MULTIPLE VERSUS SIMPLE CAUSATION
IN LINGUISTIC CHANGE

THERE exists an extensive corpus of literature on the individual forces that are known to spring into action in the shaping of language. Depending on each researcher's range of experience, catholicity of taste, and doctrinaire position regarding certain controversial matters such as the principle of teleology in evolution, he will incline to favor either external or internal factors, either the hypothesis of gradual improvement (under adverse circumstances, deterioration) of structure or the alternative hypothesis of mere regrouping of the structure's constituents, either an explanation allowing for the intervention of speakers, at varying levels of consciousness, in the events affecting their speech or the rival explanation operating with unguided clashes of blind forces. There has been considerable progress in the recognition of different categories of change, especially within phonology: thus, it would hardly occur to any enlightened Romanist at present to champion the application of, say, 'Verner's Law' to a sliver of material that does not fall under that 'law's' jurisdiction, because this century's scholars, unlike their fumbling predecessors, have learned to distinguish quite sharply between universals and particulars.

Yet the domain of linguistic etiology remains underdeveloped as long as no major efforts are made to explore the compatibilities of different determinants of change. Without a searching analysis of these affinities, complementarities, and reconciliations (or, conversely, the patterns of their mutual exclusiveness) no serious study of multiple or complex causation can be undertaken. Every historical grammar or etymological article is, of course, replete with incidental, non-committal remarks to the effect that concomitant circumstances may have accelerated the process at issue or have increased the likelihood of the event under study; yet a formal, systematic high-level inquiry into such concomitancies seems to be unavailable.

The present article, as a result of its severely limited scope and its random illustrations, does not aspire to filling this need: it remains purely exploratory from beginning to end and is meant merely to dramatize the need for a full-scale investigation so slanted and to anticipate a few of its possible conclusions. The paper falls into two parts: a semi-technical analysis of a derivational problem never before clearly outlined, I suspect, and the succinct restatement, under a new angle, of three earlier probings, two of which have given rise to memorable discussions.

1. SPANISH ADJECTIVES IN -IO

A superficial inspection of the stock of modern Spanish adjectives suffices to show that a conspicuous proportion of them end in unstressed -io (m.sg.). Here is a random collection of examples:

agrio 'sour', amplio 'full, roomy', lucio 'faded, withered, languid'; 'straight (as hair)', limpio 'clean', lucio 'shiny', medio 'half', mustio 'sad, gloomy, withered', necio 'foolish, crazy', nimio 'excessive, stingy, small', recio 'strong, harsh, hard', rubio 'blond', sabio 'wise, learned', sandio 'silly', serio 'serious', soberbio 'proud, magnificent, fiery', sucio 'dirty', tibio 'lukewarm', turbio 'muddy, confused', zafio 'rough, uncouth'.

As a group, these forms seem to have aroused scant attention, though on certain items there exists an abundant collection of writings. The diachronicist will distinguish between two major subgroups, of which the first includes adjectives, both vernacular and learned, whose final segment -io could have been readily foreseen from elementary knowledge of phonology, while the second encompasses the more difficult cases. Of these, some involve -io instead of expected -o; in others -io replaces -io. The dissection of any residual categories will be relegated to the very end of the survey.

(1) Historically oriented linguists have long since recognized within this group typical descendants of Latin adjectives in -idos; in fact, if we choose to reverse the perspective at this point and to ask ourselves what have been the characteristic Spanish reflexes of ancestral -idos formations, we shall soon discern (A) a large group of adjectives in -io and (B) an exiguous parcel of nouns and adjectives (a) either in -do (cf. Fr. froid, raide, tiède) or (b) in -do alternating, under varying conditions, with -io.  

1 To simplify matters, I am leaving out of account the learned and, for the most part, distinctly late adjectives in -idos, such as arbido, cálido, cándido, escualido, esplendido, estóido, estipado, feliz, fláccido, florido, frígido, insípido, limpio, lucido, nítido, pallido, rápido, sóldo, sorvido, turbido, vivido (semilearned hámido contrasted, at the medieval stage, with strictly bookish hámido). Note that Spanish uses these Latinisms far more sparingly than does English; thus, it lacks the exact counterparts of lurid, purplid, and vapid; favors rabia 'râvido' over râuido, and presses into service morbosidad 'where English seize upon morbidity'; English, in turn, has no Latinism to match Sp. cálido, uses gravid more parsimoniously than Spanish does gravis, and marginally tolerates palido. The modern languages have been reluctant to adopt certain adjectives in -idos; one such outcast has been CALIDUS 'sly, cunning', perhaps on account of its proximity to CALIDUS 'warm, hot'. In modern languages GELIDUS 'frosty, ice-cold' has been adopted only in poetic discourse; SULIDUS 'cold' practically on no level; LEPIDUS 'pleasant, charming, elegant' seems to be represented in Italian alone (lepido 'faccios, witty'), on a very modest scale also in Portuguese. I further omit from consideration such lexical items as have reached Spanish by way of a detour, e.g. nerto 'near, net', traceable to NESTUS via a French intermediary.
Taking into account, to round out the picture, some dialectal and obsolete formations, one arrives at the following break-down:

(A) \(-\text{idu} > -\text{id}\):

\text{flaccidu} ‘flabby, weak’ \(\rightarrow\) \text{lacio}; \text{limpidu} ‘translucent’ \(\rightarrow\) \text{limpio} ‘clean, neat’; \text{luxidu} ‘clear, bright’ \(\rightarrow\) \text{luce} (Osp. \text{luceso}); \text{nittidu} ‘shining, glittering’ \(\rightarrow\) \text{Leon. nido} (=[Pt. \text{nido}) ‘sleek, glossy, chunky’; \text{rancidu} ‘stinking’ \(\rightarrow\) \text{Sp. ranco} ‘rank, stale’; \text{rigidu} ‘stiff, unpolished’ \(\rightarrow\) \text{reco} (Osp. \text{rezo}); \text{rosçidu} ‘moistened, dewy’ \(\rightarrow\) \text{dia. ro-}, \text{ru-}; \text{rapidu} ‘tasty, flavoursome’ \(\rightarrow\) \text{sabio} ‘wise’ (cf. \text{resabi} ‘unpleasant afters Taste’); \text{sucidu} ‘juicy, full of sap’ \(\rightarrow\) \text{suco} (Osp. \text{suco}, var. \text{scujo} ‘dirty’; \text{tepēdu} ‘ lukewarm’ \(\rightarrow\) \text{Sp. tibo} (Oleon. tibo); \text{turridu} ‘unquiet, troubled’ \(\rightarrow\) \text{Sp. turbio (Osp. turvio)}.

(B) \(-\text{idu} > -\text{ido}:

(a) \text{calidu} ‘warm, hot’ \(\rightarrow\) \text{Caldo} ‘broth, sauce, gravy’; \text{solidu} ‘dense, firm’ \(\rightarrow\) \text{Sp. svelto} ‘salty, solid, ancient coin’;

\text{fastidiu} ‘cold’ \(\rightarrow\) \text{frio (via \text{fridu}) beside topon. Fontefridu} \quad \text{pčidu} ‘rotten, nauseous’ \(\rightarrow\) \text{pufo (cf. topon. Fuentpufo) \quad Ausp. \text{pufo} (Repudio) beside Osp. puduo}; \text{rapidu} ‘swift’ \(\rightarrow\) \text{ruado} ‘rapid, impetuous’ (of water), ‘whistling’ (of wind) — but \text{Osp. rabbo}, occasionally \text{rābido} — beside \text{rabbo} in an archaic layer of Old Spanish.

