ON PHONICALLY BASED ANALOGY*

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Abstract

In this paper I examine the role sound alone can play as the basis for analogical connections among forms, as opposed to more conventionally discussed factors such as paradigmatic structure, grammatical category, or meaning. Examples are presented here, mainly from English, that show sound effects in analogy at various levels of linguistic analysis, including phonetics, morphology, syntax, semantics, and the lexicon.

1   Introduction

Analogy, understood here in a broad sense to refer to any change in a given form due to the influence of another form, has a venerable history of study within linguistics, dating back to the Greek and Roman grammarians and their interest in the relationship between analogy and the origin of words and the origin of language itself. It is not surprising, therefore, that various textbooks on historical linguistics, perhaps most notably Anttila 1972/1989, have made clear the prominent role that analogy plays in the understanding of

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language change. Anttila's work, elaborated upon in Anttila 1977, established (perhaps, re-established) the semiotic underpinnings of analogical change.[1]

Still, even with so much attention to the topic, questions remain about analogy. One such question, given that analogy depends on a connection being made between two forms (the influencer and the influencee, so to speak), is just what sorts of connections can serve as the basis for analogical pressures and ultimately for analogical re-formations.

In this brief piece, I present a number of examples I have collected over the years that address this key question by demonstrating that one type of linkage between forms that must be recognized is a purely phonic one, based on sound alone. This is so even though sound is not generally thought of as a basis for analogical connections; most discussions of analogy in historical linguistics textbooks focus only on grammatical connections between forms, e.g. forms that are in the same paradigm (traditional "leveling" or "internal analogy") or forms that are members of the same grammatical category ("form class analogy" or "external analogy").

The general neglect[2] of a phonic basis for analogy is perhaps somewhat surprising, given that a phonic basis can be found in other aspects of language use. For instance, sound is critical in many types of language play, among them counting rhymes, such as *eeny, meeny, miny, mo* with its assonance and alliteration. Moreover, sound plays an important role, beyond simple rhyming patterns, in various sorts of literary expression; for instance, Miller 1982 has demonstrated complex phonic echoing within lines in Homeric epics, Watkins 1995 has shown the importance of phonic devices linked to thematic parallels throughout several ancient Indo-European poetic traditions, and Dawson 2005 draws attention to the effects of homoioteleuton, a phonically based poetic (and rhetorical) device, in the selection of certain dual and locative allomorphs in Vedic Sanskrit.[3] Further, even within recognized types of analogy, a phonic basis often is lurking. For instance, classic cases of 'contamination', which in one sense can be viewed as leveling within a 'semantic paradigm', can involve a phonic link. A relevant example is Late Latin *grevis*, which is generally believed to have developed from Classical Latin *gravis* "heavy" through 'contamination' with its semantic opposite *levis* "light", plus some influence likely from the semantically related (as a dimension adjective) *brevis* "short; brief"; however, even if the semantic links were important here — and I have no doubt that they were — there is a phonic link as well with *gravis/grevis*, *levis*, *brevis*, in

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[1] Note also the excellent bibliography on analogy, Anttila & Brewer 1977, and various recent handbook-style treatments of analogy, especially Anttila 2003 and Hock 2003.

[2] There are exceptions; Vennemann 1972, for instance, with its discussion of 'phonetic analogy', clearly emphasizes that the notion of analogy must be extended to include connections made at the level of sound and not of grammar proper. Claims concerning the purely grammatical basis of analogy are to be found in work done within the framework of Optimality Theory, on 'correspondence theory', in that the typical basis for correspondence relations is grammatical outputs, forms being considered by the evaluation mechanism of the grammar.

[3] Relevant here too is what Hock and Joseph (1996: 293), drawing on the fine work of Samuels 1972, call 'phonesthematic attraction' to describe cases where sound symbolic elements attract other forms into taking on some aspect of their shape (as with early Modern English *sacke* "sink, droop" turning into *sag* through the influence of other words in [-æg] with meanings pertaining to "slow, tiring, tedious action"); since sound symbols can potentially be considered morphemic in nature, the influence in such cases is not just phonic but involves some semantic basis as well.

that they all share the phoneme sequence -VOWEL–*vis* (of which the *–vi-* can be considered a shared stem-forming morpheme).

2   Case Studies in Phonically Based Analogy

The examples presented here range over changes in pronunciation (2.1-2.5),[4] changes in meaning (2.6-2.8), including an example from language contact/bilingualism, changes in lexicon and morphology (2.9-2.10), and changes in syntax (2.11-2.12). In many, perhaps most, of these cases, it is not possible to demonstrate conclusively that sound alone is responsible for the change (though 2.5 comes close), but the aggregate effect of so many examples in which sound seems to have been a relevant dimension to the analogical linkage, I would claim, is to show that a phonic basis for analogy is a distinct possibility that cannot simply be dismissed and thus must be taken into consideration whenever analogy is invoked.

