

METATHESIS AS TEMPLATE-MATCHING:
A CASE STUDY FROM SPANISH

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1. Among the occasional changes which have affected Spanish and other Romance languages, consonantal metathesis remains one of the least thoroughly explored, and one for which comprehensive explanations have rarely been offered. If individual examples are studied as isolated anomalies, it is necessary to resort to explanations based on analogy, dialect mixture, dissimilation, and vaguely defined 'ease of articulation'. The fact that many of the changes occurred several centuries ago, and that contemporary manifestations are limited to socially marginalized groups, e.g. semiliterate rural speakers, adds to the indeterminacy surrounding the motivation for metathesis and transposition.

In theory, all segments may be affected, and certain combinations have become almost canonical in popular Spanish (e.g. *estómago* > *estómagamo*, *nadie*, *ciudad* > *suidad*, *de repente* > *redepente*). The most common and productive patterns include the combination of obstruent and liquid; moreover, while a relatively small number of cases involve /l/ (e.g. *chueca* > *culeca*, *cucilla(s)* > *chuquilla*, *apoplejía* > *aplopejía*, *bucle* > *bloque*), the largest group involves the combination of obstruent + /r/. The present study will examine a subset of the latter group of modifications in an attempt to demonstrate systematic patterns of phonological evolution in Spanish.

2. The data to be considered represent transposition of /r/ in popular Spanish from around the world; few if any of the examples are limited to a single geographical area. The majority of the examples have enjoyed a long history in Spanish, and in earlier centuries when normative centripetal effects of prestige dialects were relatively weak, processes of consonantal transposition were more frequent and unconstrained, and undoubtedly involved more words than have survived to the present. Spontaneous current creation of consonantal transpositions is an uncharted domain; I have occasionally observed and recorded examples in popular speech for which no written attestation exists, and which are

not found among other individuals in the linguistic community in question, but the number of such cases is too small to constitute evidence in favor of a contemporary process of transposition.¹ At this point, the data will be analyzed as reflections of a diachronic process.

Transposition of /r/ involves two related but distinct groups of forms. In the first group, /r/ is displaced to the *left* of its original position. Table 1 provides representative documentation.²

Table 1.
LEFTWARD SHIFTS OF /r/

abarcar > abracar	cobertor > corbetor
ad(i)entro > adr(i)ento	conturbiar > controbiar
Borgada > Brugada	costra > crosta
cabestro > cabresto	dentífico > dentrífico
capricho > crapicho	dentro > drento
catedral > catredal	dormir > drumir
catorce > cartose	encabritado > engravitao
chacras > charcas	fábrica > frábica

¹ I have attempted to determine what if any intuitions native speakers might have about alternate or innovative forms involving transposition of /r/, but definitive answers have never emerged. Most speakers either react normatively, rejecting all transposed variants as substandard and equally undesirable, or else acknowledge the existence of transposed forms, but profess no strong feelings in favor of some over others. In a few instances hypothetical alternate forms were more consistently rejected by native speakers; thus *puđir* > *puđir* offers the alternative **puđir*, which was rejected by all Spanish speakers I informally queried. This same ad hoc panel rejected **prade* for *parde* < *padre*, which as noted below may stem from the perceived parallelism with *marde* < *madre*, for which the variant **mrade* is phonotactically impossible. The alternative **Tibrucio* instead of *Tribucio* < *Tiburcio* also seems strange, which when coupled with the nonexistence of **puđir* may hint at the exclusion of /pru/ from transposition templates. The existence of phonetically similar combinations, such as *profñar* < *porñar* and *frutuna* < *fortuna* renders such a possibility less compelling, but the differential judgements remain. In still other cases (e.g. *cobertor* > *corbetor* instead of **cobretor*), simple idiosyncrasy may be involved (although none of the speakers I surveyed felt truly comfortable with **cobretor*), or this may represent the incipient action of another force, the retention of syllabic structures (e.g. Steriade 1988).