Though the fact of the bifurcation of \text{idus} has long been accepted,\(^1\) the process has, to my knowledge, never been cogently explained. One finds hints of the phonetic

\(^1\) Some of these formations pose major phonological problems (such as the \(-\text{id}\) of \text{osp. rebio}), but this is not entirely clear. There arises one taxonomic question: in both editions of his comparative dictionary (1911-20 and 1933-35) W. Meyer-Lübke complicated a relatively simple situation by separating (a) \text{pro. \text{mesto} ‘wet’ (Cat. \text{muestre} ‘withered, flabby, sad’ (which he subsumed in § 5780 under \text{mnestus}, supposedly based on \text{mnestus} ‘must-like, sappy, sticky, fresh, young’ — an offshoot of \text{muestus} ‘must’ from (b) Fr. \text{muet} ‘wet’, Ocs. \text{mutda} ‘pale’, which he classified as descendants of \text{mnestus} ‘mouldy, musty’ (from \text{mūčere} \(\approx\) \text{mnestu} ([§ 5711]; Rum. \text{muco} (It. \text{mesto} ‘dark’). Surs. \text{mit} were declared lineal descendants of \text{mnestus}). But what is \text{mnestus} other than a blend of \text{mnestus} and \text{müsteu}? The two entries should clearly have been consolidated. E. mnestus exemplifies the same semantic affinity between ‘must-like’ and ‘mouldy’ — \text{sucidu} ‘juicy’ \(\rightarrow\) Osp. \text{suido} ‘wet’ — offers a similarly curved semantic trajectory; E. \text{moist} perpetuates Fr. \text{moisite} which underlies \text{muide} ‘moist’. Nevertheless, some development of Sp. mustio Corinam’s remarks: ‘...cuyo senido ... evolucionó en castellano por la florididad de las cosas mojadas’.

In his less than entirely persuasive note ‘Mode de obrar el substrato lingüístico’, \text{RFE, XXXIV} (1950), 1-8, esp. 5, R. Menéndez Pidal provided copious toponymic evidence of Osp. \text{rabio} \(\rightarrow\) \text{rapidu} ‘aquap rapiq doc. A.D. 1019; \text{Rabías} in Asturias, La \text{Raba} in Santander, \text{Pic. Rabia beside Rabia, Guip. \text{Fuerterrabia} \(\approx\) \text{ruado} traceable to \text{Fontem Rapidum} as attested by Archbishop Rodrigo of Toledo (13th c.). Menéndez Pidal attributed the retreat of \text{rabio} before \text{rabio} to the threat of a homonymous collision with \text{rabia} ‘fur’, \text{rabiar} ‘to rage’, from \text{rabies}. He was less convincing in his insistence on the accuracy of the equations \text{pallidu} ‘pale’ \(\rightarrow\) \text{pardo} ‘dark-brown; drab, dull’ and \text{limpidu} \(\rightarrow\) \text{lindo}. For a detailed refutation see J. Corinam, \text{Diccionario critico etimológico, III} (1956), 1016-103c and 663c-664c; also ‘Supplement’, \text{IV} (1957), 103b and 106b., with a reference to T. Wagner’s parallel demurrer. On the evidence of \text{colegue ‘to place’} \(\rightarrow\) \text{colgar ‘to hang’} the segment -\text{ldu} - could have yielded, at most, -\text{id}. For the stress shift in \text{Fuenterrabia} it seems unnecessary to implicate the peculiar accentual conditions in Basque; as in \text{ruco} \(\rightarrow\) \text{roco}, the loss of its adjectival status may have propelled the word in the direction of -\text{id}, \text{away from -\text{a}}. \text{Rabdo} calls to mind \text{Río, jauo, Jud.-Sp. kōb, kō-bdo beside aboriginal Arag. \text{janto} \(\approx\) \text{injapidu} and, through recomposition, \(\approx\) \text{injapidu}, with \text{d conceivably replaced by \text{t)} through interference of the prototype of \text{desaparejo ‘tastelss’} (P. Bernsoch, \text{NZFM, II}, 114, 265-268); cf. \text{capitale} \(\rightarrow\) \text{osp. cabal} \(\sim\) mod. \text{caudal} ‘wealth, great volume’, also \text{caudillo ‘chief, head’}, etc.

\(^4\) For a broad view of the linguistic phenomena at issue see my articles ‘Lexical Polarization in Romance’, \text{Lang., XXVII} (1951), 485-518, esp. 505-507 (on the syncope of the intertonic vowel in \text{calidos} and \text{frigidus}), and ‘Diachronic Hypercharacterization in Romance’, \text{Arch. Ling., IX} (1957), 79-113, esp. 103-106, and \text{X} (1958), 1-36.

\(^5\) \text{Pig. murcho, of course,} involves Mozarabic transmission, all the more plausibly as — barring the infallibility of an unusually early Italianism (a remote possibility) — \text{Sp. murcho} ‘withered, languid’ and \text{murchit ‘to wilt’} are also best understood on the assumption of Mozarabic channeling of \text{marcī} (\*rei ‘to droop, be faint’). For the latest pronouncement on this conduit see Corinam, \text{Breve diccionario} (Madrid, 1961), p. 373b. Meyer-Lübke operates with a long e in \text{murchio}; it seems wiser to accept A. Ernout and A. Meillet’s interpretation of the word as \text{murchidus} (Diet. \text{etymol., s.v. murchus ‘mutilated, cowardly, lazy’)) and to attribute the \text{u of murcho} to metaphony, cf. \text{rubio and tibo}.
after its adventitious substantial ingredient had become more heavily weighted than the original adjectival kernel, actually underwent accentual restructuring, with concomitant semantic support from regadio 'irrigable (land)', manantio, etc., where -io echoes -iuv. 4

In two additional, much smaller categories, of which one may be represented by a single piece, the emergence of -io presupposes no intrusion of any adventurous factor of causation:

(2) Sp. rubio (osp. rivio) ‘bland’ < rubeu ‘red(dish)’ — on all counts a vernacular word, with the characteristic preservation of /j/ after a labial (as against Fr. rouge ‘red’) and without any supervenient metathesis (as against Ptg. rivio ‘reddish-bland’). In fact, metathesis occasionally worked in the opposite direction: nervu ‘sinew; tendon, nerve’ > osp. nívor (matching Fr. nerf, Ptg. nervo, It. nervo, etc.) > Sp. nervio7 with additional learned support from nervia, -orum. 8

(3) Sp. necio ‘silly’ = nesciu ‘ignorant’. A learned, perhaps mock-learned, formation, beside even older, austerely learned medio ‘half’ < mediu and tercio ‘third’ < tertiu, as against thoroughly vernacular Sp. masturco (osp. mas-truecro) ‘common-cress, pepperwort’ < nastur-tiu, -ciu ‘kind of cress’ or corzo (osp. corço) ‘roe deer’ < curtiu. 9 There are on record numerous more modern Latinisms: espurio, eximio, nimio, obvito, etc. The halo of connotations surrounding nimio (‘prolix, stingy, worthless’, etc.) testifies to an osmosis of rude and racy formations in -io.

