

# The life cycle of constraint rankings

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*Studies in early English morphophonology*

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## References

ROA = Rutgers Optimality Archive, <http://roa.rutgers.edu/>

- Alderete, John (1997). Dissimilation as local conjunction. In Kiyomi Kusumoto (ed), *Proceedings of the North East Linguistic Society 27*. Amherst, MA: Graduate Linguistic Student Association. 17-32.
- Alderete, John (1999). Faithfulness to prosodic heads. In Ben Hermans & Marc van Oostendorp (eds), *The derivational residue in phonological Optimality Theory*. Amsterdam: John Benjamins. 29-50.
- Bat-El, Outi (1996). Selecting the best of the worst: the grammar of Hebrew blends. *Phonology* 13: 283-328.
- Bately, Janet (ed) (1980). *The Old English Orosius*. (Early English Text Society Supplementary Series 6). London: Oxford University Press.
- Beckman, J. N. (1997). Positional faithfulness, positional neutralization, and Shona vowel harmony. *Phonology* 14: 1-46.
- Beckman, J. N. (1998). *Positional faithfulness*. PhD dissertation, University of Massachusetts, Amherst.
- Benua, L. (1997). *Transderivational identity: phonological relations between words*. PhD dissertation, University of Massachusetts, Amherst. Published (2000) as *Phonological relations between words*. New York: Garland.
- Bermúdez-Otero, Ricardo (1998). Prosodic optimization: the Middle English length adjustment. *English Language and Linguistics* 2: 169-197.
- Bermúdez-Otero, Ricardo (1999). *Constraint interaction in language change*. [*Opacity and globality in phonological change*.] PhD dissertation, University of Manchester & Universidad de Santiago de Compostela.
- Bermúdez-Otero, Ricardo & Richard M. Hogg (2003). The actuation problem in Optimality Theory: phonologization, rule inversion, and rule loss. In D. Eric Holt (ed). *Optimality Theory and language change*. Dordrecht: Kluwer.
- Bermúdez-Otero, Ricardo & April M. S. McMahon (forthcoming). English phonology and morphology. In Bas Aarts & April McMahon (eds), *The handbook of English linguistics*. Oxford: Blackwell.
- Boersma, Paul (1997). How we learn variation, optionality, and probability. *Proceedings of the Institute of Phonetic Sciences of the University of Amsterdam* 21: 43-58.
- Boersma, Paul (1998). *Functional phonology: formalizing the interaction between articulatory and perceptual drives*. The Hague: Holland Academic Graphics.
- Boersma, Paul & Bruce Hayes (2001). Empirical tests of the gradual learning algorithm. *Linguistic Inquiry* 32: 45-86.
- Broselow, Ellen (1992). Parametric variation in Arabic dialect phonology. In Ellen Broselow, Mushira Eid & John McCarthy (eds). *Perspectives on Arabic linguistics IV: Papers from the Fourth Annual Symposium on Arabic Linguistics*. Amsterdam: Philadelphia. 7-45.
- Brunner, Karl (1942). *Altenglische Grammatik nach der angelsächsischen Grammatik von Eduard Sievers neubearbeitet*. 3rd edn (1965) Tübingen: Max Niemeyer.
- Calabrese, Andrea (1994). Sievers' Law in Gothic: a synchronic analysis with some notes on its diachronic development. *The Linguistic Review* 11: 149-194.
- Campbell, Alistair (1959). *Old English grammar*. Oxford: Oxford University Press.
- Chomsky, Noam (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam, & Morris Halle (1968). *The sound pattern of English*. New York: Harper and Row.