² The principle sources for the data include my own fieldwork in many Spanish-speaking regions as well as a cross-section of published descriptions, including: Alonso (1967), Alvar (1948), Alvarez Nazario (1957), Baz (1967), Becerra Hiraldo and Vargas Labella (1986), Borrego Nieto (1983), Calero López de Ayala (1981), Carrasco Cantos (1981), Chacón Berruga (1981), Donni de Mirande (1968), Espinosa (1930, 1946), Fontanella de Weinberg (1984), Flórez (1951:275), García Cotruello (1959), Henríquez Ureña (1938), Iglesias Ovejero (1982), Llorente Maldonado (1947), Marden (1938), Monge (1951), Oroz (1966), Quarta (1978), Rojas (1980), Rosenblat (1946), Tiscornia (1930:83-85), Torreblanca Espinosa (1976), Toscano Mateus (1953), Vidal de Battini (1949), Zamora Vicente (1943). Principal sources of Judeo-Spanish include: Alvar (1960:776-791), Benoliel (1977), Pascual Reçuero (1977), Renard (1966:118), Sala (1970:29-30), Wagner (1930:51), Zamora Vicente (1960:285).

fortuna > frutuna
 Gabriel > Grabiel
 garbanzo > grabanzo
 hipocresía > hiproquesía
 íntegra > íntriga
 intervalo > intrevalo
 lágrima > lárguima
 madre > marde
 matrimonio > martimoLo
 membrillo > brembillo
 padre > parde
 pedernal > perdenal
 pedernal > pedrenal
 pedestre > pedreste
 percantar > precantar
 perdonar > predonar
 perfecto > prefeto
 permiso > previso
 persif[ge]nar > presinar
 persistir > presistir
 persona > presona
 perspicaz > prespicaz

petral > pretal
 petróleo > pretolio
 piedra > pierda
 pobre > probe
 porfiar > profiar
 postrero > prosterio
 postrimería > prostimería
 público > plúbico prúbico
 pudrir > purdir
 quebrada > crebada
 quebrar > crebar
 resquebrajar > rescrebajar
 servir > sebrir
 taberna > tabrena
 teatro > treato
 temprano > trempano
 tercero > tresero
 Tiburcio > Tribucio
 tigre > trigue
 Torcuato > Trocuato
 turbio > trubio

Another subset of examples involves rightward displacement of /r/; the majority of the cases come from Sephardic Spanish; representative cases are given in Table 2.

Table 2.
RIGHTWARD SHIFTS OF /r/

acorda > acodra
 albarda > albadra
 amorde > modre
 aturdir > atudir
 bastardo > bastadro
 brebaje > berbaje
 brebaje > bebraje
 brocal > borcal
 cordero > codrero
 cuartén > cuatrén
 cuerda > cuedra
 curtir > cudrir
 deperder > depreder
 deperdición > depredición
 detardar > detadrar
 engordecer > engodreecer
 fraude > faudre
 frito > firto
 gordo > godro
 gordura > godrura

gorduroso > godruroso
 guardar > guadrar
 mordedura > modredura
 mordisco > modrisco
 orden > odren
 ordenar > odrenar
 perder > pedrer
 perdí > pedrí
 pérdida > pedrita
 preferir > perferir
 pretina > pertina
 procurar > percurar
 profeta > porfeta
 profundina > porfundina
 promedio > pormedio
 recordar > recodrar
 recuerdo > recuedro
 sordo > sodro
 tarde > tadre
 tardea > tadrea

verdad > vedrad

verdadero > vedradero

verde > vedri

verdugo > vedrugo

verduña > vedruña

verdura > vedrura

Individual cases of /r/ -transposition have usually been analyzed in terms of analogy (e.g. interchange of the prefixes *pre-* and *per-*) or confusion with a specific lexical item. Occasionally, vague references to articulatory ease are made. For example, Henríquez Ureña (1938:369) declares that the general tendency is 'to place two contiguous phonemes in a comfortable order,' influenced by 'the general instability and plurality of forms in popular speech.' The same author also briefly mentions (p. 370) 'the preference for the combination stop + liquid,' without elaborating on this suggestion. Vennemann (1988:57) analyzes metathesis of /l/ and /r/ (e.g. Lat. *periculu* > *periclu* > Sp. *peligro*) as 'slope improvement,' referring to the substitution of a less sonorant element as the second member of a syllabic onset. Since transposition of consonants is neither a regular process nor grammatically motivated (but cf. Fontanella de Weinberg 1984:441), it is easy to categorize as a simple transient phenomenon devoid of systematic patterning or theoretical interest.

