alternative explanation for the geminate leads to a better etymology, with all aspects of the forms accounted for straightforwardly, and moreover gives the added benefit of a natural explanation for the Latin by-form *inmo:* (found in Plautus and in Nonius). This form, previously considered--in desperation--to be nothing more than a manuscript error, can now, according to Melchert, be seen as the intermediate stage between \*id-mo: and *inmo:*.

Finally, it is instructive to examine the contrast between two views of how one can deal with the voiceless aspirates that have proven troublesome in the reconstruction of Proto-Indo-European. These segments pose a problem because even though they would seem to be called for on typological grounds to balance out the traditionally reconstructed voiced aspirates (e.g., \*bh as in \*bher- 'carry'), to the extent that they can be reconstructed for the proto-language, they seem to occur mainly (but not exclusively--see Dunkel 1981, Joseph 1985a) in onomatopoeic and expressive forms, such as those given in (1), from Pokorny (1959: svv.):

- (1) \*kha- 'interjection for laughing'  
 \*phu- 'blow'  
 \*pha<sup>x</sup>mph- 'swell'.

With regard this problem, Bomhard (1981) has stated that such facts show that nondistinctive aspiration was possible with the Proto-Indo-European voiceless stops and was, in his terms, 'allophonic'. For him, this allophonic realization was the only role of voiceless aspirates in the proto-language. Joseph (1985a), on the other hand, has taken the view that such facts show that the occurrence of voiceless aspirates was lexically determined in Proto-Indo-European, so that they were distinctive elements, even if they may have been functionally restricted.<sup>5</sup> The functional restriction would thus be no different from that found for labials in Iroquoian languages, and other sorts of synchronic irregularities associated with iconic elements noted above. Admittedly, Bomhard's remarks are made within the context of trying to reconstruct the prehistory of the Proto-Indo-European consonant system, while the counter-analysis focusses more on trying to determine what is directly reconstructible for the proto-language based on the evidence of the attested languages. However, it should be

clear that merely treating aspiration as nothing more than allophonic, largely because of its occurrence in iconic vocabulary, ignores the very real possibility that Proto-Indo-European aspiration may well have had the same systemic status as a feature such as labiality does in various Iroquoian languages. The voiceless aspirates, therefore, can provide the typological balance to the voiced aspirates, so that no revisions of the Proto-Indo-European consonant system are necessary. Taking seriously the contribution of iconic vocabulary items to the overall phonological structure of the reconstructed proto-language, then, can drastically change the view one takes of the Proto-Indo-European consonant system.

These few examples provide a preliminary setting for the central focus herein. They give an idea of what has been said about or done with iconic and expressive elements by other linguists, and they show that sometimes problems in diachronic linguistics can be resolved by taking such elements seriously rather than ignoring them. In what follows, some additional examples--three distinct but related case-studies from Post-Classical Greek--are presented in some detail. These all involve developments with the voiceless apico-dental affricate [t<sup>s</sup>] (written <τ> in Modern Greek) and to a limited extent also its voiced counterpart [d<sup>z</sup>] (written <τζ>). All of these cases are ones in which a recognition of a sound-symbolic and generally iconic or expressive value for [t<sup>s</sup>] and an understanding of how it functions in well-definable expressive lexical subgroups can point the way to a clear decision in an etymological investigation.

The first question is the source of the medieval and modern Greek diminutive suffix -ιτσα, some examples of which are given in (2):

- (2) φουσκ-ιτσα "little bubble" (cf. φουσκα "bubble")  
 πετρ-ιτσα "pebble" (cf. πετρα "stone")  
 λεμον-ιτσα "little lemon tree" (cf. λεμονια "lemon tree").

This suffix actually is part of a cluster of related diminutive suffixes, some of which are exemplified in (3):

- (3) a. -ιτσι, e.g., κορ-ιτσι "(little) girl" (cf. κορη "daughter"), λεμον-ιτσι "little lemon" (cf. λεμονι "lemon")

- b. -(ι)τσος, e.g., hypocoristics such as Μη-τσος (from Δημητριος).

The interesting thing about -ιτσα is that for one 'innocent little' suffix, it has generated a tremendous controversy regarding its etymology.<sup>6</sup> There are at least four different earlier Greek sources that have been proposed for it: Ancient Greek -ιδιον, Ancient Greek -ισκη, Ancient Greek -ισκιον, and early post-Classical -ικι(ο)ν, a suffix parallel to Ancient Greek -ακιον, as in πικ-ακιον "tablet for writing on", which had a similar function. In addition, it has been suggested as well that this suffix is the result of borrowing, with the Slavic suffix -ьца being the source.