All of the forms cited here are ones that I have heard over the past 30 or so years of collecting interesting examples of language change in action. Although I cannot give precise information about the speakers or the circumstances under which the form was uttered, I vouch for the accuracy of my noting of the forms and note that none is based on a unique instance, and some may even represent longer-standing variation that has been maintained.[5] In each case, I present the facts along with my interpretation of a phonic basis for the analogy, offered without an extensive justification at this stage, in hopes of sparking the necessary weighing of alternative interpretations. Also, where the examples provide the basis for some observations of a more general kind about the nature of analogy, some further comments are included.

2.1   Modern English <memento>

A common pronunciation for the word *memento* "a reminder of the past" in modern American English is [momento] with [o] in the first syllable instead of the 'correct', i.e. historically prior and otherwise expected (note the spelling, for instance) mid-vowel [e]. No similar change is observed in the word *pimento* nor, perhaps more importantly since it involves the same morpheme, in *memorial*, suggesting that the change in *memento* cannot be a regular sound change affecting [e] or [I] between labials, for instance. Presumably, the [o] is based on the word *moment*, which is strongly linked phonically with *memento* due to their sharing the onset of *mVm* and to their both having the sequence *–nt-* following later in the word. Admittedly, there is also a weak semantic link via the phrase *of great moment* and the adjective *momentous*, both of which mean "memorable" to some extent. More interestingly, one effect of the phonic analogy that leads to [momento] is a severing — or at least weakening — of the once-phonetically compatible linkage between *memento* and *memorial* and other derivatives, or to put it in a different way, the

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[4] Note that changes in pronunciation are not the same as sound change, as they may have a variety of causes, including nonphonetic ones, and they need not be regular; I take regularity and purely phonetic conditioning to be the hallmarks of sound change in the strict sense, what may be called 'Neogrammarian sound change' or 'sound change proper' (see Joseph 2008 and Anderson, Dawson, and Joseph 2010: 267 on this latter term).

[5] Such is the case with 2.6 (*flaunt* vs. *flout*), as Henning Andersen (personal communication, 5 October 2004) has brought to my attention (and cf. the OED's citation of *flaunt* in the sense of 'flout' from as early as 1923); so also with 2.3 (*nuclear*) and 2.11 (the *as far as* construction), and possibly others.

morphemic linkage with *memorial*, *remember*, etc. was not strong enough to counteract the effect of the phonic linkage with *moment*.

2.2   Modern English <consonantal>

The adjective associated with the noun *consonant* is *consonantal*, meaning "having to do with a consonant", and while it is generally pronounced, as would be expected from the spelling, [kansənæntəl], there are speakers, such as myself, who regularly say instead [kansənɛntəl]. The source of this innovative pronunciation is obscure, to be sure, but it is presumably based on near-rhyme *continental*; there is here some morphological link in that both *consonantal* and *continental* are denominal adjectives in –*al*, but the main connection between the two is sound-based, via shared onset, shared syllable-count, and shared syllable structure. Moreover, as with *grevis* discussed above, even a morphemic link gives a phonic link, here with respect to the final element –*al*.

2.3   Modern American English <nuclear>

One relevant case that has gotten a fair bit of play over the years in the popular press due to its being, it seems, the pronunciation of choice among American presidents, including Dwight D. Eisenhower, Jimmy Carter, and George W. Bush, is the adjective *nuclear* "having to do with a nucleus" pronounced as [nukyulər], for etymologically correct [nukliyər]. Here the influence seems to be the class of adjectives like *popular*, *particular*, *insular*, etc., with *nuclear* in essence 'assimilating' to, i.e. being attracted into, the class of adjectives in –*lar*. However, even if the end-point is a morphological type with a suffixal –*lar*, the starting point has to be the phonic form, with no strong morphemic basis. That is, even though *nucleus* has an –*l*- in it, its –*l*- has a different placement and morphemic status from that seen in *people/populace*, *particle*, etc., i.e. in the base words for *popular*, *particular*, etc.[6] The phonic form that gives a starting point for the attraction is *...lər* in both the attractor and attractee, discontinuous in the case of *nuclear* (thus *...l...ər*), and the end result is *...(yu)lər* in both.