3. It is natural to search the data for manifestations of the drive toward open syllabicity, whose intermediate steps frequently involve dissolution or transposition of consonant clusters. No clear tendencies emerge, however; some shifts create open syllables (*perdonar* > *predonar*), some shift open syllables to closed syllables (*piedra* > *pierda*), and most leave the syllable typologically unchanged. Some useful generalizations may nonetheless be extracted:

(i) Leftward shift of /r/ is the normal direction, while rightward shifts, less numerous and less widely distributed, are in some sense exceptional.

(ii) In many cases, true metathesis (i.e. the exact interchange of two consonants, or a consonant and a vowel) is not involved. What occurs is displacement of /r/, leaving the remainder of the word unchanged.

(iii) Displacement of /r/ nearly always involves the closest possible position to the left of the original location. These are slots which in accordance with the general syllabic template of Spanish can accommodate a single tap [r]: in the syllabic rhyme (almost always syllable-finally and as the second element of a syllabic onset. This minimal shifting sometimes creates an open syllable from a closed syllable (*garbanzo* > *grabanzo*) and sometimes produces the opposite effect (*padre* > *parde*).

(iv) The overriding factor influencing displacement of /r/ is the overwhelming preference for **obstruent + /r/** combinations. In some cases, leftward displacement of /r/ produces /Cr/ combinations by default, this being the only possible result: *persona* > *presona*, *abarcas* > *abracas*. At other times, when leftward displacement to the first available position

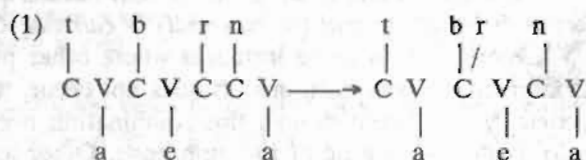
would not produce a /Cr/ combination, a two-position shift occurs: *quebrada* (> **querbada*) > *crebada*; *catedral* (> **caterdal*) > *catredal*; *Gabriel* (> **Garbiel*) > *Grabiel*, etc. In those instances where other phonotactic constraints intervene, a two-position shift does not occur; thus *piedra* does not become **prieda*, even though this combination occurs elsewhere (e.g. *prieto*), evidently because of the diphthong. Other asystematic developments may be similarly explained. For instance, *padre* would be expected to shift to **prade*, instead of the actually occurring *parde*. However, this word forms an intimate pair with *madre*, which can only metathesize to *marde* and not to the phonotactically impossible **mrade*. There remains a residue of forms which find no ready explanation at this time, or for which more than one transposed variant exists; in these instances, one must look for influence of well-established paradigms, dialect mixture, carryover of archaic forms which do not reflect current patterns of transposition, and the like.

4. Contemporary phonological theory includes models of nonconcatenative morphology which separately access templates or skeleta formed of C and V slots, at times with consonants and vowels projected on separate planes.³ In traditional accounts of Romance metathesis, assimilation and dissimilation, a symbolism similar to that of consonantal skeleta is frequently used: ..l...l... > ..r...r..., etc. (cf. Ullian 1978:394).

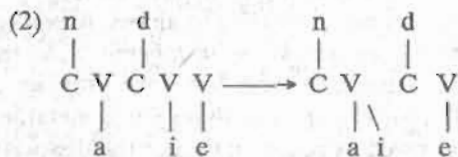
Within linear phonology, a transformational format for many cases of /r/ displacement is inevitable (cf. Janda 1984), since nonadjacent elements may be altered/exchanged, for example in *pobre* > *probe*. Two important generalizations are missed by this type of account. The first is almost a truism, namely that the total number of skeletal slots is conserved by the process, as is the C/V typology of each slot. The other generalization, specific to the Spanish data, is that the CV skeleton locally containing /r/ after the shift is uniform and invariable: CrV.