It is interesting and in fact significant that the sound [t<sup>s</sup>] should be involved in the controversy regarding the source of the diminutive suffix -ιτσα, for [t<sup>s</sup>] has a rather curious place in Greek phonology from both a synchronic and a diachronic standpoint. Diachronically, it can be singled out as one of the most recent entries into the phonological system of what has become the standard language, dating from no earlier, probably, than the period of the 8th to 10th centuries (AD), whereas most of the other sounds in the system had been in place well before that with little change since then. Also, from a diachronic standpoint, [t<sup>s</sup>] has the most involved history of any of the phonological elements in Greek today.

In particular, a number of sporadic and irregular sound changes gave rise to [t<sup>s</sup>] from earlier [t] and [k], usually before [i], from earlier [s], and also from some earlier clusters. For all of these changes, the development to [t<sup>s</sup>] is irregular, and the earlier segment or cluster would be expected regularly to have undergone no change at all. To a certain extent, some of these changes may be the result of lexical conditioning, as becomes evident below, but a variety of words is affected with no obvious generalization as to word-class always available. Examples showing these irregularly derived [t<sup>s</sup>]'s contrasted with the regular developments are given in (4), (5), and (6):

- (4) a. [t<sup>s</sup>] from [t] / \_\_\_ i (irregular result):

βουτσι "cask" ← earlier βυτι(ον)

τσιλω "have diarrhea" ← AGrk τιλω "have a thin stool"

πιτσιλιζω "sprinkle (especially with dirty water)" ← AGrk πιτυλιζω "dart about with oars"

vs. b. [t] from [t] / \_\_\_ i (expected result):

τιμω "I honour" ← AGrk τιμω

τυχη "chance" ← AGrk τυχη

τειχος "wall" ← AGrk τειχος

(5) a. [tʰ] from [k] / \_\_\_ i (irregular result):

τοικνιος "type of sea-bird" ← AGrk κυκνιος "kind of white eagle"

τσουλω "I slide" ← AGrk κυλω

vs. b. [k] from [k] / \_\_\_ i (expected):

κινδυνος "danger" ← AGrk κινδυνος

κυκλος "wheel" ← AGrk κυκλος

(6) a. [ts] from [s] in a variety of contexts, but usually initial (irregular result):

τσιριζω "I screech" ← AGrk συριζω "I whistle"

τσιλημπουρδω "I gallivant, fart about" ← AGrk σιληπορδω "I behave with vulgar arrogance"

vs. b. [s] from [s] (expected):

συκο "fig" ← AGrk συκον

σιδερο "iron" ← AGrk σιδερος "iron".

In addition to these native sources of [tʰ], this sound has also made its way into Greek through loan words. Some examples of relevant loans, taken from different phases in the development of the modern language, are given in (7):

(7) Loan words with [tʰ]

a. Balkanizing period:

παπουτσι "shoe" ← (Turkish) papuç

τσεπη "pocket" ← (Turkish) cep

τσιρκα "stroll" ← (Turkish) çark

τσισκα "cup" ← (Slavic) časka

τσιαντιλα "sack for straining cheese" ← (Slavic) tsedilo

τσιουπρα "young girl" ← (Albanian) çuprë

τσιτσαρα "comb" ← (Albanian) çaçarë

b. Italian period:

τσιουρμα "crowd" ← ciurma

κλωτσω "I kick" <-- calcio

μπροτσιο "arm" <-- (Venetian) brazzo

c. Modern period:

τσεκ "check" <-- (French) chèque

τσαρτερ(s) "charter airline flight" <-- (English) charter(s)

σαντουιτς "sandwich" <-- (English) sandwich.

In a sense, then, the native-origin versus foreign-origin question for the diminutive suffix  $-ιτσα$  is a microcosm of the question that is often asked with any  $[t^s]$  word in Greek. However, even if the decision regarding  $-ιτσα$  is in favor of native origin, the question then becomes one of just what the source actually is, as already indicated. Hence,  $-ιτσα$  provides a true etymological conundrum, and even though Georgacas (1982) has made a fairly convincing case for  $-ικι(ο)ν$  as the etymon of most occurrences of  $-ιτσα$  in Modern Greek, the controversy still continues.<sup>7</sup> Thus any further light that can be shed upon the matter is welcome, and it turns out that an interesting distributional fact, having to do with iconicity, about the element  $[t^s]$  helps to point the way to a solution to this etymological problem.