2.4   Modern American English <extraterrestrial>

The adjective *extraterrestrial* "from outer space" is innovatively pronounced by some speakers as ending in [...stiyəl] as opposed to the etymologically correct ending [...striyəl]); the basis here seems to be attraction to, that is to say influence from, *celestial* 'heavenly', with the phonic link being the shared sounds [–ɛst…iyəl], though admittedly there is a semantic connection as well between these words.

2.5   Modern American English <academia>

One particularly intriguing case is the pronunciation of *academia* as [ækəd**ej**miə] (at least in American English) as opposed to the more usual [ækəd**ij**miə]. In talking about this case over the years, in classes or in presentations, I have been told that it is a pseudo-

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[6] Dr. Tom Stewart (personal communication, Spring 2001) has told me that the noun *nucleus* can be heard as [nukjuləs], and I have personally verified that since. Though this could be the basis for the adjectival pronunciation discussed here, I am inclined to think — since there is no obvious (to me) basis for [nukjuləs] in and of itself — that the noun here is a back-formation derived from the innovative pronunciation of the adjective.

learnedism, affecting a Latin-like style of pronunciation or an Italian- or a Spanish-like one, but that ignores the basic point of why this word out of other possible words would have been affected, and why that particular affectation as opposed to other possible alterations occurred with this word. That is, there are other learnèd words that do not undergo a similar fate, such as *anemia*, for which there is no variant [ən**ej**miə],[7] or even *epidemiology*, with the same surrounding environment as *academia* (i.e., with *d* and *m* flanking the affected vowel), for which there is no [ɛpɪd**ej**mi…].[8] Nor can influence from a morphologically or semantically related word be responsible; in fact, one does hear on occasion [ækədɛmiə], based on the pronunciation of *academic*, but there is no obviously related word with [-ej-]. But when one looks to less obvious (but, I would argue, no less relevant) forms, a solution awaits; thus, I suggest that this innovative pronunciation of *academia* is based on the influence of *macadamia (nut)* where the basis for the connection is purely phonic in nature – the relevant phonic links are the large number of shared segments in the same order, in particular, [ækəd…miə]) and the shared rhythmic stress pattern. This influence seems to be felt even though there is no semantic connection whatsoever; phonic form alone seems to matter here.[9]

2.6   American English <flaunt>

 The verb *flaunt*, canonically having the meaning "show off; display ostentatiously", can now be used as well quite commonly (though prescriptively 'incorrectly') in meaning of "show contempt for; scorn". This innovative meaning is exactly the meaning of *flout*, which, not coincidentally I would argue, is phonically similar to *flaunt* in that both share [fl…t]. Thus, with this innovative meaning, *flaunt* has assimilated in meaning to *flout*, where the link between the two, the basis for the analogical influence of *flout* over *flaunt*, is a shared aspect of their phonic shape.

2.7 American English <diffident>

Somewhat similar to *flaunt* is the situation with *diffident* 'shy, lacking in self-confidence", in that it is now used by some speakers in the meaning of "having no interest in or concern for". Presumably what has happened here is that *diffident* has been 'attracted' by the phonically similar *indifferent*, which has that very meaning; crucial here to the attraction is the fact that the two words share the syllable [...dɪf...]), which is

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[7] My good friend and many-time collaborator Richard Janda and I independently came up with this idea about the source of the innovative pronunciation of *academia*, at some point in the mid-to-late 1980s, and we have each since used it in classes and in presentations. My including it here in print is with Rich's permission, and in fact, I must acknowledge his input through enlightening discussion we have had on this example, including the particular point about *anemia*; I have benefited greatly too from the many general discussions Rich and I have had over the years concerning not just *academia* but the whole overall line of reasoning adopted herein as well.

[8] Henning Andersen (personal communication, 5 October 2004) tells me that the word *schizophrenia*, widely pronounced as ending in […ijniə], can be heard also as ending in […ejniə], suggesting that there may indeed be a 'learnèd word' pronunciation coming to be associated with [ej] in certain items. I am inclined however to think of possible influence from semantically (and somewhat phonically) connected *mania* in this case, though the nature of this sort of variation in general is such that one cannot rule out any of the possible pressures.

[9] One is inevitably led to make a quip about academics being nuts, and indeed, I even own a T-shirt, a gift from a former student, Dr. Halyna Sydorenko of Toronto, that says "Academia Nut". Such a connection seems unlikely to have played a role here, however. (To see a photo of me in the shirt, go to http://osu.academia.edu/BrianDJoseph.)

stressed in each, as well as having the same end segments and, except for the prefix *in-*, the same rhythmic structure.