While linear phonology provides no alternative to an overly powerful transformation rule to account for metathesis as in *taberna* > *tabrena*, a formulation which recognizes separate C and V planes provides another possibility. Besnier (1987), for example, analyzes some metatheses as removal of a skeletal slot, followed by reassociation of the dissociated matrix with the nearest available slot of the same typology. The shift just mentioned could be represented as:

³In Spanish phonology, the pioneering nonconcatenative study is Harris (1980) dealing with nominal pluralization, particularly nonstandard forms such as *mamases*, *papases*, *ajises*, *cafeses*, as well as the peculiar Dominican plurals of the type *lbrose*, *mujérese*, etc. Harris (1983) and Núñez Cedeño (1985), among others, have developed the notion of the syllabic template in Spanish, which provides a partial basis for the development of models of template formation and matching.



In (1) the upper line represents a putative consonantal plane, while the bottom line represents a separate vocalic plane. This analysis produces the correct configuration, but it has implications which are at odds with observed behavior. The combination of slot deletion and reassociation of the delinked matrix creates a net loss on the timing tier, associating an obstruent and a following /r/ to a single skeletal slot. There is no distributional or historical evidence in Spanish which would suggest that metathesis involves shortening of the CV skeleton, or that a two-member syllable onset should be represented by a single skeletal slot. Quite to the contrary, the very fluidity and reversibility of the metathesis reflects the conservation of skeletal material. The examples adduced by Besnier involve metathesis of a consonant and a vowel, with the latter element subsequently forming a diphthong in contact with another vowel. In such environment, where a syllabic vowel becomes a nonsyllabic glide following metathesis, an analysis such as (1) seems more justified. However, even in consonant + vowel metathesis, when the syllabicity of the elements remains unchanged, postulating slot elimination may be inaccurate. This is exemplified by the frequent Spanish metathesis of *nadie* to *naide*; here a vowel and a consonant are interchanged, but the syllabicity of the respective elements is unaltered, and a slot-deletion analysis suggests a configuration which is not observed:



There is nothing in the pronunciation of *naide* which would indicate that the diphthong /ai/ is pronounced or analyzed as 'shorter' than the original diphthong /ie/, as would be predicted by the configuration in which two vocalic matrices are attached to a single skeletal slot. If, on the other hand, *nadie* is analyzed so that /ie/ is attached to a single slot, then an analysis such as (2) will not be possible, for removal of the slot would detach both the /i/ matrix and the /e/ matrix, and the latter un-associated matrix would eventually be deleted.

5. The principal result of /r/-transposition is the achievement of a CV template which shifts /r/ minimally to the left and creates/retains a C+r configuration; /r/ is the only mobile element. Recent work in template morphology, (e.g. Yip 1982, McCarthy 1981, 1982, 1985) particularly with language games, provides the underpinnings of a phonological model which will account for /r/ transposition in Spanish.

Various processes of partial and total reduplication, including infixing, have been studied within nonlinear phonology. The most widely accepted models postulate total copy of the base, followed by association of pertinent copied segments to a reduplicative template, with any stranded segments being ultimately deleted (Steriade 1988, Broselow and McCarthy 1984, Marantz 1982, Steriade 1986, etc.). True reduplication normally juxtaposes the original and the copied material, and involves more than a single element, copying at least an entire syllable.⁴

Spanish /r/-transposition involves matching of the (copied) CV string to a set of uniform templates to which /r/ has been preattached in the relevant positions as in (3). Template (3a) involves a single-syllable domain (e.g. *garbanzo* > *grabanzo* while (3b) involves a two-syllable domain (*pobre* > *probe*):

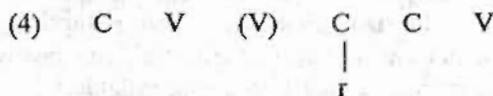
- (3)
- | | | | | |
|----|---|---|---|--|
| a. | C | C | V | |
| | | | | |
| | | r | | |
-
- | | | | | | |
|----|---|---|---|---|---|
| c. | C | C | V | C | V |
| | | | | | |
| | | r | | | |

Formally, template matching proceeds as follows. The relevant syllable is copied, e.g. /gar-/. Association of the copied material to the template, proceeding from left to right, and matching C to C and V to V, eventually results in the structure /gra-/. The final (unattached) /r/ of the copy can never be associated to the template, and is deleted. However, instead of simply adjoining this modified copy to the original stem, transposition stipulates **replacement** of the original syllable by the string resulting from fitting the copy to the template.