- Clements, George N. (1990). The role of the sonority cycle in core syllabification. In John Kingston & Mary Beckman (eds). *Papers in laboratory phonology, 1: Between the grammar and physics of speech*. Cambridge: Cambridge University Press. 283-333.
- Clements, George N. (1992). The sonority cycle and syllable organization. In Wolfgang U. Dressler, Hans C. Luschützky, Oskar E. Pfeiffer & John R. Rennison (eds) (1992). *Phonologica 1988. Proceedings of the Sixth International Phonology Meeting*. Cambridge: Cambridge University Press. 63-76.
- Clemons, Peter (ed) (1997). *Ælfric's Catholic Homilies. The first series: text*. (Early English Text Society supplementary series 17.) Oxford: Oxford University Press.
- Cohn, Abigail & John McCarthy (1994/1998). Alignment and parallelism in Indonesian phonology. *Working papers of the Cornell Phonetics Laboratory* 12, 53-137. [Available (1994) from ROA.]
- Cosijn, P. J. (1888). *Altwestsächsische Grammatik*. Vol. 1 (1883), Vol. 2: *Die Flexion* (1886). Den Haag: Martinus Nijhoff.
- Dahl, I. (1938). *Substantival inflexion in early Old English. Vocalic stems*. (Lund Studies in English VII.) Lund: Gleerup.
- Dresher, B. Elan (1978). *Old English and the theory of phonology*. PhD dissertation, University of Massachusetts, Amherst. Published (1985) New York: Garland.
- Dresher, B. Elan (1993). The chronology and status of Anglian smoothing. In Sharon Hargus & Ellen M. Kaisse (eds). *Studies in Lexical Phonology*. (Phonetics and Phonology 4) San Diego, CA: Academic Press. 325-341.
- Dresher, B. Elan & Aditi Lahiri (1991). The Germanic foot: metrical coherence in Old English. *Linguistic Inquiry* 22: 251-286.
- Fulk, Robert D. (1992). *A history of Old English meter*. Philadelphia: University of Pennsylvania Press.
- Gallée, J. H. (1993). *Altsächsische Grammatik*. 3rd edn. Tübingen: Max Niemeyer.
- Godden, Malcom (ed) (1979). *Ælfric's Catholic Homilies. The second series: text*. (Early English Text Society supplementary series 5.) Oxford: Oxford University Press.
- Godden, Malcom (2000). *Ælfric's Catholic Homilies. Introduction, commentary and glossary*. (Early English Text Society supplementary series 18.) Oxford: Oxford University Press.
- Gretsch, Mechthild (1999). *The intellectual foundations of the English Benedictine reform*. (Cambridge Studies in Anglo-Saxon England 25.) Cambridge: Cambridge University Press.
- Grimm, Conrad (1906). *Glossar zum Vespasian-Psalter und den Hymnen*. (Anglistische Forschungen 18.) Heidelberg: Carl Winter's Universitätsbuchhandlung.
- Hale, Mark & Charles Reiss (1998). Formal and empirical arguments concerning phonological acquisition. *Linguistic Inquiry* 29: 656-683.
- Halle, Morris & William J. Idsardi (2000). Stress and length in Hixkaryana. In Nancy A. Ritter (ed.), *A review of Optimality Theory*. Special issue of *The Linguistic Review*, 17:199-218.
- Halle, Morris & Jean-Roger Vergnaud (1987a). Stress and the cycle. *Linguistic Inquiry* 18: 45-84.
- Halle, Morris & Jean-Roger Vergnaud (1987b). *An essay on stress*. Cambridge MA: MIT Press.
- Hayes, Bruce (1999). Phonetically-driven phonology: the role of Optimality Theory and Inductive Grounding. In Michael Darnell, Edith Moravcsik, Frederick J. Newmeyer, Michael Noonan & Kathleen Wheatley (eds). *Functionalism and formalism in linguistics*. Vol. 1: *General papers*. Amsterdam: John Benjamins. 243-285.
- Healey, Antonette di Paolo (editor), Richard L. Venezky (director of computing), Peter Mielke (systems analyst) & John Price-Wilkin (consultant) (1998). *The Dictionary of Old English corpus in electronic form (TEI-P3 conformant version 1998 release)*. Toronto: Dictionary of Old English Project, Centre for Medieval Studies, University of Toronto. Distributed by Oxford Text Archive.
- Hogg, Richard M. (1988). On the impossibility of Old English dialectology. In Dietrich Kastovsky & Gero Bauer (eds), *Luick revisited*. Tübingen: Gunther Narr.
- Hogg, Richard M. (1992). *A grammar of Old English*. Vol. 1: *Phonology*. Oxford: Basil Blackwell.
- Hogg, Richard M. (1997). The morphology and dialect of Old English disyllabic nouns. In Raymond Hickey & Stanisław Puppel (eds). *Language history and linguistic modelling: a festschrift for Jacek Fisiak on his 60th birthday*. Berlin: Mouton de Gruyter. 113-126.

