

Nasalization in Northern In Italy: Syllabic Constraints and Strength Scales as Developmental Parameters¹

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The nasals did not begin to claim their fair share of linguistic interest until the 1970's.² And even then only a small portion of that attention was directed along the diachronic axis. Long recognized the stables of consonants, the nasals were perhaps in consequence the least apt to arouse historical curiosity. (The sibilants are like quicksilver by comparison [especially from a Romance perspective], and thus have come to boast a far vaster literature). Still less have they been examined from the vantage of phonologic strength scales, and never so within the framework of metrical or syllabic phonology. This paper will integrate both these latter approaches in seeking to account for several erstwhile anomalies in the northern Italian treatment of Latin nasals.

¹ Presented at the Second Cortona Phonology Meeting, organized by the Scuola Normale di Pisa (2-4 April 1990). I wish to thank Arturo Genre and Lorenzo Massobrio who, by their conversations and hospitality at the Archivio dell' *Atlante linguistico italiano*, nurtured this project in its formative stages. It goes without saying that they are in no wise responsible for errors of interpretation. Indispensable nurture of a more material sort was provided by the National Endowment for the Humanities (Grant FA-27462), the American Philosophical Society, and the U.C.L.A. Academic Senate (Grant 3050) for which I remain very grateful. I fear I have not answered all of Bruce Hayes' and John Trumper's queries, although I hope readers will encounter fewer stumbling blocks than would have been the case had they not taken the time to glance through an earlier draft. My debt to Arianna Uguzzoni and Glauco Sanga remains an open account—once again they spotted errors and advanced emendations. After completion of this article, Carmen Pensado, unable to attend the Cortona meeting, sent me (p.c. 16 June '90) a searching critique which will appear in Chap. 7 of a forthcoming monograph. Unfortunately, I must address our differences of opinion (e.g., regarding greater resistance to forward nasal transfer in atonic syllables and in intervocalic position) in a monograph also still to appear.

² Ohala's *Nasography* experiments (1971, 1972), Hyman's work on the Kwa group of Niger-Congo (1972), and Chen's astute Chinese dialect comparisons (1973, 1975) form a prelude to other California linguists' contributions, whose *Nasaldef* (Ferguson et al. 1975) stands with Anderson (1976) as a landmark of rekindled interest in the topic. (Ohala 1975 provides a rich list of references; cf. further Rochet 1976.) Thereafter, at Padua, Farnetani produced two conspicuous syntheses (1979a, 1979b) in quick succession.

TECHNICAL NOTE: a subscript titulus (*tilde*) indicates light nasalization from a phonetic vantage, a vertical strike | indicates syllabic juncture, whereas a colon shows the foregoing segment is long. A smaller vertical strike, when subscript, stands for a syllabic nasal (*ŋ*, *ŋ̣*, etc.); subscript *o* indicates voicelessness. A limited number of liberties have been taken with the various sources cited to make them intelligible to a contemporary reader; e.g., *jod* is here *j* (not *y*), although *ȝ* of the originals has not been converted to *y*; the palatal nasal is *ɲ* (save where an early graph has peculiar interest or figures as part of a standard orthography, e.g., *gg̃* or *ng̃* for [ɲ | ɲ]) and the velar is *ŋ*.

bank. Documented from the 14th-15th C. in the Bergamask grammar fragments published by Sabbadini (1904-05: 286) (e.g., §26 *sceptla* = simplex, §36 *provetta* = provincia) and in the 16th-c. poet Giovanni Bressano (ap. Lorek 1893: 30, 32, e.g., *cap* 'campo', *ropili* 'rompi', *tep* 'tempo'), it was recognized as a uniform change by Tempini (1908: 26) in the Val Camonica,⁵ and Battisti (1913: 32-3) for the Valvestino.⁶

2.2. Erosion of closure.

Within the class of caudal nasals, the optimal occlusive aspect may similarly be attenuated by occurrence before a fricative. Combining all of the foregoing, it is easy to see why a nasal coda before a voiceless fricative is more prone to erosion than its congener with contextual sonority reinforced. Perhaps Latin affords the most familiar example,⁷ documenting in its archaic phase numerous *composita* where a long vowel corresponds with a short vowel and nasal coda, e.g., *cēsōr* for *CEŊSŌR*, *cofeci* = *CONFĒCĪ*, *cōsol* = *CONSUL* (Lindsay 1897: 315),⁸ which run up till the 4th-3rd C.s B.C., when a conservative "reazione antisabina"⁹ set in, stigmatizing them as plebeian and rustic¹⁰ and thereby prompting a restoration of *n*: (*α*) initially wherever its absence could be inferred synchronically, e.g., *centiens* > *CENTIĒS* → *CENTIENS*, *consiāre* > *CŌSTĀRE* → *CŌNSTĀRE*, *deciens* → *DECĪES*

⁵ Where a caudal nasal "tace anche complicato, se gli tien dietro una esplosiva sorda," e.g., *biaka* 'bianca', *branca* 'branca', *homcha* 'semenza', *kap* 'campo', *kerédha* 'sicurtà', *krupa* 'compra', *peba* 'pensa', *put* 'ponte', *puta* 'punta', *tat* 'tanto', *tep* 'tempo', *vet* 'vento', *zet* 'gente', versus *font* 'fondo', *gianda* 'ghianca', *bangiot* 'singhiozzo', *hindik* 'sindaco', *manenda*, *mazenik* 'maggengo' (sc. fieno), *ombra*, *onda*, *picom* 'piombo', *skāndol*, etc. The intermediary phase is suggested by various Romanisch dialects which contrast weakening to velar *ŋ* before voiceless stops with preservation before voiced, e.g., Bravuogn [= Be-gün on Albulia] *deŋt* 'tooth', *šapf* 'I sing', *veŋt* 'wind' versus *grōt* 'big', *vent* 'I sell' (for a synchronic analysis, cf. Kamprath 1987: 150, 160-1).

⁶ Who noted for *m* "...Entnasalierung, nicht in Auslaut aber vor stimmloser Tenues," thus *CAMPU* > *kāp*, *SEMPEP* > *sēpar*, *TEMPU* > *tēp*, but *COLUMBĪ* 'doves' > *kolombā* 'popcorn', *CU(M)BITU* > *gōmbet* 'elbow', the same as the contrast between *CONCHA* 'shell' > *kōkō* 'hazelnut', *DENTE* > *dēt*, *UENTU* > *vet*, and *FUNGU* > *fōŋk*, *MUNDU* > *mont* 'clean', *SANGUE(N)* > *sangu*, *UENDIT* > *vent* 'he sells'.

⁷ But the tendency was no less present in Greek, Hindi, Lithuanian, Osco-Umbrian, Delaware [= Lenape]—for the latter, cf. Vogelín (1946: 134) (and de Chene 1979: 98), e.g., *čūšās* 'bird' but *cu:čūšat* 'little bird'. In early Greek, divergent realizations of **-oms* were occasioned phonosyntactically, according as to whether the *-s* formed part of the coda or, before a word-initial vowel, was resyllabified as an onset thereby leaving *n* less exposed to erosion; e.g., Cretan *ρωγ ελευπερος* versus *ρωγ xadepawz*. Thereafter "les divers dialectes ont généralisé l'une des deux formes. L'ionien-attique ne connaît plus que *-owz*... issue de *-owz*... l'arcadien, le thessalien et une partie du dorien ont généralisé *-oz*" —Meillet & Vendryes (1927: 132).

⁸ Cf. likewise such reconstructions as **egmons* > *equos* 'horses', **hortons* > *hortos* 'gardens' (Leumann 1977: 112, 145).

⁹ Devoto's term (1940: 97-107) which might be stripped of its specific ethnic implication and made more sociolinguistic and class-oriented.

¹⁰ Although Velius Longus (ap. Keil VII, 78) reports that Cicero on occasion forsook *-ns* as a peccant affectation and "libenter dicebat *foresia*, *Megalesia*, *hortesia*" (for Classical *-ENSIA*)—Lindsay (1894: 69).