The relevant distributional fact about  $[t^s]$ --not just  $[t^s]$  as it forms the consonantal nucleus of the diminutive suffix  $-ιτσα$  and other diminutive suffixes, but  $[t^s]$  in general in Modern Greek--is that it has a somewhat restricted distribution from a lexical standpoint synchronically in Modern Greek. In particular, it is primarily found in words that are generally iconic, expressive, and affective in nature. That is to say, it is somewhat restricted functionally in terms of its lexical distribution. While this statement is not a 100% true generalization, and there are words with  $[t^s]$ --often borrowings but cf.  $τσικνις$  from (5)--such as  $τσιμεντο$  "cement" and  $τσπη$  "pocket", that are not expressive, there is a noticeable skewing in the distribution of  $[t^s]$  (and to a lesser extent its voiced counterpart  $[d^2]$ ) in favor of expressive vocabulary. For example, in (8) are listed several of the lexical domains in which  $[t^s]$  is prominently to be found, and significantly, these represent the majority of word-classes in which  $[t^s]$  occurs; moreover, no other sound in Greek has such a lexical distribution, except, to a more limited extent, for  $[d^2]$ , some representative examples of which are given in (9):<sup>8</sup>

(8) Iconic/Expressive/Affective Domains for [t<sup>s</sup>]:

a. INTERJECTIONS:

πριτs "so what?!; who cares?!"

τs "NEGATION" (actually a click, but conventionally represented in this way; cf. also τσουκ as conventionalization of this noise)

τσα "noise used in peek-a-boo game"

b. CALLS TO ANIMALS:

γκουτs "call to pigs"

τσους "call to donkeys"

τσουγκs "call to donkeys"

ιτs "whoa!"

ιωτs "whoa!"

c. ONOMATOPEES (and derivatives):

τσοκ "crack!" (cf. τσοκίζω "I break")

κριτs-κριτs "crunch!" (cf. κριτσονίζω "I crunch")

μουτs-μουτs "kissing noise"

τσιου-τσιου "bird's chirp"

πλιτs-πλιτs "splish-splash!"

χροτs "scratching sound" (with variants γροτs/κροτs, and cf. γροτσουνω "I scratch")

d. IDEOPHONES (i.e., ATTITUDINAL ADVERBIALS):

τσοκκ-τσοκκ "immediate quick action; straightaway; directly"

τσουκου-τσουκου "steadily and surely, with a hint of secretive activity"

τσοφ-τσοφ "in an instant"

e. CONVENTIONALIZED "CHILD LANGUAGE" FORMS:

τσοτσα "aunty"

τσιτσι "meat" (also slang for "breast")

τσισι(ι)α "peepee"

πιτσι-πιτσι "(act of) washing"

f. GENERALLY COLORFUL/CONNOTATIVE/ICONIC VOCABULARY:

τσομβουνιζω "I whimper; I prate; I bullshit"

τσολαβουτω "I do a slovenly job"

τσοποτσουλης "slovenly in one's work"

τσουροπι "vulgar woman" (primary meaning: "woolen sock")

τσοκορο "vulgar woman" (primary meaning: "wooden shoe")

τουριζω "I screech"  
 τσιλη(μ)πουρδω "I gallivant; I fart about"  
 τσιτσιδι "stark naked"

- (9) τζι-τζι "noise of a cicada" (cf. τζιτζικας "cicada")  
 τζα "noise used in peek-a-boo game" (variant of τσα)  
 τζισ(ι)α "peepee" (variants of τσισ(ι)α)  
 τζιριτζαντζουλες "coquettish airs; evasiveness"  
 τζομπο "for free; thrown in; cheap".

An additional piece of evidence concerning the expressivity and, more specifically, the phonosemanticity of [t<sup>s</sup>] in Modern Greek is its occurrence in three groups of words in which it has a value that may be termed sound-symbolic or phonesthematic. In each of these groups, the [t<sup>s</sup>], by itself or in combination with other sounds, recurs in a critical mass of words that have a clear and strong association with some sensual percept or affect, to the extent that the [t<sup>s</sup>] or [t<sup>s</sup>]-sequence can be said to serve as a salient marker for that group.

The first such group is one referring to various sorts of deformities or deficiencies. In part, the iconicity of [t<sup>s</sup>] in this group comes from the fact that a sound, the [t<sup>s</sup>] itself, that is marginal in terms of the overall phonological system of Greek<sup>9</sup> is occurring in words whose referents are generally marginal in society. The relevant forms include not only the words in (10) but also the well-defined formal subgroup with the shape #kVt<sup>s</sup>-, given in (11):

- (10) τσευδος "lisp" (and derivatives, e.g., τσευδιζω "I lisp")  
 τσατρα-πατρα "stumblingly (especially of speech)"  
 τσιμπλα "eye-mucus" (and cf. derivative τσιμπλιαρης "bleary-eyed")
- (11) κουτσος "lame"  
 κτισο- "wrinkledy-"  
 κοιτσιδα "balding, scurvy head"  
 κοιτσιποδια "bad luck".

