

What is beyond [ə]?

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1. To the antecedents. A common place in Catalan phonology, especially that developed within the pre-generative era but also in generative works, was the uncertain phonemic nature of the non-alternating unstressed schwa present in words like *cas*[ə] ‘house’, *c*[ə]*lent* ‘hot’, *p*[ə]*tit* ‘little’, in opposition to the determined one, thanks to morphonological alternations, present in words like *c*[ə]*seta* ‘house *dim.*’ (cf. *c*[á]*sa* ‘house’), *p*[ə]*rera* ‘pear tree’ (cf. *p*[é]*ra* ‘pear’) and *apr*[ə]*ssar* ‘to hurry’ (cf. *pr*[é]*ssa* ‘hurry’). This indeterminacy was either accounted resorting to an archiphoneme (see, among others, Alarcos 1953, 1973), to positing a phonemic status for the schwa (see, among others, Badia 1951, 1965, 1973; Viaplana & DeCesaris 1984), to underspecification (Lleó 1970, Palmada 1990, 1994) or to an arbitrary—but more economic—underlying /a/ (see, among others, Mascaró 1976 1979, Wheeler 1979, Bonet & Lloret 1998, *GCC*). Within Optimality Theory, and assuming the richness of the base hypothesis (according to which there are not language-particular restrictions on underlying representations; see, among others, Prince & Smolensky 1993 [2004], McCarthy 2004), this undeterminacy should be accounted for by positing all possible underlying representations for this non-alternating vowel (/a/, /ɛ/, /e/, /ə/), and the grammar (*i.e.* the ranking of constraints) should ultimately be responsible for the selection of the actual output. **2. To the point.** None of the aforementioned studies, however, paid attention to one interesting fact: the extraordinary alternation of the (ordinarily non-alternating) [ə] with [é] due to stress shift in verb + clitic sequences in some Balearic Catalan varieties, described in many studies devoted to Catalan dialectology and phonology (see Alcover 1908-1909, Moll 1932, Veny 1982, and, more recently, Bonet 2002, Grimalt 2002, 2004; Torres-Tamarit 2008). **3. To the goal.** The purpose of this paper is to investigate the theoretical consequences of this peculiar synchronic alternation both for the (morpho)phonological structure of some Balearic Catalan dialects and for the different hypothesis developed within Optimality Theory to account for the undeterminacy of underlying representations. **4. To the facts.** In this paper we will focus on those varieties of Balearic Catalan which lack the schwa in stressed position (the Majorcan locations Alaró, Lloseta and Binissalem; the Minorcan locations Maó, Alaior and es Mercadal, and the Eivissan locations Sant Antoni and Sant Josep). In this varieties, the unstressed [ə] **4.1.** corresponding to the feminine morpheme (1a), traditionally interpreted as having an /a/ or an /ə/ underlying representation; **4.2.** corresponding to the tense mark ‘imperative’ of the verbs of conjugation I (1b), also interpreted as having an /a/ or an /ə/ underlying representation; **4.3.** at the right edge of the stem of some verbs of conjugation II (1c), at times interpreted as part of the stem and some other as epenthetic; **4.4.** following the tense mark for the ‘infinitive’ in the verbs of conjugation II (1d), almost always interpreted as epenthetic; **4.5.** appearing at the right edge of a clitic (1e), generally interpreted as epenthetic; *extra-ordinarily* alternates with [é], due to stress shift (2) (for an account of the factors governing stress shift in Balearic Catalan verb + enclitic sequences, see Grimalt 2004 and Torres-Tamarit 2009):

| verbal base | | | (1) [ə] | | | (2) [é] | |
|----------------|--------------------------------------------|------------------|--------------|---------------------------------------------|------------------|----------|--------------------------------------------|
| kántə kəntá | ‘sing _{2nd sg.} !’ ‘to sing’ | <i>canta-la</i> | (a) kəntélə | ‘sing _{2nd sg it_{fem}!} ’ | <i>cantar-la</i> | kəntəllé | ‘to sing it _{fem} ’ |
| kómprə | ‘buy _{2nd sg.} !’ | <i>compra</i> | (b) kómprə | ‘buy _{2nd sg!} ’ | <i>compra-la</i> | kumprélə | ‘buy _{2nd sg it_{fem}!} ’ |
| prémə prém | ‘to press’ ‘press _{2nd sg.} !’ | <i>prémer-la</i> | (c) prəməllé | ‘to sing it _{fem} ’ | <i>prem-la</i> | prəməllə | ‘press it _{fem} !’ |
| véndrə | ‘to sell’ | <i>vendre’l</i> | (d) véndrə | ‘to sell it _{masc.} ’ | <i>vendre-la</i> | vəndrélə | ‘to sell it _{fem} ’ |

| | | | | | | | |
|--|--|--------------------|----------------|---------------------------------------------|-------------------|-----------|----------------------------------------------------------|
| | | <i>me la dóna</i> | (e) mə lə dónə | ‘(he/she) gives it _{fem} to me’ | <i>dóna-me-la</i> | dunəmələ | ‘give _{2nd sg it_{fem}} to me!’ |
| | | <i>te la poses</i> | tə lə pózəs | ‘you put it _{fem} on yourself’ | <i>posa-te-la</i> | puzətélə | ‘put _{2nd sg it_{fem}} on yourself!’ |
| | | <i>se compra</i> | sə kómprə | ‘(he/she) buy for himself’ | <i>comprar-se</i> | kumprətsé | ‘to buy for himself’ |