(4) As we come to the next category (-io in lieu of expected -o), it becomes necessary to resolve the joint discussion into a bundle of individual case histories. Special vignettes are called for to justify Sp. soberbio, agrio, and amplo in the face of Lat. superbus, acrus (beside more common acer, -ris, -re), and amplus, particularly in view of perfectly normal Ptg. soberbo, agro, and amplo.

(a) Sp. soberbio = Lat. superbus ‘proud, haughty, magnificent’ (besides

4 For the classic analysis of osp. ruvio, Gal. ruco ‘graying’ (of hair), lit. ‘sprinkled, spattered with patches of gray’, a congener of Ptg. rojo ‘dew’ < roscuo (beside occasional roccio, as in Modern Spanish), see Menéndez Pidal, “Etimologías españolas”, Rom., XXIX (1900), 334-379, esp. 3691. The older conjectures, such as russeu ‘reddish’ (F. Díez, in the wake of R. Cabrera) and lozuciu × russeu (Meyer-Lübke, 1890), have meanwhile all been discarded.

5 The treatment of /bii/, /v/, whether primary or secondary, is highly characteristic of Spanish; contrast rubio with Fr. rouge and sabio with Fr. sage. Additional examples include labiu ‘lip’ (Cl. Lat. labia, -orum) > labiu and pluvia ‘rain’ > lluvia (but photoa ‘pit’ [as a trap], pitfall > hoya ‘hole’, pit’). Cf. Menéndez Pidal, Manual de gramática histórica, (Madrid, 1941), § 8 bis, Section 3c.

6 Cervantes links with Lait. nervia, M. Niedermann, “Über einige Quellen unseres Kenntnisses des späteren Vulgärlateinischen”, NJAX, XXI (1913), 312-342, esp. 325, has disregarded the role of Osp. niwro.

7 From Hispano-Romance, the generous number of learned -io adjectives, even in semantic spheres where one would hardly search for any, is characteristic of Castilian; contrast sp. tercio with Ptg. terço, fr. tiers < tertiu (a discrepancy which reminds one of Sp. oenio as against Ptg. enca < conia; see UCPL, 14, 1945) and sp. medio with dial. meio < mediu (Menéndez Pidal, Orígenes del español, § 4.8.2; and the data assembled in UCPL, XI, 1954, 114). Necio was a favorite with Juan Ruiz (1oa., 56d, 114c, 159a, 193a, 195r, etc.) who, incidentally, preferred the synonymous mesturco (1544d) to masturco.

8 On osp. locano ‘arrogant’ > ‘handsome, satisfied, strong, luxuriant’, (f) ‘noble, gentle, stately, portly’ and the corresponding abstract locanía ‘arrogance, beauty, gaiety’ ( = Ptg. loucainha ‘pride, elegance’) see UCPL, 1:7 (1947), 248-257, 260-267, 284-288, with references to the near-synonyms orgull-o, -ia and ufania.

9 For details see Thesaurus (BICC), IX (1953-55), 1-138. An 402f.

10 Soberbio is an adjective of old standing (Ruiz, 236b, 238b, 241a, 243d, 245b, etc.; Baráš e Josafá, 1665–7; Confidion del amante, 24r, 50v, 530r, 356r), which likewise had for a niche the verb soberrar ‘to treat arrogantly’ (Ruiz, 819c). The expansion of sobrevi ‘caused sobrevi ‘sudden assault, shock’ (from sobrevi) to cast off a variant sobrevi (Apolonio, Ruiz).

11 The modification of a primitive adjective by a verb derived from it, as in agrio < agria, amar < amor, ampar < amparo, etc., is a familiar construction. Castilian has its own, occasionally given rise to ‘Piachverschleppung’, as in sp. domo < nivro(o) linking beside it. debole < débole (unless the synonym enfermo ‘infirm’ deflected it from its normal course) and in Sp. desnudado ‘naked’ beside fr. nu, it. nudo, Ptg. nu (f. nu), from nedo by contamination of (odén)care ‘to strip bare’; but it seldom has been the sole or prime mover. The agro was both dominant form throughout the Middle Ages; cf. Confidion del amante, 25v and 364v4 (= mod. agrude’er ‘bitterness’

12 The same text contains agramente, 170r, and an agro duler, 260v, and 364v4 (= mod. agrude’er ‘bitterness’

13 agris ‘sweet’, lit. ‘sour(sweet’). The adjective was blanked by agru-ru ‘sourness’ (Esc. Gl.) and agris ‘sour grape(s). It is called ‘oral’, ‘vocal’, ‘oral’

14 aro, etc., note A. Castro’s contribution, p. 155a, on the classification proposed by Rice.: Agrial, it, ‘tasteless, an isolated entry in the Pal. Gl. (§ 460), pertains to the etymologically and mythologically controversial goral, goral family.
It seems best to separate the vicissitudes of amplio from those, no less tangled, of agrio. The comparative AMPLIUS is on record as having frequently furnished an equivalent of ULTRA, PRAETEREA, PLVS and as having, in fact, given rise to the verb (ex)AMPLIARE; Italian, to this day, tolerates ampio 'roomy' < AMPLIUS (cf. Sp. Ptg. ancho 'wide, broad') beside rarer amplio 'ample' (of clothes) < AMPLIUS. Agriar appears too late in texts (ca. 1730) and has remained a verb of too low incidence to warrant the assumption that it displaced OSp. agro from its natural course. If we agree to posit the (limited) productivity in Spanish of the adjectival di- or tri syllabic -io model, agrio may pass as a mere elaboration on agro, eventually adopted on the strength of its pleasing sound contour, and the crystallization of agriar would, in harmony with the record, represent the last link in the chain. Agrio may, in the process, have drawn much collateral support from the protracted coexistence in Old Spanish of vidro 'glass' < VITRÜ (cf. It. vetro, Fr. verre, Ptg. vidro) and vidrio 'id.' < VITREU 'glassy' (cf. cirio 'candle' < CEREU 'waxen'); above all, from the gradual withdrawal of the former before the latter.\footnote{The dialect map of the Peninsula (glass) shows areas of vidro < VITRÜ 'glass' and vidrio < VITREU 'glassy'. vidro, which to this day prevails in Asturias, Leon, Galicia, and Portugal, is analyzable either as a blend of vidro and vidrio or as a reflex of the latter alone, via *vidro, cf. Ptg. limpo, Gal. vidro cast off. vidrio; a contamination of the two variants has yielded bridro. Pre-metaphonic *vidro may be extrapolated from Salm. albedrin 'vidriar' (influenced by albedro < ARBUTIU?), vidriado 'cacharro vidriado', and vidrio 'vidriado'. See M. Klepinsky and V. Garcia de Diego, Inflexion de las vocales en español (Madrid, 1923), § 7:1.}

(5) The problem of the indebtedness of -io to accent-shift is again so multi-pronged and, at the same time, so closely enmeshed with other factors as to require, at the start, a number of separate analyses to foreclose the danger of any hasty generalization. The three cases at issue involve the vicissitudes of sandio, cafo, and reacio.