There are typological parallels to the situation outlined in (10) and (11), in

which some distinctive phonic characteristic associated with a word-class in a language referring to deformities or abnormalities of some sort. For example, in Latin, it has long been noted, e.g., by Meillet (1948), apparently picking up on an observation of de Saussure's, and more recently by Malkiel (1966), that the vowel [a] is found to a surprisingly high degree in words for weaknesses, physical deformities, and the like; a sampling of such forms is given in (12):

- (12) aeger "ill"  
 balbus "stammering"  
 blaesus "lisp[ing], stammering"  
 caecus "blind"  
 caluus "bald"  
 claudus "lame"  
 macer "lean"  
 mancus "maimed, infirm"  
 nanus "dwarf(ish)"  
 paetus "squinting"  
 scaeuus "left, clumsy"  
 strabus "squinting".

Similarly, one can point also to the preponderance of labials and velars in English ethnic slurs, as noted by Wescott (1971).

The second sound-symbolic group involving [t<sup>s</sup>] in Greek is one in which it occurs word-initially followed by the high, front vowel [i] in words meaning 'small, narrow, close, thin'. Some relevant examples fitting into this group and showing its extent are given in (13):

- (13) τειτωνω "I stretch"  
 τειτα-τειτα "just, barely (said of a tight fit)"  
 τειτα-τειτα "right up to the edge; close"  
 τειχλα "thin woman" (primary meaning: "thrush")  
 τειλιβηθρα "thin woman" (primary meaning: "wagtail")  
 τειρος "thin person" (primary meaning: "dried mackerel").

In such words, it is clear that the [i] is iconic, as discussed above concerning English *teeny*. However, it is also significant that the [t<sup>s</sup>] as well is iconic and contributes to the less than arbitrary form-meaning match-up, since, like the [i], it too is acoustically acute, with a high second formant.

The third sound-symbolic group involving [t<sup>s</sup>] in Greek is one in which the sound occurs word-initially followed by a vowel, usually [i] or [u], but [a] occasionally as well. The meanings of the words range over such notions as 'sting, bite, tease, burn'. A sampling of the relevant forms is given in (14):

- (14) τσιμ(π)ουρι "tick"  
 τσιβικι "tick"  
 τσιμπω "I pinch, I nip"  
 τσουκνίδα "nettle"  
 τσουζω "I sting"  
 τσιγκλω "I goad"  
 τσοτιζω "I tease"  
 τσιτσιριζω "I sizzle; I torment slowly"  
 τικνα "smell of meat or hair burning"  
 τικνιζω "I burn (in cooking)".

The iconicity of [t<sup>s</sup>] in this group is perhaps less obvious than in the other two, but it is worth noting that at least some of these words, for example τσιτσιριζω, are clearly onomatopoeic in nature. However, even if not obviously iconic, the strong associative value of the #t<sup>s</sup>V- sequence in these words cannot be overlooked; in many ways, they present a situation parallel to that of #g/- in English discussed above.

What makes these sound-symbolic groups especially important for claims about the expressivity and phonosemanticity of [t<sup>s</sup>] is that they seem to be interrelated, so that [t<sup>s</sup>] actually is at the core of an extensive phonosemantic network ranging over several interconnected lexical groups. One way in which the interrelatedness of these groups comes out is via conceptual links, as suggested by forms such as those in (15), which can fit into more than one of the sound-symbolic groups, depending on the nature of the "metaphor" by which the meaning is derived:

- (15) a. τσιγγουνης "stingy; miserly" (STING group [cf. Eng. *sting* --> *stingy*; *pennypincher*] and SMALL group [cf. Eng. *tightwad*, *tightfisted*, *close (with one's money)*])

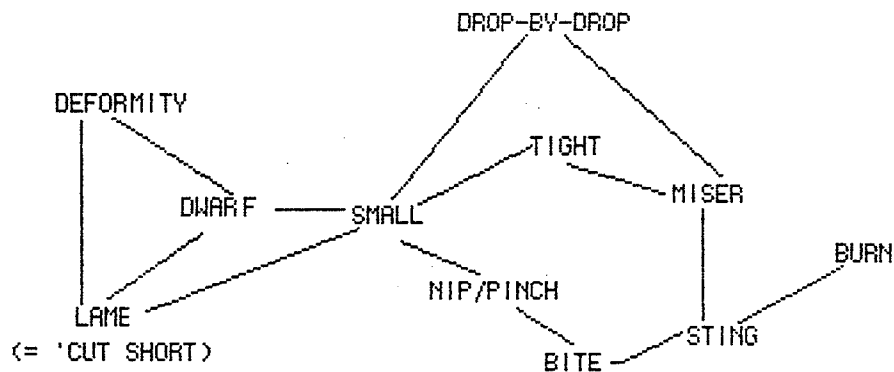
- b. τσιφουτης "stingy, miserly" (same as (a))
- c. τσιλω "I have a thin stool, I have diarrhea" (with SMALL/thin group or with DEFICIENCY group)

Another way in which the interrelatedness of these groups comes out is via formal links, as suggested by the words in (16) which have the form of one group--in this case the #kVt<sup>s</sup>- deformity/deficiency subgroup--but a meaning more appropriate to another group.<sup>10</sup>

- (16) a. κοτσουριζω "sting; burn" [Cypriot Greek] (cf. STING group)
- b. κουτσονιδα "nettle" (dialectal variant of τσουκνιδα, cf. STING group)
- c. κουτσικος "little" [from Northern dialects, but also in standard language as conventionalized utterance to babies] (cf. SMALL group).