→ *DECĪENS*, *dens* > *DĒS* → *DĒNS*, *insānus* > *ĪSĀNUS* → *ĪNSĀNUS*, **nowiens* > *NOUĪĒS* → *NOUIĒNS*,¹¹ and (*β*) subsequently, as a hypercorrection, well beyond any etymological bounds, e.g., the northern Italian *Appendix Probi* (Bobbio, 8th C.?), besides recommending *ANSA non asa* (76) and *MENSA non mesa* (152), reproves *infimenatus* for *EFFEMINĀTUS* (125), *formunsus* for *FORMŌSUS* (75), *Herculeus* for *HERCULĒS* (19), *occansio* for *occĀsĪŌ* (123),¹² Germanists are familiar with this differential development from old Anglo-Frisian, old Norse, and old Netherlandish, not to mention modern Swiss German.¹³ Compare such cognates as:

Gothic	Old High German	Old English
<i>anþar</i>	<i>andar</i>	<i>ōþer</i> 'other'
<i>fiṃf</i>	<i>fiṃf</i>	<i>fiṃ</i> 'five'
<i>gansu</i>	<i>gans</i>	<i>gōs</i> 'goose'
<i>munþs</i>	<i>mund</i>	<i>mūþ</i> 'mouth'
<i>tanþu</i>	<i>zand</i>	<i>tōþ</i> 'tooth'
<i>uns</i>	<i>uns</i>	<i>ūs</i> 'us'

¹¹ In this conflation of variants, the long vowel, resulting from the nasal's earlier evanescence, was maintained. Cicero (*Orat.* 159) mentions this peculiarity for the prefixes *CUM-* and *IN-* before *s* and *f*, e.g., *CŌNSŪĒIT*, *CŌNFĒCĪT*, *ĪNFĒLĪX*, *ĪNSĀNUS* (Leumann 1977: 112, with the sociolinguistic motive of the process clarified by Allen 1965: 29, cf. also Bichakjan 1986: 4). The subsequent absorption of *s* in *TRĀDŪCŌ*, *TRĀLOQUOR*, *TRĀUEHŌ*, etc. (from **trādūcō* < **trādūcō*, etc.) may have rendered such compounds sufficiently opaque as to thwart reanalysis; thus they survived beside *TRANS-*. For the original nasalization, recall that such prefixes were not unstressed in archaic Latin. Nominatives of the type *DĒNS*, *GĒNS*, *GLĀNS* were brought back into line with the underlying root. Phonosyntactic or Sandhi variants would have admitted of the easiest readjustment, but still the 2nd-c. grammarian Flavius Caper (ap. Keil VII, 106, 17) warned "in *Siciliam* dicendum, non *Siciliam*... numquam sine *n* pronuntiatu" —cit. ap. Lindsay (1894: 121).

¹² For earlier examples, e.g., *HERENS* for *HERĒS*, *PARĪENS* for *PARĪĒS*, *SPECĪENS* for *SPECĪĒS*, *TURRĒNS* for *TURRĪĒS*, cf. Lindsay (1894: 69), Niedermann (1953: 155-6), Leumann (1977: 145-6), Kiss (1972: 31). And *formonsus*, *occansio*, *thensaurus*, *Morse* 'Moses' are present in the *Itala Bible* (or *Vetus Latina*, 2nd-3rd C.s)—Rönsch (1875: 458s). Regarding the loss of occlusion before *f*, Josselyn (1900) noted that his Emilian and Umbrian informants for Italian failed to make any closure until *f* for 'infante' (= [fante]) and Panconcelli-Calzia (1904: 87) observed this to be a more general trend: "Observez le tracé du mot *tonfo*... Suivez la ligne de la bouche, vous trouverez des vibrations [orales] jusqu'à *f*. Pas de fermeture, pas d'*nf* La ligne du nez révèle une nasalité uniforme. L'*n* a été absorbé par l'*o*. On peut transcrire le mot [tōfo]." John Trumper (p.c.) alerts that the same want of nasal closure before *sf*, no less than *f*, characterizes Veneto speakers. For the differential development of fricatives versus stops, note how in conservative north-central Sardinian, against a background of homorganic nasal + voiceless stop preservation (*nap*, *ni*, *ŋk*) versus nasal loss preceding voiceless fricatives (*INFER(N)U* > *iffēru*, *INFLARE* > *uffrare*, **in* + *furnāre* > *iffurnare*, *CŌNSOLARE* > *cosolare*, *Sp. decanso* 'rest' > *diskāssu*, etc.), it is only in Nuorese, where **nis* (< *nj*/c) became and remained a fricative (*β*), that *n* was similarly eroded, e.g., *ABSINTHU* 'artemisia, wormwood' > *a(β)βē(β)ðu*, *LANGEA* 'lance' > *lā(β)ða* 'wound' (semantically deverbal from *landare* 'to wound with lance'—*DES* 2, 11), *LAURENTIU* (hagionym) > *Larē(β)ðu*, *LINTEOLU* 'linen sheet' > *le(β)βē(β)ðu*, **zinzala* 'mosquito' > *β(β)βala*, versus general Logudorese *attēntu*, *Larēntu*, *lentōlu*, *tintula* (data from Wagner 1941 = Paulis 1984: 185, 197, 296-7, 300, and cf. Contini 1987: 138-9 & maps 16-7, 40).

¹³ For the latter, cf. *feister* 'Finster', *bāf* 'Hant', *sāf* 'Sanft', *triche* 'trinken', *tāchel* 'dunkel', *zeise* 'zinsen' (Behaghel 1916: 235). For further ex.s and other locales, cf. Stütterlin (1924: 278).

The frequent concomitant of vowel lengthening appears to be the phonologization of a widely-observed phonetic tendency: i.e., the forward spreading of nasality results in the vowel nucleus' assumption of the timing slot of the former nasal consonant (VN > VV). (Recall that regardless of their historical sources, nasal vowels are ipso facto longer than their oral counterparts). Turning to the length of the nasals themselves, numerous pioneers had pointed out that they were longer before a sonorant than before a surd, e.g., Sweet (1877—for such English pairs as *spend*: *spent* [no. 99]),¹⁴ Passy for *Les sons du français* (1887: pl. 124). Within Italo-Romance, where the same tendency obtains, from a compensatory, syllabic vantage, it is axiomatic that the shorter the nasal, the longer the vowel. Thus Fava and Magno Caldognetto (1976: 57-8) ascertained that vowels before N + C[-voice] were as long as if in an open syllable, whereas N in the environment N + C[+voice] constituted a genuine coda, i.e., vowels were there as short as in a closed syllable. E.g.,

NC[-voice]	NC[+voice]
<i>campi</i> 112.8/45.1 ms.	<i>gambe</i> 97.7/142.8 ms.
<i>tempo</i> 120.3/75.1 ms.	<i>fondo</i> 75.1/150.4 ms.
<i>cento</i> 112.8/52.6 ms.	<i>lungo</i> 45.1/75.1 ms.

Uguzzoni (1975: 60-1) had earlier established that, from an historical perspective, Emilian treats mid-vowels followed by NC[-voice] as if in an open syllable, whereas those before NC[+voice] evolve as if in a closed syllable; for ex.,

nel dialetto di Benedetto [Pavullo nel Frignano (MO)] gli sviluppi divergenti delle vocali seguite da nessi nasali eterofoni [i.e., -voice] rispetto a quelle seguite da nessi nasali omofoni [i.e., +voice] si possono vedere chiaramente in questi esempi: (*i*) *siŋk* 'cinque' / *šëŋka* 'cinghia'; (*u*) *ün*t 'unto' / *önz* '(egli) unge'; (*e*, *è*) *dënter* 'dentro' / *vänd* '(egli) vende', *tëmp* 'tempo' / *setämber* 'settembre'; (*o*, *ò*) *prünt* 'pronto' / *önda* 'onda', *kürjka* 'conca' / *löŋg* 'lungo'; (*a*) *tënt* 'tanto' / *gränd* 'grande' (also cf. earlier 1971: 124, and, for more data from nearby dialects, 1979: 6-9).