2.8 American Norwegian <brand>

The same effect as that seen in 2.6 and 2.7 can be observed in language contact, where the 'attraction' takes place across languages whose speakers are in contact and are bilingual. In particular, Haugen 1969 has noted what he calls 'homophonous extensions', exemplified by American Norwegian *brand*, which has the meaning "bran", as opposed to the meaning "fire" in Standard Norwegian, due, in his account, to the influence of American English *bran*. Haugen's use of the descriptor 'homophonous' signals his recognition of the relevance of the phonic link between the attractor and the attractee.

2.9 American English <as of yet>

Although meaning can be affected by phonically based analogical attraction, as the examples in 2.6-2.8 show, the results of such analogical pressure need not always make sense. Rather, it can effect changes in the form alone even if aspects of the meaning are altered in unusual ways. A case in point is the expression *as of yet*, which seems to be an innovative crossing, a contamination that is, between two phrases, *as yet* and *as of now*, that were already present in the language. The emergence of *as of yet* means that either *as yet* has taken on *of* due to influence from *as of now*, or else *as of* has taken on *yet* as a possible complement due to influence from *as yet*. In either case, there is a shared phonic link through the word *as*, but there is as well a semantic link in that both are time expressions. Nonetheless, along with the analogical assimilation that leads one of these expressions in the direction of the other with regard to form, there is either a complication of or a shift in the semantics of the relevant pieces.

In particular, in the phrase *as of X*, the complement *X* generally has a definite and fixed time reference of some sort (e.g. *as of December*, *as of now*, *as of 3:33PM*, etc.); however, in the innovative *as of yet*, the complement has a very different kind of time reference, certainly not anything that could be characterized as definite in any sense, and thus a complication. Alternatively, one could say that the meaning of *yet* has shifted to accommodate its use in a new expression or that the requirements of *as of* have changed so as to allow a referentially vague term like *yet* as a complement. Either way there is a change beyond the new form, and the analogy leading to *as of yet*, with its phonic basis, is in large part responsible.

2.10 Latin <queō, nequeō>

The Latin verbs *queō* "I am able" and *nequeō* "I am not able" may well show morphological developments that under one account of their etymology would be a case of phonically based analogy. The standard etymology[10] treats *nequeō* as the older form, deriving from *neque* "and not" plus *eō* "go", originally in an impersonal passive formation *nequitur* "it does not go", with *queō* then a back formation created by slicing off the clear negative morpheme *ne-*. This suggestion fits the facts formally and may well be right, but it is not necessarily the most satisfying possibility on the semantic side. As an alternative, one might look to a different root as underlying these verbs, in particular

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[10] See Ernout & Meillet (1939: s.v.).

Proto-Indo-European *kʷey- "make, do" (as seen in Greek *poiéō*), so that the sense "be unable" would stem from "not to be done" (that is, "not doable"). While admittedly speculative (as is often the case with root etymologizing), in that case, these verbs would show 'assimilation' in their inflection to the form of *eō* "I go", in the following ways: from a preform 1PL.PRES *kʷey-o-mos, one would expect either Latin *queumus** (with the phonetic development of *-eyo- seen in *ey-ont- "going" => *eunt-*) or *quēmus** (with the analogical development seen in forms like *monēmus* "we warn"). Instead what occurs for these verbs is *(ne)quīmus*, with the same root form as *īmus* "we go", from *ey-mos. Similarly, the infinitive is *(ne)quīre*, just like *īre* "to go", even though the expected outcome would be something like *(ne)quēre**. This cannot be proven conclusively, and it may well be that Ernout and Meillet are right in linking these verbs etymologically with *eō* from the start, but if the semantic connection is considered suspect, so that an alternative etymology is sought, then the later issue of how *(ne)queō* came to be linked with *eō* would have to be based not on their semantics but on the fact that they rhyme. That is, what would link the verbs, in this interpretation, and make the analogical influence possible, therefore, would be a phonic connection.

2.11 English <as far as…>

An example involving phonic analogy that affects syntax can be seen in the changes discussed by Rickford et al. 1995 with regard to the English construction beginning with *as far as* and signalling a focalized element. In particular, they note that a clear old construction in Modern English is that illustrated in (1), in which following the focalized element preceded by *as far as*, there is a verbal coda, usually *be concerned* though others such as *go* can also be found:

(1)   a. <u>As far as John is concerned</u>, forget about him!
        b. <u>As far as John goes</u>, forget about him!

In addition to this construction, there is another one, which Rickford et al. quite appropriately take to be innovative, in which *as far as* occurs but the verbal coda is lacking, as in (2):

(2)   <u>As far as John</u>, forget about him!