(a) The continued use of Ptg. sand-eu, fem. -ia 'foolish' (rhyming with jud-eu, -la 'Jew') and internal metric evidence — particularly rhymes — within older Spanish jointly militate in favor of stressing OSp. sandio on the i. After a period of dormancy in the word, one of these quaint voces rústicas eventually consecrated by their emergence in Don Quixote, has been revived and is today again widely understood among the cultured, if hardly readmitted to active use. The average speaker of Spanish tends to read it sándio (in accord with niecío and in semantic contrast distinction to sábbio; one fringe benefit is the wedge thus driven between sandía 'silly girl' and sandía 'watermelon', of Arabic background). A modern commentator is free to strike a puristic pose and to combat this perfectly natural development, but to heap abuse, as does Corinmonas, on speakers favoring sándio and to liken the drift toward this richly suggestive variant to the groundless distortion — in the wake of its revival — of maguer 'though' into magier, to exhibit an utter lack of perceptiveness.\footnote{Except for his repeated gratuitous inveighing ('deformación arbitraria')... "aumentación bárbara") against the perfectly natural stress-shift Corinmonas, DCE, s.v., furnishes an informative entry on sandio. The question of the ultimate origin of OSp. sand., sen-dio (rhyming with fraio, etc.), Ptg. sandeu (one debatable conjecture: SANCTE DULCI) does not directly impinge on the prosodic change here at issue.}

(b) Sp. cafo 'uncouth' (Nebrixa: cafo) shares with sandio the distinction of etymological opacity; moreover, its medial -f- stamps it as exotic. Arabic ancestry has been suspected for over a century; if Dozy's base čari, despite the endorsement it has received from Diez, Cuervo, and Meyer-Lübke, proves unsatisfactory, some such elaboration on Eguzlaz y Yanguas' rival conjecture as that recently offered by Corinmonas (blend of SAFIH 'stupid, shameless' and šARI 'pure') may temporarily be given the benefit of the doubt. But, in granting the word's Oriental parentage, Corinmonas was doubly wrong in minimizing Pedro de Alcala's accent-mark placed unequivocally on the /t/ both because he threw out without warrant unassailable philological evidence and because he failed to do justice to a derivational schema in the process of crystallization. Zafio > zafio involves the hypercharacterization of a borrowing as an adjective, much as a change in the opposite direction (say, rocio > rocio) serves to cut a word's adjectival ties and to trim it as a newfangled substantive.

(c) The uninhibited use of adj. -io as a derivational tool is further dramatically illustrated by reacio 'obstinate', which, judging from its medieval prototype refazio, -hazio, clearly stressed on the i, may parallel Fr. restif and involve an -ivus -io offshoot from refazer 'to do sth. over and over again'. The total obliteration of -h < -f-, even in spelling, calls to mind Sp. acera 'sidewalk', extracted from fasc < facie through the instrumentality of -ARIA, a blurred derivation from which the same consonant has disappeared word-initially.\footnote{The existence — possibly ephemeral — of a variant cafo alongside cafo follows from Ptg. safaro, an unmistakable conger (inculto, vil, desprezável). Ptg. safo, cafo may well be a Castilianism, as is demonstrably tibio; cf. Rom., LXXIV (1952), 145-176.}

(6) Systematic_distillation of the dialectal lexicon could vastly increase the stock of examples and disclose the maximum degree of freedom in the use of the model. Let two illustrations suffice. Extrem. ludio 'leavened' neatly matches Sp. leبدو < OSp. lebedo, from LEVITU, which, in the standard language, involves a normal development neatly paralleled by deuda 'debt' < OSp. debdá < DÉBITA. Leundo contains a rare diphthong, which untutored speakers of Spanish are known, from independent observation,\footnote{I have given up the alternative possibility of extracting refazio from OSp. (faz 'face' < facie. Semantically there is no reference to 'grimacing', while phonologically the derivation from faz is blocked by the consistent use of -i- in preference to -h-, counter to the record of posfazar, later por- and pro-fazar 'to mock', lit. 'to deride (behind one's face = behind one's back)'; see RPh, III (1949-50), 27-72. The inventory of medieval forms includes ra- refazido (General Estoria, I, 599a; II, 151ab and 2298) and refazio, commented upon by Juan de Mena in his 'Glosa a la Coronaciob (ed. 1548, fol. 68'); I owe this datum to my late wife Maria Rosa Lola de Malkiel. Refazo's Gallo-Romance counterpart, Fr. rît (restive), is best associated with respect to not in its general sense of 'staying, remaining' (E. Gamillscheg, EWS, s.v.: 'mit der Eigenschaft des Stehenbleibens'), but in its military use as synonym of RESISTERE ('to be refractory, rebellious'), see Ermout and Meillet, DÉLÉs, s.v. sté (p. 6536).}

18 For statistical data see T. Navarro, Estudios de fonología espanola (Syracuse, N. Y., 1946), 29. On the shift Eva - U- see A. M. Espinosa and A. Alonso, BIDHA, I, 263.}
If one cares to fall back on the pattern of thinking which linguistic geography has developed among its practitioners, one can argue that the inorganic atomic -i- so far observed may have sprouted from the 'epenthetic -i-' peculiar, from the earliest records, to Astur-Leonese dialect speech; some adjectives of the kind we are here surveying (e.g. ludio and pintio) indeed give the impression of mere regionalisms. But while constant fluctuation at dialectal border-lines in the scope granted to -i- may indisputably have furthered the spread of agrío, zafio, etc., such wavering does not of itself explain why -io should have become the distinctive mark of adjectives rather than of some other form-class or of a random collection of lexical items. What matters is that we are here witnessing, excitingly close at hand, the birth of a genuine derivational model so far overlooked by analysts, of a device fit for subtle hypercharacterization.

We have thus so far isolated the following causes, ascertainable or highly probable, behind the crystallization of Spanish -io adjectives: perpetuation of Latin prototypes in -iус, authentic (limpio) or plausibly reconstructed (mustio), or else limited survival, in the vernacular layer, of bases in -eus, -itus (rubio), adoption of learned formations now early (nego, now late (serio), influence of the coexistent abstract (soberbio), reverberations of the autonomous use of the Latin comparative (amplo, perhaps via ampliar), extension of wavering between an old substantive and an erstwhile adjective tendency to elicit it (ve-, vi-dro ~ vidrio ~ agro ~ agrío), accent shift in a word reintroduced into restricted use (sandio) or in one favored uninterruptedly (reacio), restructuring of borrowings from exotic languages (zafio), infiltration of specimens of such dialectal speech as abound in epenthetic /j/ (pendio), free-wheeling use of -io coincident with the elimination of undesirable diphthongs through metathesis (Extr. ludio). Each individual explanation, in some instances aduced to justify the derivation of a single adjective, seems defensible; in all likelihood none is powerful enough to have allowed an observer to predict, with assurance, this particular course of events.

Such a tangled situation gives rise to a number of closely connected questions. If half-way satisfactory explanations culled from the existing inventory of processes are readily available for all or most of the formations, is it advisable to posite the productivity of a new derivational model such as radical-stressed adj. -io? In the event that we accept this model as a contributing force in the dynamics of the language under scrutiny, do the other explanations fall by the wayside, or can two (or more) causes be recognized as mutually complementary and coefficient? Is it possible...
to establish certain general criteria for such causal complementarity and for its opposite, mutual exclusiveness? Does not the assumption of multiple causation, especially if made on a liberal scale, clash with the principle of maximum economy as a yardstick of cogent scientific analysis, to the extent that such parsimoniousness is compatible with expository accuracy and with the complexity of the facts analyzed?