In Romagnol likewise this distinction must have existed; for ex., in Bolognese, where however it is currently being effaced as the vowel system is compacted through mergers:¹⁵

¹⁴ In pairs such as *meant*: *meant*, *joins*: *joint*, *pens*: *pence*, Mayer (1903) determined the average duration of N before C[+voice] to be 194 msec. versus 122 msec. before C[-voice]—cit. ap. Jespersen (1948: 449). For rapid, informal English, Ferguson (1975: 183) transcribed *camp* as [kæp] versus *hand* as [hænd]. Note further that the anticipated suspension of sonority which shortens a vowel preceding a voiceless coda operates in English across a nasal + obstr. cluster, e.g., the same opposition observable in *add* [æ:d] : *at* [æt], *bad* [bæ:d] : *bat* [bæt] recurs in *and*: *ant*, *band*: *bant*, *send*: *sant*, suggesting an effective devoicing and weakening of the nasal in rapid speech, i.e., [æ̥]: [æ̥t], [b̥t] versus [æ:nd], [b:nd].

¹⁵ Thus ap. Mainoldi (1967: xiii & q.vv.), while for *Coco* (1970: 9n.9, 13n.16), *ai* is a mere socio-generational variant of *a*. This trend may have been present as far west as S.E. Piedmont, if Priocca (CN) *çänt* 'cento', *pučäinta* 'polenta', *surtimäint* 'proposta' [lit. 'sortimento'], *täimp*

V [-high] NC [-voice]
[-low]

däint 'dente'
läint 'lento'
täimp 'tempo'
väint 'vento'
väinj 'vinco'
zäint 'cento'

V [-high] NC [+voice]
[-low]

mända 'merenda'
ränd 'rendo' (vb.)
tänder 'tenero'
zänder 'genero'
tanda 'tenda'
vänder 'vendere'¹⁶

The differing syllabic valence is firmly recoverable in the Engadin; e.g., for Celerina (Schlarigna, Engiadin'Ota), Walberg (1907: 44-5) documented two distinct vowel evolutions according to the sonority of the following obstruent:

CONTRO > <i>künter</i> 'against'	* <i>bründü</i> > <i>brüents</i> 'bronze'
FRÖNTE > <i>frunt</i> 'forehead'	FUNDU > <i>fuents</i> 'farm, ranch'
MONTE > <i>munt</i> 'mountain'	MUNDU > <i>muent</i> 'clean, pure'
PONTE > <i>punt</i> 'bridge'	ROTUNDU > <i>arduont</i> 'round'
UNCIA > <i>ünša</i> 'ounce'	SECUNDU > <i>səguont</i> 'second'
UNGULA > <i>üngla</i> 'fingernail'	SPONDA > <i>špuända</i> 'bank, slope'

IGU > <i>džuf</i> 'yoke'	CURSU(-A) > <i>kuers(a)</i> 'ran'
LUPU > <i>luf</i> 'wolf'	CULME(N) > <i>kučlm</i> 'peak, ridge'
NÖDU > <i>nuf</i> 'knot'	FORMA > <i>fuerna</i> 'mould'
SCÖPA > <i>šku</i> 'broom'	MUSTU > <i>mušt</i> 'must, pommace'
SCRÖFA > <i>šruva</i> 'sow'	TORTA (PANIS) > <i>tuarta</i> 'cake'

the same as:

(Note that *u* in open syllables likely represents the coalescence of an earlier falling diphthong **ou*, which left its 'hardened' trace in other contexts, e.g., *CÖTE* > *kuket* 'whetstone', *FLÖRE* > *fluker* 'flower', *HÖRA* > *ugra* 'hour', *SPO[N]SA* > *špägza* 'bride'

'tempo' genuinely contrast in the vernacular with *lengua* 'lingua', *vende* 'vendere'—cf. Toppino (1902: 522n4 et passim). For its clear presence west of the Panaro, cf. Uguzzoni's corrections (1975: 68-83) to Rohlfis and Schür. At Benedetto (Pavullo) *kë:mp* 'campo', *pië:nta* 'pianta' (reflecting an early lengthened **i*: > **æ* > **æ*:) contrast diachronically with *gränd* 'grande', *mända* 'manda', wherein the length is a more recent reanalysis deriving from laxness due to brevity in closed syllables, as is still preserved higher in the mountains, e.g. Boccasuolo (Palagnano) *gämba*, *gränd*, *vänga*, beside *ka:mp*, *pi:nta* (ib. 68-9). For earlier discussion of other points in Emilia-Romagna, cf. Weinrich (1958: 244-6). In more remote Romance types, the contrast was most assuredly decisive; e.g., in the lower Engadine, Sent CONTENTU > *kuntäint*, FRUMENTU > *furmäint*, UENTRE > *vüimär* (the same as in open syllables: ACETU > *äčü*, BENE > *bäin*, CANDĒLA > *kändäila*, CATENA > *kädätina*), as versus a stabler, closed-syllable reflex in *dävünt* 'far' < **de* + *ab* + *inde*, *fëndär* 'to split' < FENDERE, *mävenda* 'snack', *vëndär* 'to sell' (Pult 1897: 33-40).

¹⁶ Thus ap. Mainoldi (1967 q.vv.). At the turn of the century, Trauzzi & Ungarelli (1901), taking their cue from Gaudenzi (1889: 33) et passim, transcribe this *a* as still slightly palatalized, e.g., *mävända*, *vävänder*, *zävänder*, in contradistinction to a velarized *a* in identical context corresponding to *öü*. For the same situation at Modena (where the falling diphthongs [evolving as if in open syllable] remain, e.g., *mävint*, *rövmpär*, *sävmpär* the same as *böun*, *vävint*, while earlier *tönda*: *tävnda* have merged as *tävnda*), cf. Marri (1984: 153-5).

[Walberg 1907: 38]. For a similar differentiation in the lower Inn valley [i.e., -NT- as open, -ND- as closed], cf. Pult [1897: 20-3 et passim], De Poerck [1962: 80-1].

The Spanish school of Navarro Tomás and Amado Alonso was also alert to the relative length of the following occlusive in such sequences, e.g.,

NC[- voice] NC[+ voice]

ampo m = 70 / p = 110 ms.

ambo m = 100 / b = 55 ms.

venta n = 70 / t = 100 ms.

venta n = 90 / d = 50 ms.

terça n = 75 / k = 105 ms.

terça n = 90 / g = 60 ms.¹⁷

astutely deriving an historical inference from the differences observed:

los dos resultados extremos *lomo* [< LUMBU 'loin'], *iferno* [< INFERNU 'Hell'], son manifestaciones inequívocas de un opuesto papel que la nasal puede desempeñar en el grupo: [nasal] dominante [versus nasal] dominada—Espinosa (19302: 378).

Such a synchronic, articulatory discrepancy between the two contexts, opposed as to voice, whereby the N of NC[- voice] is lenis with respect to the N of NC[+ voice] as fortis, serves to explain the discrepant evolutionary paths taken by the sequences in numerous languages. E.g., in much of central and southern Italy, in Belgium and in the Pyrenees, Latin MB/ND evolved as **mm/ *nn*.¹⁸ Compare the fortis nasal spreading

¹⁷ For Italian, Jones (1950 = 1967: 125) pointed out that "when *t* is preceded by a strongly stressed vowel + *n*, it is noticeably longer than a single *t* preceded by a strongly stressed vowel only. Thus the *t* in *dante* 'Dante' is longer than that in *dare* 'you give'; it is in fact almost as long as the long ("doubled") *t* of *fatto*." Such a phonetic difference may account for the medieval northern Italian graphs with a geminate voiceless obstruent following a nasal, e.g., O Trev. *mentito* 'chin', OBologn. *chonettonsi* 'they commit themselves', *similiante* 'resembling, similar', *temperanza* 'moderation' (which modern editors hasten to clear away), and, conversely, the nasal gemination before a voiced obstruent used for modern Bolognese by Trauzzi & Ungarelli (1901), e.g., *fänzz* 'fungo' (on. pl.), *lämmb* < LUMBU, *männ* < MUNDU, *piännb* < PLUMBU, versus *zaint* < CENTU, *point* < PUNCTU, *uainp* < TEMPU. For the situation in Ibero-Romance, cf. Blaylock (1966). Such reinforced post-nasal voiceless obstruents also crop up in Later Latin inscriptions, e.g., *Anttonia*, *Anttonius*, *Ponttiæ*, *vincantur*, *campidoctor* (cf. Leumann 1977: 219). From a physiologic vantage, these facts suggest that anticipatory raising of the velum accompanies chord separation, leaving an exclusively oral occlusion which fortifies the homorganic stop. As regards the medieval graphs, recall that they were often hyper-phonetic (as a result of slow, groping, syllabated transcription of pronunciation), no less than hypophonemic. Analogous gemination of voiceless obstruents after liquids, e.g., OFlor. *Berrii*, *partie*, *verso*, *voisse* (Schiaffini 1926: 265), very likely had a phonetic basis—cf. Sanga (forthcoming = May, 1989 *SLJ* meeting [Trento]).