A schematicization of these various connections among the forms in this sound-symbolic network is given in (17):<sup>11</sup>

(17)



The significance of being able to trace such connections among the sound-symbols is that it suggests that they are all members of one large iconic category, and further that [t<sup>s</sup>] is the sound-symbol par excellence in Greek since this sound is the formal element common to all these iconic groups.

These various distributional concerns demonstrate that [t<sup>s</sup>] has the curious functional status in the overall phonological system of Modern Greek noted at the outset, especially since no other sound in the language,

with the exception of [d<sup>z</sup>], has a similar distribution. For example, even though [k] occurs in some of the lexical groups listed above, it also occurs quite commonly in what may be termed 'ordinary', i.e., nonexpressive and nonaffective, lexical items.

With the synchronic status of [t<sup>s</sup>] in Modern Greek now established, the matter of the etymology of the -ιτσα diminutive suffix can be taken up once again. Especially relevant in this regard is the diachrony of [t<sup>s</sup>] in its sound-symbolic role.

Among the forms in the Modern Greek sound-symbolic network, there are several for which the etymology is reasonably assured. These include those listed in (18):

- (18) τσιμ(π)ουρι "tick" <-- \*κιμυριον (cf. Hesychian κιμυρος · μικρολογος "counting trifles")  
 τσιβικι "tick" <-- \*κιμβικιον (cf. AGrk κιμβιξ "skinflint, stingy")  
 τσουκνιδα "nettle" <-- AGrk κνιδη "nettle" (with morphological reshaping due to τσουζω "I sting")  
 τσικνα "smell of meat/hair burning" <-- AGrk κνισα "scent/vapor of burning (sacrificial) fat"  
 (possibly also to be considered:  
 τσιχλα "thrush; thin woman" <-- AGrk κιχλη "thrush"  
 τσιπος "dried mackerel; thin person" <-- AGrk κηπισ/κιρπισ "sea-fish", though not obviously iconic in AGrk).

An examination of the Ancient Greek forms in (18) permits the positing of a sound symbol for that stage of Greek consisting of the sound-sequence *k + optional consonant + i-*. While this phonestheme does not seem to be as well developed as the Modern Greek one examined above, the "critical mass" needed to establish such an element appears to be present. Moreover, some additional forms should be considered here, and they not only strengthen the case, but suggest the possibility of an optional *s-* with the sequence as well:

- (19) κνιψ "small creature which infests fig and oak trees"  
 κνιπος "niggardly, miserly"

σκνιψ "insect found under bark of trees; an insect which attacks vines"  
 σκνιπος "niggardly, miserly".

The meanings of the forms in (19) are especially significant, for they show a conceptual link between the BITE/BURN-group above in (14) and words for "stingy", a link suggested in (15). The forms in (18) and (19) together, then, point the way to a sound-symbolic sequence #*(s)k(C)i-* for Ancient Greek in words referring to biting, stinging, and the like.

The relevance of all this to the question of the etymology of the diminutive suffix can now be made explicit. It seems not to be stretching the semantics of the various forms under consideration too much to see diminutivity as fitting into the sound-symbolic network developed earlier and schematized in (17). Clearly diminutivity relates to "smallness", and furthermore, it is possible to detect an element of diminution in other parts of the sound-symbolic network, as indicated in (20):

- (20) DIMINUTIVE: narrowing/rendering small of main referent  
 PINCH: narrowing/rendering small of act of biting  
 THIN: narrowing/rendering small along one dimension.

Moreover, meanings such as "miserly, niggardly" for some of the Ancient Greek members, specifically σκνιπος and κνιπος from (19), fit very clearly within the network defined in (17).

Once diminutives are seen as entering into the sound-symbolic network of Modern Greek, then a principled basis emerges for deciding the question of the etymology of the suffix *-ιτω*, and in particular for its consonantal nucleus. Among the etymological possibilities for *-ιτω-* given above is one possibility, *-ικι(ο)ν*, that would have a *-k- + -i-* sequence that would fit formally into the sound-symbolic group that was evident for earlier Greek. That is to say, *-ικι(ο)ν* fits in with the earlier forms in the same way that *-ιτω-* fits into the Modern Greek system.