In seeking to provide answers, one must draw a line between mere description and causal explanation. When we state that *lueto* was locally transformed into *luido* and list this process under the rubric metathesis, we simply attach a tag to a shift which, within that dialect, happens to be unpredictable, even in probabilistic terms; not for nothing did Aseolf subsume metathesis under a bundle of seemingly capricious sound changes which he eloquently labeled 'general accidents'.

Our second step is to remind ourselves that, even where probabilistic statements can be ventured, such assessments involve a low degree of predictability offer, in themselves, an invitation to researchers to seek for additional determinants. Assuming that a given historical situation and its peculiar social setting (with special reference to a protracted state of bilingualism) favor the surmise of substratum influence, surely, even the most enthusiastic supporter of such hypotheses will grant that only selected features of sound structure, lexicon, etc. are bound to filter through. It is clearly plausible that certain asymmetries, lacunae, or ambiguities, in short, flaws in the architecture of the receiving language control the extent of assimilation of the ingredients adopted from the donor language. This mutual dependence leads to a sobering realization: though, for temperamental reasons, scholars may be divided into those preferring to operate with external pressures and those hypothesizing internal pressures to the limit of their imaginative power, the actual changes in language, in a numerical instance, presuppose interplays of inner and outer forces.

Our third thought may be directed toward quantification. If, for the sake of simplicity, we argue that the crystallization of all -io formations except those developed from Latin through normal channels involves the convergence of two forces: on the one hand, the agency of an apparently productive derivational model not yet fully identified (Force A) and, on the other, some collateral pressure familiar from earlier inquiries (Force B), we observe that, in the slice of material examined, Force B varies from case to case: B1 (accent shift), B2 (adaptation of a borrowing), B3 (contamination by a related verb), etc., while Force A remains pervasively at work and actually ties together all these minor heterogeneous modifications. The positing of a heretofore unsuspected force — e.g., of an expanding derivational type — gains in plausibility if that force is each time paired off, in a series of complex processes related to one another, with a companion force of distinctly smaller scope. Under these conditions, the newly introduced Force A brackets and underpins a structure that would otherwise suffer from amorphousness and tend to crumble.

The final consideration in weighing the validity of a new factor of causation is whether its agency can be observed, at least occasionally, in isolation. We have seen that for *agrio*, *amplo*, *reactio*, *zafio*, etc. at least one other driving force can be tenta-


tively identified, with widely varying degrees of accuracy. The tidy isolation of even one clear-cut case would add immeasurably to the credibility of any broader hypothesis positing involvement of a new force as a separate ingredient in multiple or complex causation.

II. THREE SUPPORTING EXAMPLES

Let me now weigh the advantages accruing from the assumption of complex causation to the solution of certain problems examined elsewhere in considerable detail, but not yet definitely settled.

A. Alternation of [ay] and [ar] in Hispano-Romance

Of the three cursory discussions chosen for this supplementary purpose, the first, a classic case of irreconcilable disagreement between two equally distinguished scholars, revolves around the alternation of [ay] and [ar] in Hispano-Romance, [ay] being locally an allomorphic member of the phoneme /a/. Of the two disputants, the Romance comparatist E. G. Wahlgren brought to the arena a far better knowledge of cognate languages, his critic T. Navarro a more intimate glimpse of fluid Peninsular dialect usage — a discrepancy in training and exploratory flair which makes their clash of opinions, over thirty years ago, all the more dramatic. Wahlgren was by no means a scholar one-sidedly committed to a favorite idea (or to warring against strawmen and *bêtes noires*), and readily granted that the transformation of a d into an r could (a) in some languages (say, in Italian and in Provençal) represent regular sound shift, a kind of 'rotacism', while (b) it was elsewhere, e.g. in Spanish, set in motion by a subtle interplay of (a) lexical and affixal analogies and (b) sallatory (sporadic) sound changes; but he apparently did not care to reckon with any intermingling or alliance of these two major groups of ingredients. Thus, in dealing with Spanish words (predominantly of dialectal stock), he appealed to lexical contaminiation, as with *badajo* 'clapper (of a bell)', changed into *barajo* allegedly through contact with *baraja* 'pack (of playing cards)', -ar to -uri 24 to the intrusion of a derivational suffix as in (a) Ast. *antroiru* 'carnival' instead of expected *antroidu* < INTROITU, through pressure of -oitr < -ORIU, or in (b) dial. *par-

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24 E. G. Wahlgren, Un problème de phonétique romane: le développement "d" > "r" (= Skrifter utg. av K. Humanistiska vetenskapssamfundet i Upsala, XXVI,14) (1930). T. Navarro's critique of this 250-page monograph appeared the following year in RFE, XVIII, 393-395. For a succinct reappraisal of the material see my article "Estudios de léxico pastoral: *piara y manada*, BH, LIII (1951), 41-80, esp. 61-66; for a subsequent elaboration on the special problem of *mentira*, which I regard as patterned on OSP, *vera*(s) 'truth' < *vira* 'true things' and *jura, vera* 'oath' < *ňura* lit. *rights*, see "Ancient Hispanic verbs* y *mentira*: A Study in Lexical Polarization", RPh, VI (1952-53), 121-172.

25 Additional equations: *ataur < atur-arl, -ule < ataul 'coffin' × bail 'trunk'; corioso < codino 'care' (côte < THIRK to think') × cur-ur, -iso (CURA 'care, pains').
para 'eyelid' < párpad, stand. lámpara 'lamp' < LAMPADA, through association with unstressed -aro, -ara; to the interference of a coexistent infinitive, as in seguidilla beside older seguidilla 'form of stanza' (also 'special air and dance'), and mentira 'lie' beside Cat. mentida 'id.', through contamination with seguir 'to follow' and mentir 'to lie, be false', respectively; to association with a prefix: dial. armiro < ad- miro and armitian < admission,87 and to miscellaneous disturbances classifiable under assimilation (Cloromiro < Clodomiro), dissimilation (paeres < pares < paredes 'walls'), and metathesis (paderón < padenón 'thick wall'). In a small residue of more complicated relationships Wahlgren was willing to recognize a joint effect of the agencies just identified, while stubbornly discarding the intervention of regular phonological change; this slightly liberalized attitude applied to arbolera < arboleada 'grove', Arag. bacarador < baidador 'grassworker', pelarela < -era < -era 'loss of hair', porviera < polviera 'cloud of dust', and veda < vereda 'path, sidewalk'.