¹⁸ Inasmuch as this is a nasal spreading or strengthening process, note that the strongest nasal, *ŋ*, most widely experienced such a "dominant" or fortition development, followed by *n*, whereas the weakest nasal, *ɲ*, only rarely behaves in tandem, e.g., Norwegian *Landsmäi* (= *Nyorsk*) with [mm, nn, ɲɲ] for *mb, nd, ng* (although *Rijkemäl* or *Bolemäl* still writes *nd*—cf. Haugen 1982: 82-3), or Land Dayak with *m, n*, and *ŋ* corresponding with Sea Dayak and Malay *mb, nd, ng*—cf. Scott (1964). In southern Italy, only limited areas of Sicily, Calabria, Puglia and the Salentine peninsula show *ng > ɲɲ*, evolving in parallel with *mb > mm*, *nd > nn*. John Trumper (p.c.) warns that Rohlfs (1966: 361 [§255]) missed the full extent of *ng > ɲɲ* in Calabria due to its socio-generational conditioning. An anonymous reader for this journal adds that the symmetrical evolution (involving *ng > ɲɲ*) is also present "in area barese e lucana meridionale e orientale" and suggests that the present-day want of symmetry may result from the absence of **ɲɲ* in the Italian inventory and thus it fails to find the corroboration of *mm/ɲɲ/nn*.

(= lag or permansive assimilation) before a voiced fricative, versus the nasal effacement or lenition with anticipatory spread of the voiceless oral occlusion in Old Norse, e.g.,

<p><i>*andar</i> > <i>annar</i> 'other' <i>*fnda</i> > <i>finna</i> 'to find' <i>*kunda</i> > <i>kunna</i> 'I could' <i>*munda</i> > <i>munn</i> 'mouth' <i>*sinda</i> > <i>sinn</i> 'voyage' <i>*tonda</i> > <i>tönn</i> 'tooth'¹⁹</p>	vs.	<p><i>bekk</i> 'bank' (OSwd. <i>bank</i>) <i>brekka</i> 'brink' (Swd. <i>brink</i>) <i>klepp</i> 'lump' (Swd. <i>klimp</i>) <i>kleitr</i> 'rock' (Swd. <i>klinter</i>) <i>skreppa</i> 'slip' (Swd. <i>skrympa</i>) <i>stuttr</i> 'short' (Swd. <i>stunter</i>)²⁰</p>
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These two divergent paths, i.e., of nasal weakening as against nasal dominance,²¹ both preserve the moraic structure of the Old Norse syllables

For Apulia, cf. Loporcaro (1988: 147); for Lucania in the negative, instead, Lausberg (1939: 97-8). In those scattered parts of central Sardinia where *mb > mm* and *nd > nn*, *ng* does not evolve to **ŋɲ*—Wagner (1941 [= Paulis 1984: 293f]), and Contini (1987: 143 & map 37). On the strong end of the scale, in Dolomitic Ladin *mb > m* has led the way—cf. Elwert (1947), Pellegrini (1954-55: 377), just as in Castilian (e.g., *lamer*, *lomo*, *paloma* versus *cuando*—thus pitting it against Aragonese and Catalan). In Aquitania, where both clusters early assimilated in favor of the nasal, the change *mb > m* lasted far longer than *nd > n*, thus HUMERU > **umbr* > **umbe* > *ume*, versus SANTIATE > *santat* (not **sanat*)—Rojjat (1932: 2, 216-7). In Old High German, to judge by orthographic evidence, *ng* seems to have followed both evolutionary paths in differing dialects, i.e., that of precocious weakening (as in Gothic—cf. infra n. 20), e.g., *chunigges* 'of the king' (on the way towards *chunig* ca. 830), *honeyge* 'honey' (< *honing* 'golden-colored'), *phenning* for *pfenning*, alongside the path of inertial nasal spreading (as in various Scandinavian dialects), e.g., *forscumme*, *frakunna* in the 8th-c. St. Gall MS of Chironian Notes (versus the Paris MS with *forscunga*, *fragunga*)—cf. Braune (1911: 105), Baesecke (1918: 123).

¹⁹ As the English glosses suggest, in other Germanic dialects in which the spirant was not voiced (cf. Goth. *anþar*, *munþs*, *vinþs*, *unþas*), the assimilatory process ran in the opposite direction, e.g., Engl. *other*, *couth*, *mouth*, *sithe* (obs.), *tooth*. The weakest nasal, the velar, was sufficiently ahead in leading the process that, before the velar fricative, it left only a long vowel already in early (primitive) Germanic (**Vɳx* > **V̄x* > *-V̄x*), e.g., OHG. *brūhta* 'brought' ← *bringan* 'to bring', *dāhtia* 'thought' ← *dāinkan* 'to think' (Braune 1911: 105, Prokosch 1939: 86).

²⁰ Data from Noreen (1884: 76-7 et passim); cf. also Gutenbrunner (1951: 59, 74). Note that it is only the voiced fricative which succumbs to the nasal's inertial spread. Just as, inversely, only the voiceless stops, eroding the nasal's closure and sonority, operated in the opposite way. When, instead, the nasal occurred before a voiced stop, it was preserved, e.g., *kamb* 'comb', *lamb* 'lamb', *timbr* 'timber', *wamba* 'womb, stomach', *bind* 'I bind', *bund* 'hound', *land* 'land', *finger* 'finger', *tunga* 'tongue'. (In cases of early apocope and word-final devoicing, the anticipatory desonorization and nasal weakening took place, thus the pret. *batt* and imp. *biti* contrast with pres. ind. *bindr* 'he binds', pret. plr. *bundom* 'we bound', etc. For both the relative and absolute chronology of these developments, cf. Moberg [1978]). Only the weakest nasal, the velar, assimilated in Gothic to a voiced stop if graphs such as *briggan* 'to bring', *drigkan* 'to drink', *figgr* 'finger', *gagan* 'to go', *laggs* 'long', *sagg* 'he sank', *siggwan* 'to sing', etc., are to be taken at their face value (i.e., if they were not influenced via Wulfila by Greek digamma)—cf. Wright (1954: 74-5).

²¹ The same divergent patterns of nasal lenition (preceding a surd) versus nasal fortition (preceding a sonorant) occur before stops in various Middle Indic languages, e.g., in the Khorosthi *Dharmapada* (3rd c. A.D.), with subsequent voicing of the intervocalic surd, e.g., *antara* > *adara*, *dāntab* > *dādau*, *hanti* > *hādī*, *kānti* > *kādī*, versus *chandas* > *channu*, *kranda* > *kana*, *vindati* > *vinadi* (Sen 1960: 13, 56, 70). The nasal erosion pattern is the more frequent of the two

at issue, just as did the cognate development reviewed above for Old English, wherein compensatory vowel lengthening took the place of a lengthened, ambisyllabic consonant (compare *amar* with *ōber* 'other', *mum* / *mūb* 'mouth', *tōnn* / *tōp* 'tooth'). Such cognate developments already begin to hint at the convertibility of the nasal coda, VN(C) > V̄V(C) (or later VV[C]) or VC(C), which will shortly become a Leitmotif of our analyses based upon timing constraints.²²

If pressed to judge the relative potential hazard of a context which tends to deprive a nasal of sonority as against that which deprives it of closure, I would incline to favor the latter,²³ since there are languages (such as Latin above) where nasal codas are eroded only before fricatives (never stops, ²⁴ e.g., CAMPUS, DENTEM, UNCUS 'hook'²⁵) and others still in which they are

changes, e.g., Sk. *tankū* > Prakrit *takā*, Hindi *tāk* 'coin'. Marathi presents the likely intermediate phase (conserving nasalization), e.g., *avta* > *āt*, *cañcu* > *cōc* (but no nasal loss before a sonorant: *bhāñḍā* > *bhāñḍ*, *cañḍra* > *cañḍ*, *nimba* > *nimb*)—cf. Bloch (1920: 82-85).