This parallelism allows for the strengthening of the case for deriving *-ιτω-* from earlier *-ικι(ο)ν*, as argued by Georgacas, and for accepting that derivation over some of the other possibilities, e.g., the one deriving *-ιτω-*

from  $-\delta\iota\omicron\nu$ . Without a derivation of  $-\iota\sigma-$  from  $-\kappa\iota(o)\nu$ , one has to complicate the scenario of the development of  $-\iota\sigma-$  considerably and posit that such a form could secondarily be drawn into the network defined by the other  $-\iota\sigma-$  words. While such secondary associations certainly do occur, as noted by Bolinger (1950), Anttila (1977), and many others, it clearly seems preferable from a methodological standpoint not to have to posit such additional steps if at all possible. Recognizing  $-\kappa\iota(o)\nu$  therefore as the source of  $-\iota\sigma-$  because of their parallel behavior in diachronically related sound-symbols obviates the need for any such additional steps, thus making for a stronger case overall. Furthermore, this parallelism allows for the rejection of the suggestion that the occurrence of  $-\iota\sigma-$  in these Greek diminutives is due entirely to a borrowing, since the evidence discussed here shows that the matter involves a purely Greek-internal shift within a phonosemantic subsystem.

Before accepting  $-\kappa\iota(o)\nu$  entirely, however, one other possibility must be considered. Since, based on the evidence of  $\sigma\kappa\upsilon\psi/\kappa\upsilon\psi$ , the Ancient Greek sound-symbol seems to have allowed an optional initial  $s-$ , being thus  $\#(s)k(C)i-$ , the Ancient Greek suffixes  $-\iota\sigma\kappa\iota\omicron\nu$  or  $-\iota\sigma\kappa\eta$  emerge as plausible sources of  $-\iota\sigma\alpha$ . However, the general optionality of the  $s-$  makes  $-\kappa\iota(o)\nu$  more plausible a priori and moreover,  $-s-$  in general seems to have an inhibitory effect on fortitions such as affricativization (as discussed in Joseph 1984b). Thus, it seems best to look to  $-\kappa\iota(o)\nu$  for the source of the  $-\iota\sigma-$  of  $-\iota\sigma\alpha$ .

Placing the Greek sound  $[t^s]$  within the context of how it functioned in a phonesthematic sub-system provides the key to a convincing etymology here. That means that contrary to the usual role that sound-symbolic and iconic elements play in confounding etymological research, here they have proven to be quite useful. Moreover, the utility of such elements--again specifically  $[t^s]$  in its sound-symbolic function--can be demonstrated by two additional cases from Greek.

For example, the etymology of the verb  $\tau\omicron\mu\pi\omega$  "pinch, nip" is far from clear. Chatzidakis (1892) has derived it from a putative Middle Greek  $^*\epsilon\mu\pi\zeta\omega$ , a denominal verb from Ancient Greek  $\epsilon\mu\pi\varsigma$  "mosquito", whereas

Moutsos (1980) has instead derived it from the κίμυρος/κίμβιξ family (cf. (18) above). Recognizing the sound-symbolic value of #κι- in earlier Greek makes Moutsos' derivation more attractive and more plausible than that of Chatzidakis, for the κίμυρος/κίμβιξ family gives a more direct path to the ultimate sound-symbolism associated with τσίπω than does the derivation from εμψι. Moreover, it may be possible to develop yet another source for τσίπω from material related indirectly to the family of κίμυρος/κίμβιξ (see (18) and (19) above). In particular, if the starting point was the root (σ)κνιπ- (cf. (19)), then τσίπω could have arisen via the following combination of morphological and phonological developments:

- (21) a. Morphologically: Verb in -ίζω (usual denominal type) --> Verb in -ω (as with AGrk ψηφίζω "vote" --> NGrk ψηφώ)  
 b. Phonologically: κνιπ- --> \*κινπ- ([kɪnp-]) --> \*κίμπ- --> τσίπω- (cf. metathesis in σικνω "smell of meat/hair burning" <-- κνισα (via \*σικνω, with #σ- --> #τσ- as in τσυρίζω "I screech" from συρίζω (cf. (6a) above).<sup>13</sup>

Whether τσίπω is from κίμυρος/κίμβιξ or from (σ)κνιπ-, it is clear that placing these words in their sound-symbolic context aids in the decision regarding the etymological source of the word.