The weakest feature of Wahlgren's position is the extraordinary range of diverse phenomena, many of them of an optional rather than obligatory nature, to which he resorts in an effort to elude any appeal to regular sound-shift; one notes, as a result, the strikingly thin representation of each phenomenon in the inventory of determinants. Would it not be more realistic, after preliminary deduction of a few very old cases which must be accounted for in a different context (like lámpara), to posit for the twentieth century a state of widespread fluctuation [-i-][r-], still bidirectional, but clearly pointing toward r as the ultimate victor,88 a situation resembling a sound shift in statu nascendi, i.e., one which may or may not eventuate, depending on the final outcome of the interplay of contending forces? If we agree to view these disturbances as mere symptoms or harbinger of a pending shift, does it not stand to reason that this preliminary scouting and groping — as speakers unconsciously feel their way toward a possible break-through which, once it is a fait accompli, linguists will class as sound-shift — should be directed towards points of least resistance? These are just such points, in the edifice of language, as might cause the existing structure to yield through pressure independently applied by miscellaneous processes, such as metathesis, dissimilation, lexical or affixal analogy, etc. If these heterogeneous causes effect, again and again, the same shift, one has every

87 Lexical and suffixal pressure were jointly implicated in the case of altragerias 'misfortunes' < tragedias (seria, with particular attention to laceria, misteria 'wretchedness'; see A. W. Muntke, Anteckningar, 58). Transfer of the consonant preceding the suffix: cusa-riego 'accompanying the flock, having died on the sheep path' < ciego, after palomario 'domestic' (of pigeons), pinariego 'pertaining to the pine. Transfer of the suffix itself: soleares 'melancholy songs' < soledades (after palom-ares 'doves', pul-ares 'ducks'). On -iego see my monograph in UCPL, IV, 3 (1955), 111-213, and the numerous critical reactions to it; on the interf -aro, -los interjos hispánicos: problema de lingüística histórica y estructural, Estructuralismo e historia, ed. D. Catalán, II (Univ. de Las Canarias, 1958), 107-199.

88 Significantly, Navarro discovered only three instances of the reverse shift r > s. For a critique of the concept of "acoustic equivalence", a category under which most Spanish linguists would subsume the fluctuation for, see my review in LAV, XXX (1954), 128-153 (esp. 142-146) of one of L. Rodríguez-Castellano's Asturian dialect monographs.

B. Hypercharacterization of Gender

The explicit marking of a given morphological category in excess of the traditional norm may be called hypercharacterization. Thus, Latin possessed the category of gender and frequently expressed relevant contrasts with maximal crispness and neatness: FILL-US 'son' ~ -A 'daughter'; BON-US, -A, -UM 'good'. In other contexts the gender was signaled less vigorously, as when certain adjectives merged either their masculine and feminine variants, to the exclusion of the neuter (TRIST-US, -E 'sad'), or all three variants (VETUS 'old'). Since, in the transition to Gallo-Romance, GRANDIS (m, f) 'big, great, tall, lofty' was ultimately split into grand / grâl/ (m.) ~ grande / grâl/ (f.), and VIRIDIS 'green' (m., f.) into vert / vert/ (m.) ~ verte / vert/ (f.), or since, in Vulgar Latin, a pair quite uncharacteristically marked by its endings, such as socer 'father-in-law' ~ SOKR HOTHERS 'mother-in-law', yielded to tidily contoured SOCE(R)U ~ SOCE(R)A (cf. It. suocer-o ~ -a, Sp. suegro-o ~ -a), we can safely infer from these changes a more pronounced trend toward hypercharacterization of gender.

In a few instances this trend seems to be at work alone, unblurred by interferences or coincidences, as when OSP. cuchar (f.) 'spoon' < Gr.-Lat. COCCUS LEARE was transformed into mod. cuchar — under sanitary laboratory conditions, as it were. In most cases there occurred a splicing of this tendency with others, liable to separate isolation. Thus, if VETUS, -ERIS, alling from inadequate marking of gender (hypercharacterization), was replaced in some varieties of provincial Latin by VETULUS (cf. It. vecchio, Fr. vieil), in others by VETERU supported by VETERANU (OGAL.-Pigt. vedro, OSP. vefro, cf. topon. Murviedro, lit. 'ancient wall'), in yet others by a cross of VETULUS and VETERU (cf. vieio, judging from its erratic diphthong, as against, say, REGULA 'rule, bar, lath' > Sp. reja 'grate'), one must not ascribe this complex reshuffling solely to a recoil from defective marking of the gender: affixation and inflection may also have shared heavily in the process. Clearly, in VETULUS the newly awakened fondness for diminutives was likewise operative, while in VETERU one witnesses the concomitant intrusion of a rival declensional paradigm: compare PAUPER, -ERIS 'poor' with MISTER, -I 'wretched' (or TENER, -I 'tender') and observe the contrast between Sp. Ptg. pobre (m., f.) and It. povero-o, -a — and the parallel contrast between Sp. Ptg. alegre (m., f.) and It. allegro-o, -a, the common starting-point being AL-ACRE, -ICRE 'excited, lively'.

The analyst can fruitfully apply this general approach to one close-knit sector of the Latin lexicon viewed in its transition to Romance, namely the zoonyms.89 In this domain, the marking of the animal's sex through gender was initially kept at the barest minimum, except — understandably enough — in the case of certain

89 For details I refer to my above-mentioned article, "Diachronic Hypercharacterization in Romance", esp. to pp. 5-16, devoted almost exclusively to names of animals.
domestic animals, where the male and the female of the species provide radically
different services (BOS vs. VACC, ASIN-US and ASELL-US vs. -A, CAPER vs. CAPRA, etc.).
At the outset, LEO ‘lion’ and LUPUS ‘wolf’ were, consequently, ambigenic, with
MASCULUS and FEMINA added at rare intervals for incidental emphasis on the sex,
much as are bull (buck) and cow, cock and hen, he- and she- in English, or, for that
matter, -bock, -kuh, and -kalb in German. So deeply rooted was this usage that,
when the Romans coined LUPA, it first denoted only the ‘harlot’; chronologically,
then, its figurative use took precedence over its basic one. Gradually, the scope of
LUPA was widened to include the meaning ‘she-wolf’; also, LEA ‘lioness’ came into
existence to contrast with LEO (which, by the same token, was referentially narrowed
down). Before long there developed a vogue for consistently separate designations
of at least those male and female animals whose behavior lent itself to ready obser-
vation.

Now, it is noteworthy that wherever lexical innovations proved successful in
Romance zoonymy, regardless of the specific justification of each replacement, one
recurrent fringe benefit was the sharper delineation of the gender (and sex). Thus,
for ambi-generic CAN-ES or -S ‘dog’ we find in Spanish an exotic substitute, perro,
flanked by pera ‘bitch’; in near-by Portuguese CÃO < CANE has survived in close
association with cadela ‘bitch’ < CATULA, -ELLA, orig. ‘female puppy’; CATULUS,
not necessarily cognate to CANIS, was eventually drawn into the latter’s orbit. French
offers a third solution of the problem, displaying chiende alongside chien, much as,
in a Frenchman’s world-view, the lione shares the lair of the lion. The lexical and
grammatical vicissitudes of the cat’ were somewhat different: the original designa-
tion fÉLÊS was feminine, like VOLFES ‘fox’ and MELLÊS ‘marten or badger’, and the
reference was initially quite vague as regards both sex and species; conceivably hints
of ‘wild cat’ and ‘weasel’ were both included. The introduction of CATISS (GATTUS),
a word first attested in the 4th century, in all likelihood marked three events: the
adoption of a new label, the importation of a hitherto unknown species, and the
acceptance of a new social institution (domestication of the mouse-chasing pet);
but — even more important to us — it coincidentally provided a welcome means
whereby speakers could instantly tell a male from a female, a discrimination for
which there apparently arose a demand even outside Romance (cf. G. KATER ~ KATZE,
R. kot ~ koška). Lat. LEFUS, -ORIS ‘hare’ was ambi-generic, a state of affairs
preserved in Italian; the congener languages have devised various ways and means for
neater sexual differentiation, e.g. Rum. iepr (m.) ~ iepruric (f.), Fr. lièvre (m.) ~
ha(e) (f.) < Gmc., Sp. lebr-on (m.) ~ liebre (f.). One can almost indefinitely increase
the number of illustrative examples; every single one of these elaborative substitutes
may be amply justified, I repeat, in terms of such phenomena as lexical borrowing,
orchestrational attachment of augmentative or diminutive suffixes, analogical
innovation, etc. But if the student of causation succeeds in isolating one consistently
emergent by-product of all these multifarious processes — namely the more explicit
marking of gender and sex — he is entitled to posit for the agency effecting the change