²² While the nasal erosion seen above in Latin could smoothly result in a phonemically lengthened vowel, given that language's quantity oppositions, in many Romance dialects (from which such a phonological length distinction had disappeared) where the same plebeian process was reëacted on a later crop of *-s/-f-* sequences, the result was fricative fortition, i.e., the type *pesar* for *persare* 'to ponder, think' as versus *pezar* 'to weigh' (concretely) inherited from pleb. Latin *PĒSARE* for *PĒSARE*, cf. OProv. *coselh* < *coselh* 'counsel' < *CONSILIU*, *esems* < *enems* 'together' < **insemel* for *SIMUL*, *masip* < *mansip* 'boy, manservant' < *MANCIPIU* (Appel 1918: 78), OCat. *cosòls* < *CONSULES*, *cosseyl* < *CONSILIU* (mod. Cat. *consell* with learned reaffirmation of *n*). Compare also Sard. *masèdu* < OSard. *masèdu* < *MANSUERTU* 'tamed, tamed' < OSard. *tesones* 'nets stretched to trap birds' < *TENSIONES*, versus more recent assimilations as in *bilassa* 'scale' < *bilansa*, *persare* 'to think' < *persare*, *kossolare* 'to console', *iskassare* 'to get out of the way' < *scansare*, *diskassu* 'rest, relief' < *Sp. descansar*—Wagner (1941 [= Paulis 1984: 296]) and cf. sup. n.12. There are late Latin graphic variants which also suggest this alternative, consonant-timed compensation, e.g., *messes* ~ *menses* for *MENSĒS*. In the light of such data, one might speculate that the frequent Old Spanish graphs of the sort *Alfonso*, *cansado*, *consejo*, *piensan* (as in *Cid* MSS) may represent similar s fortition as a consequence of nasal weakening. Recall that this was the Oscan result of acc. pl. **-ovs*, **-ems* and analogic **-ans*, e.g., *fehuss* 'walls' (Cippus *Abellanus* ap. *Vetter* 1953: 9), *vias* 'streets' (Pompeii—*Vetter* 1953: 48), wherein *-ss* represents the same fortis sibilant that resulted from other assimilations (e.g., *meddiss* < **meddiks*, or with **-iff(o)s* dat. and abl. pl.: *analfiss*, *saferiss*). (Conversely, Umbrian attests to dialectal variation: *treif* [with vowel lengthening] for *trif* = *tris* [Leumann 1977: 145].)

²³ The phonetic reality of such a differential progress was already observed by Roussetot (1901 [= 1924: 546]), who noted in the Walloon dialect of Alost (= Aalst) a "double résultat de la syllabe *an*, selon qu'elle est suivie de *-s* ou de *-t*: *kāns* 'chance' [et] *kant* 'côté'. La nasalité de la voyelle est beaucoup plus intense dans le premier cas, à tel point que l'*n* a été presque entièrement absorbé."

²⁴ This class would include, at the Romance stage, affricates (i.e., stops with delayed release) as well. Compare in the Val Leventina (Sganzini 1925-26: 104, 116, 147, 203-6): AXUNGIA > *sofza* 'grease, suet', FUNGŌ > *fōjz* 'mushrooms', LONGE > (*da*) *lōjz* 'fat', PENSAT > *pañša*, PIANGERE > *piēs*, Longob. **ykanas* > *skējza* 'crutch, strut', as against no erosion in CINGULU > *senz* 'cinch, strap', **manducō* > *mēndži* 'I eat', SANCŪI > *sanis* (var. *senis*), TANTĪ > *tanis* (var. *tēnis*), the same as *lojz*, *mont*, *pont*, etc.

²⁵ Although some incipient weakening of the weakest caudal nasal, the velar, may be detected in the curious vowel lengthening (as a vestige of nasalization) observable in perfect participles such as CINGŪ < CINGŌ, FŪNCTU < FŪNGOR, IŪNCTU < IUNGŌ, PŪNCTU < PUNGŌ, SANCŪ < SANCŪŌ, ŪNCTU < UNG(U)Ō (Niedermann 1953: 73), wherein the root-final velar stop was devoiced before the suffix *-to-*. Cf. also QUINQUE *avec* i issu de **e* devant nasale gutturale tandis

weakened before voiced as well as voiceless fricatives, without being measurably affected before either grade of stop,²⁶ e.g., in the Val d'Antrona (Nicolet 1929: 50s et passim):

que *e* subsiste devant *n* dentale, par exemple, dans CENTUM" —Meillet 1937: 116, and further Grammont 1939: 220 (comparing TINGUŌ with Gr. *téggō*). By this same principle might be explained CONŪX (beside vars. CONTUNX and CONTŪX), which seems to violate through excessive weight [i.e., [-uŋks] as VVCCC] the syllabic canons posited by Panfilov (1977: 95). (It is impossible to know what the original value of Greek digamma may have been, i.e., whether **ŋg* ever had an allegro realization **ŋg*.) In Gothic it was only the velar **ŋ* to assimilate to a following stop, if such graphs as *briggan* 'to bring', *figg* 'finger', *gaggan* 'to go', *laggs* 'long', etc., may be taken at face value (cf. Wright 1954: 74-5). In Old Provençal, it was velar **ŋ* to weaken before *g* into an oral tap reanalysed as *r*, e.g., CANONICA > *canongue* > *canongue* > *canongue*, DOMINICA > *dīmenegue* > *dīmenegue* > *dīmenegue*, MANICA > *manega* > *manega* > *manega* > *moregure* > *moregure* > *moregure* (Appel 1918: 78-9). In conservative central Sardinian, with nasal loss before fricatives (e.g., *-ns* > *-s*, *-NF/-MF* > *-ff*, and, for Nuorese, *-NTJ/-NCJ* > **nis* > *n̄* > (ð)ð—cf. supra n.12), as against nasal preservation before stops, it is significant that the few sporadic instances of nasal erosion in this context involve velar *ŋ*, e.g., Log. var. *addūkkas* 'cunquē' for *addūkkas* < *DUNC* + *UNQUAM* (DES 1, 483, and Paulis 1984: 569), *affleku* 'expectation' for *affleku* < *Sp. afínco* 'eagerness, acquisitiveness', Camp. var. *affrakakái* 'to grab' for *affrakakái* (on *franka* 'branca'), *akka* 'where' for *ánka* (DES 1, 85), *makkái* 'to lack' for *mankái*, but never **kappu* for *kappu*, **teppu* for *tempu*, etc. (The apparent anticipation of *b* over *m* in Belvi *ibbina* 'gut' for nearby *imbina* [and even *immina* at Tonara] < INGUINA [with accent shift—DES, 1, 613 and Wagner 1941 (= Paulis 1984: 479)], against the general evolution seen in ANGUILLA > *ambidda* 'eel', QUINQUE > *kimbe* 'five', LINGUA > *limba* 'tongue', LANGUIDU > *lámbridu* 'sated, stuffed', SANGUE[N] > *sámbe[n]* 'blood' [Wagner 1941 (= Paulis 1984: 226)], may well harken back instead to precocious erosion of velar *ŋ* before the etymological labio-velar *gw*, i.e., one might reconstruct **iggwina* from **iggwina*, with the standard development of the labio-velar thereafter as in AQUA > *abba* 'water', EQUA > *ebba* 'mare', SILIQUA > *silibba* 'pod'. Thus developments such as *ibbina*, cf. also *kibbánta* 'fifty' at nearby Busachi [beside *kimbe* 'five' however], would confirm the hypothesis of precocious weakening of the velar nasal *ŋ* rather than contradict it.) *N*, inferrably become velar, in the sequence *-NCT*, is the only nasal to be absorbed before an occlusive in lower Engadine, e.g., EXTINCTU > *šitt* 'snuffed-out', IUNCTA > *juitta* 'excess, overplus in a trade', PUNCTU > *püitt* 'point of needle' (versus *DENTE* > *dánt*, GRANDE > *grónt*, etc.—Pult 1897: 106 for Sent). In several Sursilvan varieties, *N* before *g/k* weakened a step ahead of *N* before other occlusives, coming to form an open syllable and thereby permitting a lengthened bimoraic nucleus, e.g., *bránpka* > *bránpka* 'paw', *isáungga* > *tsáungga* 'pliers, tongs' versus *grónda*, *kómp*, *tónts* (Huonder 1900: 21-3). Recall that in this prevocal position alone, i.e., not before *nj/nđ* nor *m/mb*, Late Latin vowels were lengthened and tensed and thus closed in Tuscan, e.g., FUNGU > *fungo* 'mushroom' (not **fongo*), IUNGU > *giunco* 'reed' (not **giunco*), LINGUA > *lingua* 'tongue' (not **lengua*), LONGU > *longo* 'long' (not **longo*), TINCA > *tinca* 'tench', UINCULU > *vinchio* (→ *vinco*) 'withy', or the Gmc. suffix *-ingo*. The expected mid-vowel results (just given with asterisks) begin around Arezzo to the South and Lucca to the West. Prior to the diffusion of the Florentine model, they were more widespread, e.g., Siense *tenche* was a Shibboleth (vis-à-vis Flor. *tinche*) circa 1526 (Gigli 1717: lxxvi for its password function). To the precocious tendency of velar *ŋ* to transfer nasal resonance forward we shall return momentarily (infra §4.2—also n.27 for non-etymological insertion). The same closing tendency surfaces in Bolognese, although only with the more homorganic back (velar) vowels, e.g., *fonz* 'fungo' (pl.), *long* 'lungo', *óngke* 'ughnia' (not **läng*, *ángga*), versus *lungua* 'lingua', *vajnk* 'vinco' (from older *vajnk*, etc.—cf. Coco 1970: 19, 24).