A final example of this same type of methodology can be seen in the case of the etymology of the word τσιγγουνής "stingy; miserly" (cf. (15a) above). The standard account of its etymology, e.g., that endorsed by Andriotis (1967: s.v.) is that it is a borrowing from Turkish *çingene* "gypsy", with a shift in stress--from Turkish end-stress to the Greek penultimate stress--and a vowel-change and/or morphological reshaping to an adjectival formation in -ουνής. While this account is certainly possible, it is a bit disturbing that there is attested in Greek the form τσιγγενες "stingy, miserly",<sup>14</sup> with the Turkish stress preserved and without any reshaping of the final two syllables. In this context, then, the proposal of Xanthoudides (1918), that τσιγγουνής derives from the native Greek etymon of the forms represented by the West Cretan adverbial τζιγκου-τζιγκου "drop-by-drop, with economy" and related forms such as τσιγκα "full to overflowing" and the verb τζιγαζω "flow out in drops".<sup>15</sup> Not only does relating τσιγγουνής to τζιγκου-τζιγκου solve the problem of the occurrence of the -ου- in the penultimate syllable of τσιγγουνής, but it also finds support

from the type of methodology pursued herein for -τσά and for τσιπλά. In particular, the τζιγκου-τζιγκου -etymology for τσιγγουνής is supported in two ways. First, as is evident in (15) and (17) above, there are potential conceptual connections in the sound-symbolic network between the group of words with meanings SMALL/TIGHT and the group of words for "miser". Second, the metaphor necessary for such connections is active still in Modern Greek, as shown by the occurrence in Standard Modern Greek of derivatives of the verb σφιγγω "I squeeze, I tighten" having the meaning "miserly", namely σφιχτος "tight, firm; miserly", and σφιγγοχερης "stingy" (literally: "having a tight hand"). Thus, the derivation of τσιγγουνής from a form that fits into the SMALL/TIGHT sound-symbolic network and metaphorical domain is quite well-motivated and avoids the ad hoc assumptions about loan-word nativization inherent in the derivation from Turkish *çingene*.

By way of conclusion, it seems fair to say that the methodology outlined here for these cases from Greek has worked fairly well, in that it has shown that a consideration of matters of iconicity and expressivity can lead to interesting results and need not preclude serious etymological investigation. However, it is important to be realistic and even somewhat pessimistic about the applicability of such methods in general, for they may not be extendable in any general way to other instances. It appears to be the accidental convergence of many different factors that has permitted the utilization of sound-symbolic and expressive phonological elements to advantage in these three cases, so that the 'experiments' reported on here, so to speak, might be very hard to replicate in other contexts, with languages other than Greek and especially ones that do not have as well-documented a history to draw on. Yet, the fact that this exercise can be fruitful means that when the opportunity arises, there should be no hesitation in using such methodology--iconicity and etymology are not naturally opposed to one another and can coexist cooperatively under appropriate circumstances.

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NOTES

1) Moreover, there is iconicity in syntax as well, as discussed in Tai (1985) and several other papers in Haiman (1985).

2) There are, to be sure, some difficulties in the the development of Modern English *tiny* from Middle English *line*, all of which are summarized in the *OED* (s.v.); though the development of the vowel in the first syllable seems not to be problematic.

3) It must be pointed out that there may have been two homophonous lexical items *pipin* in Middle English, as indicated by the two glosses given for this form. If so, the suggestion could be made that only the "squeak"-form developed into *peep* and not the "pipe"-form; however, since the forms were presumably pronounced the same, such a scenario would be equivalent to admitting the lexical conditioning of sound change, where the relevant lexical category in this case is onomatopoeia.

4) Admittedly, *glitzy* is probably a blend of *glitter* and *ritzy*, so that the occurrence of a *\*gl-* sequence in it is due in part to its derivation. However, one could argue nonetheless that this new word is an especially appropriate coining and that it still shows some synchronic motivation for its form through the occurrence of this *\*gl-* once it has been created via blending. Moreover, even if sound-symbolic sequences are treated as nothing more than ordinary morphemes from a formal standpoint, as Rhodes & Lawler (1981) would have it, their semantics still sets them off from other morphemes. The nature of the meanings they convey then becomes their main defining characteristic--as virtually all researchers working in this domain have concluded, the primarily connotative value of such elements distinguishes them from "ordinary" vocabulary with its primarily denotative value. See Wescott (1975) for some discussion.

5) Moreover, there is support for distinctive voiceless aspirates elsewhere in Proto-Indo-European in various nonalternating forms where the sequence of a voiceless unaspirated stop followed by the second (the *a*-coloring) laryngeal has yielded an aspirated stop in more than one language, suggesting that the aspiration was present in the proto-language; for example, *\*/t + H<sub>2</sub>/* became *\*[th]* in the second person singular active ending of the perfect, as shown by the correspondence of Sanskrit *-tha* to Greek *-θα*. See Joseph (1985a) for some further discussion.

6) See Georgacas (1982) for a thorough discussion of these various possibilities, and others as well, and for complete bibliography.

7) As evidence of the fact that the controversy is continuing, cf. Ilievski (1982) and Joseph (1985b).