In cases like *pobre* > *probe*, the template is two syllables in length, but the process is identical. Specifying C and V values in the templates

⁴ An alternative formulation, without practical repercussions for the present analysis, involves 'parafixation,' of the template skeleton, followed by association and sequencing with respect to the original melody (Clements 1985).

has the added dividend of excluding derivations like *piedra* > **prieda*, since the reduplicative template has only a single V slot following the preattached /r/ in the first syllable. The templates in (3) do not yet account for transpositions in which an /r/ originally in the syllable onset becomes rhyme-final (*madre* > *marde*, *piedra* > *pierda*). It appears that most of these transpositions follow from the phonotactic impossibility of adjoining the /r/ to the onset of the syllable in question, although a few idiosyncratic cases remain (e.g. *puadir* > *purdir*). To cover these examples, an additional two-syllable template is needed:



The optional V accounts for words like *pierda* < *piedra*.

6. Secret language formation, infixation and reduplication have, in recent analyses, been construed as complete copying of the CV melody, followed by matching to templates. Since a maximum of two syllables is ever involved in /r/-transposition, it is more parsimonious to assume that only the melodies of these syllables are copied. There is an even more powerful argument in favor of partial copying, which is the open-ended and potentially infinite set of CV templates which would be required if total copying were involved. Template-matching, resulting in transposition, is triggered by the presence of /r/ in at least the following configurations:

(a) in the rhyme of a syllable whose onset contains a single (nonpalatal) obstruent (e.g. *garbanzo* > *grabanzo*).

(b) as the second position of a syllable onset (by definition following a nonpalatal obstruent), just in case the immediately preceding syllable contains a single nonpalatal obstruent in the onset (e.g. *pobre* > *probe*). It may be that the syllable preceding the original site of /r/ must be open, but the data are insufficient to force a choice.

Transposition is not a productive, algorithm-driven process such as is involved in language games (usually based on transposition of individual syllables, or the entire word), nor does it entail a morphological dimension, such as occurs in most regular processes of reduplication and infixation. For reasons only dimly understood, Spanish exhibits certain quasi-regular phonotactic patterns which serve as attractors and which may eventually coalesce into true CV templates, especially in weakly-monitored speech, but which remain as relatively isolated and occasional manifestations. The dictum that reduplication and other template-based phenomena operating on domains larger than the individual syllable copy

the melody of the entire morpheme/word should be relaxed in instances where no morphological material is involved and/or where no regular syllable-driven transformation is contemplated.

Analyzing consonantal transpositions with the same theoretical approach used in reduplication, i.e. melody copying + matching to a CV skeleton, differs from true reduplication/insertion in that rather than affixing a partial or total copy of the input material, this material is totally replaced by the reassocated melody + skeleton. This represents a logical extension of widely accepted phonological procedures. Many reduplicative phenomena require partial effacement of material in the input string, which is tantamount to the replacement of the entire input string with a string derived from matching to an external skeleton or template. Two well-known language games will illustrate this fact.

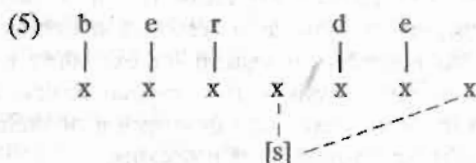
Consider first the English-based play language Pig Latin. If the first syllable of a word has no onset, the adjoined final syllable begins with a preattached consonant, usually /p/ or /w/ (cf. Zim 1948): *ice* > *icepay*. A template-matching analysis will have to include not only reduplication of the melody of the key syllable and matching of this melody to the partially prespecified skeleton, but also replacement of the skeleton of the syllable with a string lacking the initial C, followed by reassociation of the original melody.