²⁶ Graphic var.s in Old Provençal suggest nasalization and nasal weakening before *v* no less than before *f*, e.g., CONUENIT > *conven* < *conen*, *comidar* > *comidar*, *comit* > *comit*, *enveja* > *enveja* (< INUDDIA), same as CONFUNDIT > *cofon* < *cofon*, *enfan* > *efan*, *enferm* > *eferm*, etc.—cf. Anglade (1921: 187-8) (who also notes occurrences in Sandhi, e.g., *bo voler* 'good will', *mo filh* 'my son', same as *mo saber* 'my opinion, understanding', and in contrast with preservation before stops, e.g., *mom payre* 'my father', *mon talen* 'my inclination', *de bon talen* 'willingly, in good faith', also intervocally *mon amic* 'my friend'). Likewise for OCat. *covent* <

brj^ošul ~ brišul 'juniper'
 čěš ~ čěš 'prepared, neat'
 fūš ~ fūš 'mushroom(s)'
 mūža ~ mūža 'to milk'
 pīsa ~ pīsa 'pliers'
 rāf ~ rāf 'crayfish'
 rāš ~ rāš 'rancid'
 sūža ~ sūža 'suet'
 vāš ~ vāš 'check'²⁷

but

banča 'bench'
 čamp 'field'
 gamba 'leg'
 ganda 'acorn'
 lanča 'bog'
 rōnda 'to render'
 runi/-da 'round'
 sampa 'paw'
 sant/-a 'saint'²⁸

CONUENTU, *cové* < CONUENIT, same as *devesa* < DEFENSA, *enceza* INCENSA, *ifant* < INFANTE—all instances which have been reversed by learned overlays—cf. Bacia i Margarit (1951: 194). In remoter areas, the process remains uncorrected, e.g., in Upper Engadine: Celerina (Schlarigna) *kuvliker* < CONUENIRE, *ivildža* (Church-word) < INUIDIA, *ivider* < INUITARE, *ivilet* 'invitation', same as *kufurter* 'to comfort, ifirm' < INFER(N)U, *iflēr* < INFILARE, and *kuzdrin* 'cousin' < CONSORINU (Walberg 1907: 121-2).

The inverse index to such nasal evanescence, i.e., hypercorrect, adventitious nasal insertion before *s/z, š/ž*, is far more widely attested in northern Italy than its positive occurrence. (Just as in Old Provençal, where nasal epenthesis formed the obverse to loss [cf. supra n.22], e.g., *destrens* for *destressa*, *ensai*, *ensamentz*, *ensien*, *quains* [for *quaiscais* 'almost, nearly'], *roisimbol*—Appel [1918: 96-7].) But this documentary state of affairs is not atypical of tendential changes which initially occur in the more casual rapid, negligent speech register of a community and thus prompt a counter process (hypercorrection) in the literary record often before positive evidence surfaces in script. Schneller (1870: 75) dedicated a paragraph to the phenomenon in Ladino ("Einschiebung": e.g., *dozerna* 'dozen', *smozir* 'to bellow' < MUGIRE, *sonsin* 'plum'); Salvioni (1886: 223-4) cited numerous cases in north-central Lombard, e.g., *dozerna* 'dozina' < **duodecena* 'dozen', *gonža* 'gaggia' < GATA jay, magpie, *lavéns* 'lavaggio' (= 'turned stone vessel', 'pot-stone'?), *Manža* (Val Maggia), *mōvž* 'moggio' < MODIU 'bushel', *penž* 'peggio' < PERUS 'worse', *rōnža* 'roggia' (cf. *roxa* in Bonvesin) < [AR]KUCIA 'excavation, pit', mentioning "frequent esempi nel milanese urbano e più nel rustico." (Cf. further Salvioni [1895: 78, 1907: 725], and Sganzi [1925: 26: 116, 204f] for Leventina.) Cases abound in older docs., e.g., *angonza* 'anguish' < ANGSTIA, *tonsego* 'poison' < TOXICU (Uguccone da Lodi), although some influence from the prefix IN- has been suggested since Mussafia (1873: 69) for such frequent forms as *invald* 'summer' < AESTATE, *insites* 'same' < **iste-ipsa*, and (paradoxically) *insifj* 'to go out' < EXIRE. (In the Valvestino also before *g*, i.e., the weakest [homorganic] velar nasal was implicitly evanescent and in variation as well, e.g., *formingo* 'little ant', *minglo* 'little flake, bit', *oringlo* 'nettle', *springlar* 'to glean', *zminglar* 'to cut up, dice', the same as *granžet*, *lenžer*, etc. [Battisti 1913: 33]. Cf. general Lomb.-Ven. *angonara* 'needleful of thread' **acónaria* on ACUS, *angulana* 'water-sprite' < **aguana* [Prati 1908: 36], *an-langual* 'equal', *delenquar[e]* 'to melt' < DELIQUARE, and with inertial or permansive nasal resonance *minga* 'bit' < MICA.) The tendency is widespread to the east, cf. Ven. *ansa* < ANSA 'axe', *consa* < COSSA 'thing', *instà* < ISTA 'summer', *mensora* < MENSURA 'selvedge', *skarpàdda* < *skarpàdda* 'beetle', *sissof* < SISOS 'chilins', *Chioçg* *sonsu* for *sissovo* 'whisper', *tansa* < TASSA 'debt, tax', and is by no means recent (cf. *consa* in 13th-c. *Lanuda veron.*, 15th-c. *minzuol* < *mizuel* 'glass, cup' < **meditulu* (Mussafia 1873: 79), OPad. *tinisco* < *tisco* 'consumptive, tubercular' [Cod. Macer.], *tonsego* 'poison' < TOXICU in the *Prov.flem.* and many MSS of the *Plainte* [ed. Linder 1898: *lextitil*]; nor is it absent to the West, e.g., Piem. *linger* 'leggero', *ninsola* 'nocciuola', *nōse* 'to bewitch' < NOQUERE, *ransié* 'rosiccate' (cf. Aly Belfald 1933: 73, Salvioni 1898: 477, Toppino 1902: 545). Salvioni (1902-05: 242-3) cited numerous Friulan toponyms wherein the preceding nasal resonance induced reanalysis of **nīs* as *nīs*, e.g., *Bicininis*, *Buininis*, *Cicuinis*, *Lucininis*, *Malininis*, *Pantianinis*, *Preccininis*. In the Veneto, it presupposes a fortis or voiceless *s*, which also could occur following the off-glide *wau*, whether etymologic or accruing in the medieval period from the vocalization of *l* before dentals, whence the variants *causa*, *consa*, *cosva* with corrections *colsa* and *consa*, *aus*, *oss-artse* 'to dare', with