(Data from Alcover 1908-1909, Moll 1932, Veny 1982, Bonet 2002, Grimalt 2002, 2004; Torres-Tamarit 2008)

5. To the interpretation. This behavior is not trivial, given the rich structural picture beyond these vowels. In this paper, we are going to explore two hypothesis for these facts. **5.1.** The first one is to assume that in *all* these cases the vowel is already present underlyingly and that all [ə] are derived from /ε/. This interpretation is apparently controversial for the cases in (1d), but in fact it is not if we take into account that in most Balearic Catalan dialects the final sequence [rə] of these verbs (*beure, treure, entendre, estendre, rompre*, etc.) is often interpreted by the speaker as belonging to the stem, and, therefore, not as the tense mark + the epenthetic vowel, since the «apparent» tense mark /r/ is often repeated in a sequence of verb-enclitic: *beure'l* [bəwrəlló] ~ [bəwrél] ‘to drink it_{masc.}’; *treure-ho* [trəwrəró] ~ [trəwréw] ‘to drink it_{neuter}’, etc. **5.2.** Another interpretation of the facts is to assume the epenthetic character for some of these vowels (basically those in (c), (d) and (e)), but then some mechanism should explain their featural mapping. Markedness alone cannot be responsible for that since the universal markedness hierarchy for stressed nucleus (*N/ə >> *N/i,u >> *N/e,o >> *N/ε,o >> *N/a) would select the [a]. The selection of [ε] instead of [a] could be due to the higher perceptual similarity between [ə] and [ε], especially in stressed position. In fact, there is independent diachronic evidence for this behavior: in most Eastern Catalan dialects the stressed schwa of old Catalan has become systematically [é] and not, for instance, [á]. **5.3.** Given the depicted facts, in which the schwa consistently alternates with the mid-low front vowel and roughly following the radical version of richness of the base exposed in McCarthy 2005 and a particular integration of the lexicon optimization hypothesis, our proposal is that the schwa has not a phonemic status in the varieties lacking this vowel in stressed position, even in non-alternating cases such as *cas[ə]* ‘house’, *c[ə]lent* ‘hot’, *p[ə]tit* ‘little’; in these cases, just three vowels are present in the lexicon of the speaker and the one more easily retrieved is /ε/, the most similar to the schwa, among the three vowels with which it alternates (*i.e.* /a/, /ε/, /e/).

Selected references: Alarcos, E. (1953): Sistema fonemático del catalán», *Archivum*, III. 135-146. // Badia, A. M. (1965): Función significativa y diferencial de la vocal neutral en el catalán del Barcelona. *Revista de filología española*, XLVIII. 79-93. // Bonet, E. (2002): Cliticització. In Solà, J., Lloret, M.R.; Mascaró, J. Saldanya, M.P.(dir.) *Gramàtica del català contemporani*. Barcelona: Empúries. // Bonet, E.; Lloret, M. R. (1998): *Fonologia Catalana*. Barcelona: Ariel. // Bonet, Eulàlia and Torres-Tamarit, Francesc (2009) Allomorph selection in Catalan encliticized imperatives. Paper accepted at the 39th Linguistic Symposium on Romance Languages, University of Arizona. // Capmany, E. (2008): Diferències fonològiques entre diversos estils de parla al català central septentrional. PhD dissertation. UB. // Grimalt, P. (2002) Enclisi i accentuació en el català de Mallorca i Menorca. MA Thesis.UB. // Grimalt, P. (2004) Aplicació de la proposta d’accent de Max W. Wheeler al patró accentual de les formes encliticitzades del català de Mallorca i Menorca. Manuscript, UB // Lleó, C. Problems of Catalan phonology. University of Washington, Washington. // Mascaró, J. (1976): Catalan phonology and the phonological cycle. MIT PhD dissertation. Cambridge. Indiana University Linguistics Club. 43 // McCarthy, J. J. (2004) The Length of Stem-Final Vowels in Colloquial Arabic. Ms., University of Massachusetts Amherst, Amherst, MA. *Perspectives on Arabic Linguistics* 18, ed. Dilworth B. Parkinson. Amsterdam: John Benjamins. // McCarthy, J. J. (2005) Taking a free ride in morphophonemic learning. In: M.-R. Lloret and J. Jiménez, eds., *Morphology in Phonology, Catalan Journal of Linguistics* 4, 19-55. // Palmada, B. (1994): *La fonologia del català. Els principis generals i la variació*. Bellaterra; Barcelona: Servei de Publicacions de la UAB // Prince, A. & Smolensky, P. (1993 [2004]): *Optimality Theory: Constraint Interaction in Generative Grammar*. Malden & Oxford: Blackwell. // Moll, F. B. (1932): Estudi fonètic y lexical del dialecte de Ciutadella». *Miscelànea Filològica dedicada a don A. Ma. Alcover*, Palma 1932. 397-460. // Torres-Tamarit, F. (2008) Stress shift of Formenteran Catalan verb plus enclitic(s) sequences: an OT approach. MA Thesis. UAB // Veny, J. (1982) *Els parlars catalans*. Mallorca: Editorial Moll. // Viaplana, J. & DeCesaris, A. (1984): La “vocal neutra” del català central: fonema o al·lòfon? *Working Papers in Linguistics (Estudis gramaticals I)*, Bellaterra. // Wheeler, M. W. (1979): *Phonology of Catalan*. Oxford: Blackwell.