    Their main concern is the spread of the innovative construction in the past 200 years and especially in the later half of the 20th century, but they discuss various possible explanations for the appearance of the innovative pattern in the first place. One that they consider to be possible, but which in my view they pass over a bit too hastily (p. 115), is that given by Faris 1962 concerning possible involvement of another focalizing construction with *as for*, as in (3), which has no verbal coda:

(3)   a. <u>As for John</u>, forget about him!
        b. *<u>As for John is concerned</u>, forget about him!

The absence of the verbal coda in the *as for* construction would provide a model for its analogical absence in the *as far as* construction. But what is the basis for a connection between the two constructions? They are functionally linked, of course, in that both mark focused elements, but alongside this functional connection, there is another that cannot be ruled out, namely what Faris may have been hinting at when he referred to the influence

of 'the closely resembling *as for'* (p. 238): a phonic link. That is, one could claim that *as for* provided a suitable model for *as far as* based on the shared phonic form between the two of *as* and *f-V-r*. In this way, the innovative verbless construction would be a contamination or crossing (as seen above), an analogical creation with a phonic basis.

2.12   American English <being that>

My final example also is a case of syntax being affected by a phonically based analogy, and is quite parallel to the *as far as* example in 2.11. In this instance, the two older constructions that play a role, in my account, are the subordinate clauses (underlined) exemplified in (4):

(4)   a. <u>Seeing that</u> John is here, we can start.
          b. <u>It being the case that</u> John is here, we can start.

and the innovative construction is that illustrated in (5):

(5)   <u>Being that</u> John is here, we can start.

All of these represent ways of stating the circumstances under which the action of the main clause occurs, (4a) with a gerund (or participle) that ostensibly is linked to the main clause subject and (4b) with an absolute construction containing an expletive *it* serving as subject to *being*. In the case of (5), there is as well a 'dangling' participle, in that *being* is not linked to any main clause argument, but also the syntactic anomaly of the suppression of the expletive subject of *being*, even though English in general is not a *pro*-Drop language.[11] How did the innovative construction in (5) arise? It is my contention that it is the result of a crossing of the two older constructions seen in (4), where the connection between the two is on the one hand functionally based in that both indicate attendant circumstances, but further, that it is aided by the phonic link between the two as well, essentially the rhyming of *seeing* with *being*, and thus due to the same sort of pressures that gave rise to the innovative *as far as* construction, and indeed the other innovative forms throughout section 2.

3   Conclusion

There is more that can be said about these examples and their collective effect. For instance, in some cases, the analogy results in a new form that is far from regular or simplified, far from 'optimal', as with the *being that* construction in 2.12, with its odd suppression of a pronoun that runs counter to otherwise quite general English subject requirements, or *as of yet* with its odd semantics or selectional anomaly. The suggestion that these anomalies emerge by analogical pressures means that analogy cannot be taken as an optimizing or regularizing force per se, except perhaps when applied to individual cases; that is, rather than leading to system-wide regularization and simplification ("system optimization" in the sense of Kiparsky 2000), analogy can introduce

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[11] Admittedly, most treatments of *pro*-Drop refer to the suppression of subject pronouns in finite clauses (as in Modern Greek *tréxo* "I am-running" (literally, "am-running")). However, English has the free suppression of subject pronouns only in imperatives, and gerund/participial forms normally lack a subject only under circumstances of control from a main clause nominal (as in (4a)). Thus the absence of *it* here is innovative from a syntactic point of view.

complication into the system – the regularization would seem to be just on a very localized basis (in the sense of Joseph & Janda 1988), in that, as here, there is an 'inner logic', as it were, to the creation of *as of yet* because of the presence of *as yet* and *as of now*, at least in terms of its surface form; so also with *being that*.[12]

Finally, it must be emphasized that even though phonic effects, based on these examples, seem to be capable of playing an important role in establishing analogical links among forms, it is not the case that phonic effects hold sway every time one of these forms is uttered. Rather, as with any change, once a new form takes hold, the path by which it arrived at that particular shape is largely irrelevant. For instance, even though the currently widespread American English pronunciation of *often* with medial –*t*- has its origins in a spelling-based pronunciation, it is not the case that every time it is uttered now, speakers have the spelled form in mind inducing them into pronouncing the –*t*-; rather for most such speakers, *often* is simply learned with a *t* and thus always pronounced that way. So too in the examples discussed here: it is not the case that every innovative utterance of *academia* has a *macadamia* lurking behind it, so to speak. However, as the need to separate the impetus of an innovation from its spread is necessary in most accounts of language change in general, this aspect of the discussion merely places these examples in conformity with what is known about language change more generally.

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[12] This line of reasoning is pursued further in Joseph 2012.

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