If we have thus far graded various types of medial coda positions as to their potential hazards for nasal stability,²⁹ it remains to distinguish the coda position of maximum jeopardy from the position of greatest stability.

2.3. Coda versus onset position.

While word-final coda position on a stressed nucleus emerges as the context of greatest risk for a nasal, sapping its sonorance and the general integrity of its closure through forward transfer to the preceding vowel, onset position is instead the context of maximum strength since here any anticipatory lowering or misalignment of the velum will tend to enhance rather than erode nasal identity. Indeed, if the foregoing vowel becomes markedly nasalized, the transition from it to the nasal's specific closure may be perceived as a light or fleeting velar nasal and thereupon be reproduced as such, i.e., with some dorsal tongue raising en route to, say, the apical contact for *n* (V⁷|nV) or the lip closing for *m* (V⁷|mV). Thus in many Gallo Italian dialects, the resonance of a nasal onset following a stressed vowel has spread forward across syllable juncture without any sacrifice of the original onset's status. For ex., Gaudenzi (1889: 32) observed that VNV in Bolognese:

tra vocali, purché tenga dietro alla sillaba accentata, si raddoppia: e allora la prima *n* diventa gutturale, la seconda resta dentale: il che equivale a dire che la *n* genera nella vocale accentata precedente una assonanza gutturale. Es.: *spagna* 'spina', *logna* 'luna', *curagna* 'corona'.³⁰

corrections *obartse* and *onsartse* (cf. Tuttle 1986). Such variation spun off frequent *n* insertion, e.g., OVen. *lonsengare* 'to flatter' ← Prov. *lausengar* (Salvioni 1890: 262n4), *ponçino* 'chick' PULICINU, *ponso* 'wrist' ← PULSU—Stussi (1965: 205), Ineichen (1957: 103, 1966: 569-70). Such insertion was especially widespread when abetted by a preceding nasal (via lag or inertial spreading across the vowel), e.g., *menza* 'milza' (spleen), *minga* 'milza (spleen)', *monto* 'molto' ('much'—also in the syntagm *montben*, *montben* < *molto bene* present through Emilia into Monferrato), and likewise in Sandhi producing *anto* 'alto', *antro* 'altro', with the phonosyntactic pattern still present in western Tuscan, e.g., *n' antra volta* but not **n' antro*—cf. Varanini (1983: 89), also Nenucci (1865: 11, 20) (for Pistoia). For *nf* → *ff*, cf. OTrev. *affanegar* 'to rave' for *anf*, highland Veneto *onfegar* > *ofegar* 'to smear', whence inversely *onfir* for *ofir* 'to offer', etc., also OVeron. *onfende* 'he offends' (also Uguccone da Lodi), Mil. *sonfiàs* (el nas) 'to blow nose'. In Sardinian dialects with (-ð)ð (cf. supra n.25), such adventitious nasal insertion (analogous to -ns- for -s-) also occurs in this context, e.g., *lānda* ← *lādda* 'lace, thong' < LAQ(U)EU, especially with lag nasalization as in *manūda* 'handle' < **manūcca* (Wagner ap. Paulis 1984: 356-64).

²⁸ Also before originally voiced affricates, i.e., stops with delayed release, e.g., *brunīs* 'bronze pot' < **brundiu*, *sent* 'thin strip of grass' (lit. 'belt' < CINGULU), *undža* 'fingernail' < UNGULA. ²⁹ E.g., *n* + voiceless fricative > *n* + voiced fricative > *n* + voiceless stop > *n* + voiced stop. ³⁰ Compare, for the earlier phase, Gorra's comment on Piacentino: "nei femminili in VnV lo strascico nasale d'uscita del maschile permane, ma il *n* ricompare, e nel singolare si unisce alla sillaba seguente, quindi *sā* 'sano', femm. *sāna*, cioè, *sā + na*, e così *tā + na*, *lā + na*, *bō + na*..." (1889: 149).

The same gradient of vowel receptivity ($a > o > e > u > i$ —soon to be clarified [infra §2.5]) also obtains for this further extension of nasalization. Thus, as stated, there are dialects wherein only stressed \bar{a} accepts nasality from a following nasal onset. For his native Piveronese (TO), already Flechia (1888-89 [publ. posthum. 1898: 118-91]) had a firm grasp on the situation:

È noto come il piemontese abbia insieme col genovese un così detto η faucale; ma la faucalizzazione di cotesto suono nel piemontese è di doppia Natura. Il torinese, o piuttosto l'alto piemontese in genere, ha codesta nasale faucalizzata e l'ha come suono semplice; mentre nel basso piemontese la nasale si raddoppia e si raddoppia in guisa che il primo n suoni faucale [ŋ] e il secondo dentale [n]; quindi mentre gl'it. *lana*, *catena*, *spina*, *corona*, *luna* nell'alto piemontese vengono a sonare *laŋa*, *kaɲeŋa*, *spiŋa*, *kuɲuŋa*, *liŋa*, nel basso si profferiscono *laŋna*, *kaɲeŋna*, *spiŋna*, *kuɲuŋna*, *liŋna*. Ora il piveronese che, fuor delle sue specialità, concorda generalmente col basso piemontese, non conosce punto cotesta faucalizzazione se non dopo l' \bar{a} tonica, mentre dopo le altre vocali presenta la nasale inalterata, vale a dire né doppia né faucale, corrispondendo per questo rispetto al dialetto canavesano che non soggiace punto alla legge della faucalizzazione; quindi [piv.] *bruvariaŋna* 'aggiunto di una specie di fave', *kantaragna* 'raganella', *davagna* 'dipana', *subiagna* 'salamandra', [agg. *gavajŋgavajna* 'bucato, forato'] *laŋna* 'lana', *spagna*, 'manico', [marzagna 'melanzana',] *paizagna* 'paesana', *piantagna* 'piantaggine', *siagne* 'spianano', *terzagna* 'terzana', *valzagna* 'valligiana', ma *spina*, *buna*, *kuruna*, *bruna* 'tuona', *kuina* 'culla', *iina*.³¹

Projecting rapidly forward, this evolutionary line bifurcates according as to whether the nasal sequence $-ŋ n-$ underwent anticipatory or instead lag/permansive assimilation. By anticipating alveodental n , the forward spread of nasality was retracted and the ambisyllabic dental n , still written $-nn-$, came to be realigned as a fortis onset, i.e., $*\bar{V}ŋ|nV > *Vŋ|nV$ ³² >

³¹ Nigra by 1878: 37 contrasted the alveodental VnV which remained "incolume" in Canavese, with the short velar of Turin and the heterosyllabic nasal sequence of the Monferrato (ηn). In his great anthology of *Canti popolari del Piemonte* (1888), he utilized b to represent syllable juncture, e.g., Tur. *fascinha*, *funtinba* [= $-ŋ a$] versus Monf. *chenbna* 'cuna', *crubna* 'corona', *fenbna* 'fina' [= $-ŋ na$]. The sequence $-ŋ n-$ was confirmed by Renier's Monferrine informant, Ant. Piccarolo (1896: 136). (The same graphic expedient has been used since Sarmento for this anomalous juncture in Galician.) The Turinese poet, Pini Pacot, would later adopt a hyphen for the same function. (Aly-Belfadel [1933: 73-4, 93] merely muddied the waters in this regard.)