8) Here and below, cf. Joseph (1982), (1983), (1984b), and (1986) for some details and further discussion. There is considerably more that can be said about this whole matter, all of which is to be treated in a more systematic and thorough fashion in a forthcoming monographic study of  $\langle \sigma \rangle$  and  $\langle \zeta \rangle$  from both a synchronic and a

diachronic perspective.

9) For example, /t<sup>s</sup>/ is marginal in the overall system in terms of its frequency: along with /d<sup>z</sup>/, it is the least frequent phoneme, as independent token-frequency counts by Mirambel (1959) and Householder, Kazazis, & Koutsoudas (1964) have shown. Moreover, along with /d<sup>z</sup>/, it is the only affricate in the language, and seems also to have a very low functional load.

10) Admittedly, some of the forms cited here are dialectal and thus not strictly speaking relevant for the determination of the phonosemantics of τσ in Standard Modern Greek. However under the view that they are nonetheless part of the Greek language, taken as a collection of all its dialects, such forms do take on some value for the types of considerations presented here.

11) Although "small" has been placed at the center of this diagram, it may be closer to the truth to view the semantics more in the manner of recent work by G. Lakoff, and take the category containing these sound-symbols to be defined by their union instead of by their intersection.

12) Moreover, as Eric Hamp (personal communication) has pointed out to me, the semantics of κίμυρος/κίμβιξ gives a better source than εμπίς, for mosquitoes do not really pinch but instead sting.

13) Another example of this metathesis is perhaps to be seen also in the apparently related forms τσουγγρώνω <--> γρατσούνω, both meaning "I scratch".

14) The fact that τσιγγένης has the meaning "stingy, miserly", as does τσιγγουνής, shows that there is no argument against the borrowing hypothesis for τσιγγουνής based on the apparent shift in meaning from the Turkish form (meaning "gypsy"); it may even be that *çingene* can have the meaning "stingy" in Turkish as well. The need to assume both a shift in stress and a morphological/phonological reshaping of the word still would speak strongly against the borrowing hypothesis.

15) The slight differences in phonetic shape, e.g., τζ- in the Cretan forms as opposed to τσ- in the Standard Modern Greek form, are explainable as regular dialect differences; moreover, the claim is not that τσιγγουνής derives from the Cretan adverb directly, but rather that both derive from a common source in pre-Modern Greek (or earlier).

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## SUMMARY

Iconic elements are generally held to be problematic for the purposes of etymological investigation, for they often show synchronic oddities and behave irregularly from a diachronic standpoint. However, it is possible, under the appropriate circumstances, to use such elements to advantage in etymologizing. Three examples of this nature are presented from Greek. In each of these, it is shown that a recognition of a phonosemantic value for the Modern Greek affricate [tʰ] (graphic

<τ>) enables one to make a principled decision regarding otherwise controversial etymologies. [t<sup>s</sup>] is argued to hold a special place functionally in the Modern Greek phonological system, participating in an extensive network of sound-symbols, for instance, and from that observation, a case can be built for the etymologies of three morphemes--the diminutive suffix -τσο, the verb τσιπλω "I pinch" and the substantive τσιγγουνής "stingy, miserly"--that participate in the network too.

### RÉSUMÉ

Les éléments iconiques posent souvent des problèmes pour l'étymologie, à cause de leurs irrégularités du point de vue synchronique et diachronique. Ici, cependant, on présente trois cas pris du grecque post-classique où une valeur phonosémantique pour le son [t<sup>s</sup>] (<τ> en grec) permet d'arriver à une décision concernant des choix difficiles pour l'étymologie du suffixe diminutive -τσο, du verbe τσιπλω "je pince", et du substantif τσιγγουνής "avare, chiche". On notera que la participation du [t<sup>s</sup>] dans un réseau des mots expressifs est très important pour cette démonstration de l'utilité des éléments iconiques dans les investigations étymologiques.

### ZUSAMMENFASSUNG

Lautsymbolische und ikonische Elemente sind oft problematisch in der Etymologieforschung, weil sie synchronische und diachronische Unregelmäßigkeiten aufweisen. Hier werden drei Fallstudien aus dem postklassischen Griechischen aufgezeigt, wo die Anerkennung eines phonosemantischen Wertes für den Laut [t<sup>s</sup>] (<τ> in griechischen Buchstaben) die Entscheidung zwischen einigen möglichen Etymologien für das Suffix -τσο "-lein, -chen", das Verbum τσιπλω "ich kneife", und das Substantiv τσιγγουνής "Geizhals; geizig", erlaubt. Es erweist sich, daß die Teilnahme des [t<sup>s</sup>] in einem Gefüge affektiver Wörter sehr wichtig ist, wenn es darum geht, die Etymologien lautsymbolischer Ausdrücke zu erfassen.