the status of an autonomous co-determinant, because this force ties together untold
developments which would otherwise appear disparate, meagerly exemplified, and
almost random. The pointed structuring of change need not be confined to phono-
emics, where it was first traced out with such elegance.

C. Consonantal Dissimilation

Had a more generous allotment of space been at my disposal, the pièce de résistance
of the discussion might well have been consonant dissimilation at a distance, with
special reference to Romance, a notorious crux of explicative linguistics. If one
disregards A. F. Pott’s inconclusive pioneering essay (1833) geared to Indo-European,
a probing which stamped the phenomenon as capricious and sporadic, the event
that can best serve as the starting point for the entire debate is the publication of
M. Grammont’s doctoral thesis (1895). That monograph involved an attempt to
elevate dissimilation so delimited to the rank of a sound law, or rather of a set of
stringently formulated sound laws, cross-temporal and supposedly binding on all
speech communities. Grammont’s thesis, and a major complementary article (1907)
from his pen, provoked a flurry of formal reviews and lively ‘prises de position’ at
a juncture when neo-grammarian theory and practice were approaching their
all-time crest. Among the participants, A. Meillet wholeheartedly approved the kernel
of the book, skipping details; C. Salvioni evinced skepticism regarding Grammont’s
rigid ‘laws’; G. Paris spiced his plaudits with an ironic remark on the intricacy of
these laws; M. Niedermann gained from the author’s treatment the distinct impres-
sion that a common sound law was at issue; a realistic A. Thomas observed in action
such lexical complications as seemed to make havoc of Grammont’s severely phrased
laws; K. Brugmann liberally assessed the scope of dissimilation and invoked psychol-
ogical motives (specifically, the ‘horror aequi’) which obviate the need for any
regularity of recurrence; in contrast, H. Sechardt resolved the problematic changes
arrayed by Grammont into a string of etymological biographies. E. Schopf, in his
study of ‘Fernwirkungen’, endorsed Grammont’s doctrine in theory, without quite
so zestfully applying it in practice. W. Meyer-Lübke sought to reconcile the acknowl-
edgment of dissimilation as a major shaping force in evolution with demands for
individual attention to lexical details. L. Gauchat, likening the salutary change in
question to mutations familiar to the botanist, warned against indiscriminate use of
the facile label (‘moyen commode d’explication’).

Fresh vigor was injected into the debate by Rebecca R. Posner’s stimulating Ox-
der dissertation, Consonantal Dissimilation in the Romance Languages (1961), a
book which had the merit of eliciting a bold counter-proposal from K. Togeby only

For a rather full and very perceptive bibliographic survey see K. Togebey, ‘Qu’est-ce que la dissimilation’, RPh, XVII (1963-64), 642-667; cf. the following comments and qualifications. One
could add to Togebey’s roster M. Grammont’s third and final pronouncement in Traité de phonétique,
reserves the separate label ‘differenciation’.
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two years later. Like Grammont, Posner believes in the survival of the fittest as the
overriding dissimilatory principle; but she skillfully nuances her predecessor’s teach-
ings by taking into account phonemics, paying attention to the frequency (incidence)
of sounds, laying down more carefully distilled conditions for regressive effects,
discriminating between the central and the peripheral parts of the lexicon (the latter
include technical terms and the onomatopoeic), and distinguishing, especially as
regards the sequence of two r’s, between individual languages.31

Identifying himself, at least in part (pp. 647, 652), with the thinking of such earlier
Danish linguists as C. Møller, J. Bykskov, and K. Sandfeld, and amplifying on classic
pronouncements by Schuchardt, Gilliéron, and Meyer-Lübke (p. 651), Togey offers
the readers of his ambitious critique of Posner’s monograph a kind of sparkingly
phrased counter-theory. The kernel of his proposal, brought to bear on Latin and
Romance material, may be epitomized thus:

(a) Consonant dissimilation operates either (a) with the precision of a genuine
’sound law’ (e.g., k → k’); preventively in the distribution of such suffixal doublets
as Lat. —ARIS, —LUM-/KUM, Fr. —eil/-eul, —erer/-eler; pp. 648f.), or (β) sporadically,
a situation which forces the analyst to use the term, at most, as a descriptive tag
(“une étiquette sans valeur”) and in fact invites its elimination from any causal argu-
ment (p. 650).

(b) Inquiries into dissimilation revolve around three fundamental problems:
the causation, (β) the direction, (γ) the outcome of each shift. On the first of these
problems, we learn, there prevails a good deal of confusion; the second was attacked
resolutely, but less than successfully, by Grammont, whose twenty ‘laws’, despite
their sophistication, are vulnerable to criticism; on the third Posner has cast a ray
of light.

The hard core of Togey’s own reflections is to be found in his repeated insistence
on the dispensability of any assumption of a consonant’s dissimilatory change or
disappearance if some other explanation, equally plausible, can be offered.32 An
impressive string of such preferable rival explanations is next displayed in consid-
erable detail (pp. 653–664), the possibilities varying from a medieval scribe’s lapsus
calami and an early etymologist’s faulty base to lexical borrowing, hyperurbanism,

31 In a similar vein, the late Alf Sommerfelt, in a possibly unpublished lecture given a few years
ago at Stanford’s Center for Advanced Studies in Behavioral Sciences, used samples of Celtic and
Norwegian material to demonstrate that the agency of ‘saltatory shifts’ is, in every language,
intimately interwoven with the specifics of regular phonological change.

32 “Car on ne peut pas se contenter de la formule paradoxale de R. Posner qui veut parler à la fois
de cause et de hasard. S’il faut chercher ailleurs la cause de ces changements, l’explication par la
dissimilation devient superficielle” (p. 651); “S’il faut chercher pour chaque mot une explication par
particulier du résultat de la ‘dissimilation’, cette dernière cause pourrait, à elle seule, expliquer la
dissimilation, qui de nouveau devient, en tant que telle, superficielle” (ibid.); “Si le changement s’explique
dans ces cas sans une action dissimilatrice, celle-ci devient illusoire” (p. 652); “Même les mots ré-
fractaires à une autre explication ne peuvent prouver l’existence d’une influence vraiment dissimi-
latrice, car à côté d’eux on trouvera très souvent d’autres mots présentant le même changement de
phonème sans qu’il y ait dans le voisinage un phonème identique qui aurait pu exercer son influence”
(pp. 663).