³² This reconstructed phase is preserved in parts of lower Piedmont, e.g., Gressio (CN) and Murazano (CN) *län|na*, Strevi (AL) *län|na* (from earlier $*län|na$ attested in surrounding zones—cf. Parry [1984: 62] for data, also Schädler [1903: 45-6] and Rohls [1966: 312]). Thus, for ex., the Alessandrine ethnographer, Gius. Ferrero (b. Carpeneto d'Aqui 1847), warned that "la semplice n si divide quasi in due, mettendo un intervallo di pronunzia tra esse. Per es., *sen-na*, *cadem-na*, *funtan-na*, *cason-na*... *chin-na*, *lin-na*, *farin-na*" (1881 = 1889: 77). (N.B. the process only obtained with stressed vowel nuclei; thus *üna* as an autonomous pronoun 'one' → Monf. *in-na*, but as a proclitic indef. art. Monf. *ina fii* 'a flower', *ina levv* 'a hare'—1889: 63.) Ungarelli (1901: ix-xx), against the background of Bolognese $-ŋ na$, noted that certain country dialects had evolved $-n|na$: "Quando la n è doppia dopo e od o , la prima [ŋ] si pronunzia gutturale e l'altra dentale: *spen|na* 'spina', *furton|na* 'fortuna'... ed è in quest' n doppia che rilevasi una delle principali differenze fonetiche fra il dialetto cittadino e il dialetto rustico, giacché i rustici, specialmente i montanari, pronunziano *galen|na*, *furzen|na*, *furton|na* con tutt'e due le n dentali." For Parmigiano, Malaspina (1856: I, 7) used an apostrophe "a far posare la pronunzia... con

$*V|nV$.³³ Pio Rajna, although a native of Sondrio, after many years in Milan, observed that n in the context $\bar{V}nV$ there acquired:

un suono che l'alfabeto italiano non ci permette di ben rappresentare né con un n sola né con due, sebbene in mancanza di meglio, si sia pur costretti ad adottare l'uno o l'altro partito. Il femminile di *bon* = [bō] non è né *bona* né *bonna* letti all'italiana. L' n di questi casi è vibrata come la doppia toscana, ma più breve e compatta; ché, invece di ripartire le sue articolazioni tra la vocale antecedente e la seguente, le appoggia per intero alla seguente, quasi fosse scritto *bo-nna* (1880: 37).

Salvioni (1884: 156-7), who cited Rajna with approval, provided indirect evidence for the earlier ambi- or heterosyllabic phase in the form of

una pausa momentanea... come in *Patón'na* 'cagnaccia', *spén'na* 'zipolo', *zén'na* 'capruggine'. The phonetic value of this graph remains obscure. Some eighty years later, Ugo Pellis' inquiries at Parma (ALI Cd 5, 1938) recorded an urban dialect split along two evolutionary lines: the city center had preserved an earlier stage with a velar nasal coda, $-ŋ n-$, whereas, across the Torrente Parma, Rione Ognissanti (Borgo Arta) had vocalized the nasal coda as a palatal glide and eliminated nasalization ($*\bar{V}ŋ|n- > *\bar{V}i|n-$). The earlier existence of the ambisyllabic phase (there asterisked) is corroborated by the shortening > laxing > opening of the heirs to Latin \bar{i} and \bar{u} ; e.g., *coq(U)ina* 'kitchen' > center *kužéŋn'*, Oltretorrente *kužéŋn'*, the heirs to \bar{u} > cen. *faréŋn'*, Oltretorr. *faréŋn'*, MATUTINA 'morning' > *m'fégŋn'*, *m'fégŋn'*, PRUINA 'frost' > *bréŋn'*, *bréŋn'* (same as heirs to \bar{e} , e.g., CATENA > *k'éđéŋn'*, *k'éđéŋn'*, PLÉNA > *pléŋn'*, *pléŋn'*, UENA > *véŋn'*, *véŋn'*), and CUNA 'cradle' > center *kóŋn'*, Oltretorrente *kóŋn'*, LUNA 'moon' > *lónŋn'*, *lónŋn'* (same as SONAT > *el-sóŋn'*, TONAT 'it thunders' > *e-tróŋn'*, *e-tróŋn'*). Since \bar{a} , as will be seen shortly for Bolognese, was intrinsically too long to accept the incremental weighting of forward transfer of nasality, forms with ancestral \bar{a} remain the same for both parts of town (i.e., nasal evolution was blocked from the inception), e.g., center and Oltretorrente *fontán'*, *kampán'*, *laar'*. For the stage with ambisyllabic, re-dentalized $-n|n-$ and compare further in Sardinia, between the innovating Campidanese bloc with MANU > *mān* and that of conservative *mānu*, "dans les parlers de Fordongianus et d'Allai... [-N-] est réalisée régulièrement comme une géminée: *mānu* > *mānu* 'main', *sōnu* > *sōnu* 'sommel'" (Contini 1987: 136, also *čennāi* 'cenare'—map 36, and at Laconi *čenn'oi*, *mān'u*)—developments for which I would reconstruct an intermediate phase $*\bar{V}ŋ|n- > *Vŋ|n-$. (As for many Sardinian processes, this too occurs in Sandhi, e.g., *sa 'nura* 'the daughter-in-law' versus adjacent *sā 'ura* from $*sā'ŋ|ura$ —cf. Contini [1974: 107-12] for an additional sociolinguistic factor in the equation.)

³³ This result, after further apocope, fed the French results of the type *bonne* < BONA (vs. *bon*), *chienne* (vs. *chien*), *donne* < DONAT (vs. *don* < DONU), *sonne* < SONAT (vs. *son*), etc., which begin to appear during the 13th C. (Pope 1934: 168). In view of the northern Italian data, Fouché (1966: 567) seems hasty in dismissing them as never having had geminate or heterosyllabic value: "les graphies du type *bonne* < BONA, *bonne*, < BONA, *sonne* < SONAT, etc., ont été créées pour indiquer la nasalisation de la voyelle précédente... elles n'ont jamais prétendu *m* ou *n* geminés." Certainly $-nn-$ is likely to have represented $*-ŋn-$, and $-mm-$ may easily reflect $*-ŋm-$ (already Gauchat called attention to such a "son transitoire $-ŋ$ " for the Franco-Provençal of Dompiere [1890: 399-400], and it is well attested in Val d'Aosta today, e.g., Antagnod *fiāŋ|ma* 'flame', *krāŋ|ma* 'cream', *rāŋ|ma* 'branch'—Pellis ALI Bb5, nos. 748, 4407 & 3077, no less than in the Franco-Provençal of Montana, e.g., AMAT > *lāŋmā*, FLAMMA > *fāŋmā*, FUMŌ > *fūŋmō*, $*krāmā$ > *krāŋmā*, LĪMA > *līŋmā*, PRĪMA > *prīŋmā* 'thin' [masc. *prīŋ*], RAMA > *rāŋmā* [Gerster 1927—although a few instances in which this sequence has evolved to a long, ambisyllabic *m* are also cited, e.g., CŌMA > *kōmā* 'mane', HOMINE > *ōmō* 'man', LACRIMA > *līŋremmā*). For such a phase, $*\bar{V}ŋ|n-$, in older French, cf. the early vernacular result of adverbs composed with present participles and -MENTE, e.g., *ardement* < ARDENTE + MENTE, *avenement*, *noisachement*, *prudement*, which likely passed through the same stages as *gramment* < $*gā'ŋ|mēt$ < GRANDE + MENTE—cf. Nyrup (1936: 310-11). Recall that the homophony of *grammaire* 'grammar' and *grand-mère* 'grand-mother' created confusion for Molière's *Femmes savantes* (II, vi, 492)—as $*gā'ŋ|mēr$ or $*grammēr?$