The second example is a language game whose Spanish variant is frequently known as *jerigonza*, and which involves infixing at the syllable level. Immediately following the nucleus of each syllable (i.e. before the coda if there is one), another syllable is inserted which begins with a key consonant (usually [p], with variants [ñ], [λ], etc.) followed by a copy of the original vowel (for similar or identical examples based on other languages, cf. Halle 1988, Haraguchi 1982, Sherzer 1976). If the original syllable contains a coda, this is placed after the nucleus of the inserted syllable: *usted* > *upusteped*; *pocos* > *popo-copos*, etc. Formally this represents matching to a template which consists of a truncated version of the skeleton of the original syllable (missing the coda) plus an exact copy of the original skeleton. As with Pig Latin, it is necessary to remove material from the original syllable as a result of matching to the new template. There is no nonarbitrary reason for excluding total replacement of the skeleton in an analysis whose original motivation was reduplication but whose ultimate goal is the description of skeletal templates and their role in diverse phonological processes.

7. The origin of the preattached /r/ in the templates does not follow immediately from any currently available theory of diachronic Spanish phonology. One obvious suggestion is the separation of Spanish phonemic melodies into C and V tiers, since in /r/-transposition the vowels remain unaltered in substance and relative order, while modifica-

tions in the consonantal patterns do occur. Spanish exhibits no convincing evidence of separate vowel or consonant planes, although occasional autosegmentalization of vocalic features, is attested (e.g. McCarthy 1984). The events leading to the formation of templates with preattached /r/ suggest not the separation of C and V planes, but rather the existence of a separate plane containing only /r/, which interacts with the remainder of the CV skeleton only in those positions where /r/-transposition is operative. The idea that in the formation of the templates underlying /r/-transposition, /r/ occupies a separate plane during at least part of the derivation, is a radical departure from traditional models of Spanish phonology. There are other phenomena in marginal varieties of Spanish which suggest a similar autosegmentalization or segregation of an individual consonant as a transitional diachronic phase as well as a momentary lapse during synchronic production. Two possible parallels will be briefly noted.

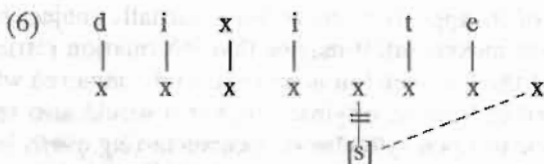
A striking similarity with transposition of /r/ is the insertion of hypercorrect /s/ in Spanish dialects characterized by severe consonantal reduction in the syllabic rhyme. Núñez Cedeño (1987, 1988) describes this process for colloquial Dominican Spanish, citing cases such as *puedo* > *puedos/puesdo*, *cielo* > *cielos/cieslo*, *párpado* > *párspado/párpados*, *calamidad* > *calasmidá/calamisdá/calamidás*, *verde* > *versde/verdes*, etc. He posits a rule of epenthesis, adjoining /s/ to the end of a syllable, and constrained by structure-preservation from inserting an /s/ before a following vowel. This formulation illustrates the fact that /s/ is only inserted epenthetically in those environments where aspiration/deletion occurs, namely word-internally in syllable-final position, and word-finally before resyllabification. However, it does not account for the multiple possibilities of /s/-insertion in a given word, or the fact that more than one /s/ can theoretically be inserted in a single word (e.g. *mulo* > *muslo/mulos/muslos*), a phenomenon which occasionally does occur. An analysis in which the epenthetic /s/ forms a separate plane more transparently illustrates the nature of /s/-insertion:



(*verde* > *versde/verdes/versdes*)

An identical analysis emerges for the common transposition, in popular Spanish of many regions, of /s/ in the second person singular preterite verb ending: *dijiste* > *dijites*, *hablaste* > *hablates*, etc. The nonetymo-

logical final /s/ has clearly been added through analogical pressure, given that this is the only verbal tense in which the second person singular form does not end in the characteristic morpheme /-s/. In dialects where syllable-final /s/ is variably weakened or elided, forms like the ones above could conceivably be attributed to simple phonological conditioning. However, the same verb forms are found in Spanish dialects where syllable-final /s/ is not normally effaced (e.g. Mexican-American Spanish), so that the disappearance of the /s/ in the inflectional ending is not always due to phonetic erosion. An analysis in which the relevant instances of /s/ are represented on a separate plane reflects the fact that transposition rather than phonetic erosion is at work:



8. Skeletal replacement and template matching are marked processes which require powerful phonological machinery, and which place severe strains on information transfer. It may be that total skeletal replacement is limited to sporadic processes such as transposition and metathesis, or to invented language games, which require an extraordinary conscious effort and even a training period in order to ensure effective communication.

In the development of the Romance languages, C+liquid combinations have always received a 'special' treatment, and it is likely that the transposition of /r/ in popular Spanish at least partially reflects this fact. Combinations of the type /C+l/ underwent various modifications in Spanish, with /C+r/ clusters being less affected. This relative stability may have provided a pivotal structure or proto-template which subsequently affected independently-motivated consonantal shifts.

Leftward shifting of /r/ seems to be at least partially attributable to Latin phonotactic patterns, which had the overall impact of promoting or retaining words in which the consonantal density (onset-initial and rhyme clusters) decreases from left to right (cf. Lindsay 1894: 97-8; Devine and Stephens 1977). Many of the /C+l/ clusters which arose intervocalically through syncope of atonic vowels eventually resolved to single onset-initial segments (e.g. *fenuculum* > **fenuclum* > *hinojo*). Occasionally, dissimilation or haplogy further reduced consonantal density in the rightmost portions of words (e.g. *proprio* > *propio*). Spanish permits proparoxytones whose final syllable begins with C+liquid groups (*árbitro*, *múltiple*, *álgebra*), but many of the words are semi-erudite, and

rightward stress shifts and/or loss of the liquid in the final syllable occasionally occurs in nonstandard speech. Analysis of the Spanish lexicon is complicated by questions of text frequency, regional usage, derivational and inflection modifications, etc. but patrimonial words, particularly those which are unquestionably part of the non-erudite vocabulary, are weighted in favor of /C+r/ combinations in the leftmost portion of words. Aside from the Latin heritage, this apparent leftward skewing of consonant clusters may have to do with relative prominence, articulatory energy, or the position of the stress peak within the word. Word-initial position is the most prominent site for consonant clusters, together with the onset of tonic (non-initial) syllables. This does not account for shifts like *catedral* > *caatedral* instead of **cratedral* (which is occasionally heard), but the transposition of /r/ appears to be at least partially subject to a constraint on distance of movement. It may be that information retrieval following reordering of the CV skeleton is more severely impaired when a consonant moves further from its original site, but it would also seem that a shift from closed to open syllables or vice versa (e.g. *perfecto* > *prefecto*) would also have adverse consequences for uninterrupted retention of information, and yet such changes are commonplace. It is also possible that /r/-transposition was originally limited to true metathesis of adjacent segments (*garbanzo* > *grabanzo*), thus implicitly providing a model for subsequent developments.

9. Metathesis and transposition were more frequent in earlier time periods, and were apparently more prevalent in certain dialects. There are no documented reasons for such discrepancies, but possible scenarios are not difficult to imagine. In the contemporary world, the chances for metathesis becoming regular in more than a few items are slight, given the homogenizing process represented by schools, mass media, and increased social and geographic mobility. In more marginalized areas or groups, normative pressures and monitoring are lowered or absent altogether. It is misleading to base an assessment of the scope or importance of a process such as consonantal transposition on contemporary manifestations, where artificially conservative tendencies are at work.

In summary, I hope to have demonstrated that at least some types of metathesis may be subject to a principled phonological analysis. Spanish is not ordinarily considered to possess template-based phonological structures (but cf. Pharies 1986 for some other possibilities), but under conditions of drift and isolation, phonological patterns emerge which suggest new dimensions in the evolution of Spanish. At the same time, the analysis of metathesis as template-matching, rather than as a brute-

force transformational rule rearranging arbitrarily designated strings of segments, is potentially applicable to a wider range of examples.

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