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onopatopoeia and expressivity, crosses within the same word family, blends with
some other word family, folk etymology, suffix or prefix change, agglutination or
deglutination of the article, and the like. What adds a touch of drama to this dis-
cussion, aside from the author’s general mastery of linguistic grand strategy and
from his exemplary Pan-Romance versatility, is to see a scholar reared in the tradition
of radical structuralism and, to this day, steeped in it, side, for once, with such cham-
pions of the opposite extreme as Schuchardt and Galliéron.

Despite my great admiration for Togey’s spirited advocacy of a deflated assess-
ment of consonant dissimilation, I cannot entirely subscribe to his views insofar as
they concern the theory of causation. Preferring at this point to refrain from any
formal commitment regarding a matter which has proved so vexatious to some of
our discipline’s keesten minds,33 let me provisionally state this: From the fact that
a phenomenon, while definitely identifiable, is seldom found in isolation I would infer
that this isolable phenomenon usually operates in conjunction with others. Once
the common occurrence of multiple causation is granted axiomatic, there will
be no need to proceed to radical extirpation of any suspected redundancy.

To cite concrete instances, Togey is at his most persuasive where he corrects the
geographic trajectories of certain words traced hazily by Posner, as when he argues
(p. 654) that it is not Fr. caramel which must be confronted with calamelli, but
the French word’s immediate prototype, Sp. caramel ‘lollipop’. Similarly, Fr.
(dial.) coronel ‘colonel’ reflects, in its central pillar, the corresponding phoneme of
the trans-Pyrenean cognate; It. gonfalone and Sp. gonfalon ‘(ancient) banner’ prove,
upon closer inspection, to be mere Gallicisms (Fr. gonfa-lon < Ofr. -non), etc. In
other cases, possibly more numerous, Togey’s stimulating alternative hypotheses
lead to a richer orchestration of the earlier analyses rather than to their complete
abandonment. Thus, in semi- or, better, almost-learned Sp. plegaria ‘prayer’ <
precaria (p. 655) the dissimilation, invoked by Grammont, seems to be the decisive
force behind the withdrawal of the first r in favor of l, but plegar ‘to fold’ < plicāre
may have been, on the semantic side, a contributing factor (by suggesting genu-
flexion). Furthermore, the switch in Spanish from an older, rustic form pregar ‘to
fold’ (preserved in Portuguese with a more advanced scale of meanings: ‘to nail,
fasten, fix’) to the socially more elegant variant plegar created an ideal setting for
the simultaneous replacement of pregaria by plegaria. Our attention, then, is drawn
to an ensemble of circumstances, by no means mutually exclusive: (1) a latent
dissimilatory trend, (2) a semantic or imagierial bridge, (3) false regression, i.e., a
typically socio-linguistic reaction. Each single ingredient of this amalgam is isolable
and can be charged with the full burden of responsibility for the crystallization of
plegaria, but it is the joint momentum that most satisfactorily explains the outcome.

In a way, the aggregate of causes relates to a single cause as does a phoneme to one

33 Notoriously weak and hesitant is L. Bloomfield’s treatment of sporadic sound change in his
book Language (1933); see Chap. 21, § 10.
of its distinctive features, except that it is uncertain whether the subtraction of one cause would radically alter the total picture.44

To conclude: The prevalent notion of unicausality needs thorough revision much as did until recently the long-accepted belief in dominant monolingualism (or, for that matter, as did the earlier typological classification of languages on the basis of a single structural characteristic). By starting out with the expectation of overwhelmingly plausible pluricausality we stand a chance of reaping two major benefits: In terms of improved cognition, we shall do fuller justice to the complexities of reality, and in terms of academic tone and scholarly climate, we shall eschew that stridency of debate which, in the case of strict alternatives, the stern demand for a partisan choice has invariably carried with it, to the detriment of a serene and balanced appraisal. To supply just one example: The bitter controversy surrounding the postulated regularity ("Ausnahmslosigkeit") of sound change might have lost much of its acerbity and dogmatism if heavier emphasis had from the outset been placed on the fact that ordinarily the 'sound law' describes but one ingredient (say, $x$) in the total situation at hand (say, $x + y + z$). If this is so, the law 'works' when $y$ and $z$ each equal zero, i.e., when there occurs no disturbance.

It remains to be seen whether, on balance, the principles of linguistic etiology lend themselves to encoding in a rigid sequence of statements or formulas, approximately along the lines selected for a different purpose by the late L. Hjelmslev in his *Prolegomena* and by some of the younger reformers of description, or whether a looser, discursive presentation, of the kind favored in historical research, is to be preferred as more germane to the analysis of events.

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44 An analysis in miniature form of the four problems here outlined enters into my presidential address "Linguistics as a Genetic Science", to appear in *Language*. 

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BÉRITUDE MÅLBEGG

RÉFLEXIONS SUR LES TRAITS DISTINCTIFS ET LE CLASSEMENT DES PHONÈMES

Les premières découvertes de phonétique acoustique dues au sonographe et présentées au public linguistique par Potter-Kopp-Green (*Visible Speech, 1947*) et par Martin Joos (*Acoustic Phonetics, 1948*) furent une véritable révélation aux yeux de beaucoup de phonéticiens qui se sentaient de moins en moins à l'aise avec la description traditionnelle articulatoire. Les sonogrammes semblaient résumer et confirmer des connaissances déjà entrevues dans le travail remarquable de Stumpf (*Die Sprachlaute, 1926*) et reconnues dans les spectrogrammes obtenus à l'aide du 'Tonfrequenzpektrometer' de Siemens,1 et combler ainsi les lacunes dans les résultats, pour l'époque remarquables, de par exemple Gemelli, Håla et Sovijärvi. Le livre de T. Chiba et M. Kajiyama *The Vowel* (1941) ne fut le plus souvent connu des phonéticiens que longtemps après la guerre. L'énorme variation des faits articulatoires découverte grâce à la perfection des moyens d'analyse physiologiques et visible déjà dans les importants résultats de E. A. Meyer (*Untersuchungen über Lautbildung, 1910*, et autres publications), prouvée de façon définitive par O. Russel (*The Vowel, 1928*), avait enlevé la base à une phonétique qui, chez les anciens de l'école dite classique (Passy, Sweet, Sievers, Storm), avait été fondée sur une analyse inconsciemment structurale et exprimée par une interprétation simpliste de faits articulatoires mal connus (observations sur soi-même avec le fameux petit miroir du phonéticien).

Les nouveaux résultats acoustiques montraient la possibilité de remplacer la description articulatoire par une description acoustique (en termes de formants) en meilleure conformité avec ces unités auditives et structurales qu'on appelait traditionnellement 'sons du langage'. Si un [i] pouvait être prononcé de différentes façons (par exemple avec une distance entre le dos de la langue et le palais qui variait avec l'ouverture de la bouche),2 il gardait toujours une structure acoustique qui garantissait son identité auditive. Le spectre définissait la voyelle.

Telle était la situation quand je commençai, en 1949, mon étude sur le classement.

1 En réalité, une base remarquablement solide avait déjà été donnée par les grands précurseurs dans le domaine de l'acoustique des voyelles: Helmholtz, l'Abbé Rouscelot et Pipping.
2 Pour d'autres exemples, voir l'article cité ci-dessous.