- Hogg, Richard M. (2000). On the (non-)existence of High Vowel Deletion. In Aditi Lahiri (ed.) *Analogy, levelling, markedness: principles of change in phonology and morphology*. Berlin: Mouton de Gruyter. 353-376.
- Horgan, D. M. (1963). *West Saxon dialect criteria in the extant MSS of King Alfred's translation of Gregory's Regula Pastoralis and Orosius's Historiae adversus paganos*. Dissertation, University of Manchester.
- Hutton, John (1998a). The development of secondary stress in Old English. In Hogg, Richard M. & Linda van Bergen (eds). *Historical linguistics 1995: selected papers from the 12th International Conference on Historical Linguistics, Manchester, August 1995*. Vol. 2: *Germanic linguistics*. Amsterdam: John Benjamins Publishing Company. 115-130.
- Hutton, John (1998b). Stress in Old English, *giet ongean*. *Linguistics* 36: 847-885.
- Idsardi, William J. (1994). Open and closed feet in Old English. *Linguistic Inquiry* 25: 522-533.
- Itô, Junko & R. Armin Mester (1992). Weak Layering and Word Binariness [Preliminary version]. LRC-92-09, Linguistics Research Center, Cowell College, University of California, Santa Cruz.
- Itô, Junko & R. Armin Mester (1998). Markedness and word structure: OCP effects in Japanese. Unpublished manuscript, University of California at Santa Cruz. [Available from ROA.]
- Kager, René (1997). Rhythmic vowel deletion in Optimality Theory. In Iggy Roca (ed), *Derivations and constraints in phonology*. Oxford: Clarendon Press. 463-499.
- Kager, René (1999a). *Optimality theory*. Cambridge: Cambridge University Press.
- Kager, René (1999b). Surface opacity of metrical structure in Optimality Theory. In Ben Hermans & Marc van Oostendorp (eds), *The derivational residue in phonological Optimality Theory*. Amsterdam: John Benjamins. 207-245.
- Ker, N. R. (1957). *Catalogue of manuscripts containing Anglo-Saxon*. Oxford: Clarendon Press.
- Keyser, Samuel Jay & Wayne O'Neil (1985). *Rule generalization and opacity in language change*. Dordrecht: Foris.
- Kiparsky, Paul (1995). The phonological basis of sound change. In Goldsmith, John A. (ed.) *The handbook of phonological theory*. Cambridge, MA: Blackwell Publishers. 640-670.
- Kiparsky, Paul (1998b). Sievers' Law as prosodic optimization. In Jay Jasanoff, H. Craig Melchert & Lisi Oliver (eds). *Mir Curad. Studies in honor of Calvert Watkins*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Kiparsky, Paul (2000a). Analogy as optimization: 'exceptions' to Sievers' Law in Gothic. In Aditi Lahiri (ed), *Analogy, levelling, markedness: principles of change in phonology and morphology*. Berlin: Mouton de Gruyter. 15-46.
- Kiparsky, Paul (in press). *Paradigm effects and opacity*. Stanford: CSLI Publications.
- Kiparsky, Paul & Wayne O'Neil (1976). The phonology of Old English inflections. *Linguistic Inquiry* 7: 527-557.
- Kuhn, S. M. (ed) (1965). *The Vespasian Psalter*. Ann Arbor: University of Michigan Press.
- Lahiri, Aditi, Tomas Riad & Haike Jacobs (1999). Diachronic prosody. In Harry van der Hulst (ed), *Word prosodic systems in the languages of Europe*. Berlin: Mouton de Gruyter. 335-422.
- Lass, Roger (1994). *Old English: a historical linguistic companion*. Cambridge: Cambridge University Press.
- Lin, Yen-Hwei (1997). Syllabic and moraic structures in Piro. *Phonology* 14: 403-436.
- Lindelöf, Uno (1897). *Glossar zur altnorthumbrischen Evangelienübersetzung in der Rushworth Handschrift (die sogenannte Glosse Rushworth<sup>2</sup>)*. (Acta Societatis Scientiarum Fennicae XXII no. 5). Helsingfors: Druckerei der Finnischen Litteratur-Gesellschaft.
- Lindelöf, Uno (1901). *Die südnorthumbrische Mundart des 10. Jahrhunderts. Die Sprache der sog. Glosse Rushworth<sup>2</sup>*. (Bonner Beiträge zur Anglistik X.) Bonn: P. Hanstein's Verlag.
- Lubowicz, Anna (1999). Derived environment effects in OT. In Kimary N. Shahin, Susan J. Blake & Eun-Sook Kim (eds), *The proceedings of the West Coast Conference on Formal Linguistics 17*. Stanford, CA: CSLI. 451-465.
- Luick, Karl (1964). *Historische Grammatik der englischen Sprache*. Edited by F. Wild & H. Koziol. Part 1 (1914-1921), Part 2 (1929-1940). Stuttgart: Bernhard Tauchnitz / Oxford: Basil Blackwell.

- Lutz, Angelika (1986). The syllabic basis of word division in Old English manuscripts. *English Studies* 3: 193-210.
- McCarthy, John (1998). Sympathy and phonological opacity. Ms., University of Massachusetts, Amherst. [Available from ROA; revised version published as McCarthy (1999).]
- McCarthy, John (1999). Sympathy and phonological opacity. *Phonology* 16: 331-399.
- McCarthy, John & Alan Prince (1993). Generalized alignment. In Geert Booij & Jaap van Marle (eds), *Yearbook of morphology*. Dordrecht: Kluwer. 79-153.
- McCarthy, John & Alan Prince (1995). Faithfulness and reduplicative identity. In Jill Beckman, Laura Walsh Dickey & Suzanne Urbanczyk (eds), *Papers in Optimality Theory*. (University of Massachusetts Occasional Papers in Linguistics 18.) Amherst, MA: Graduate Linguistic Student Association. 249-384.
- McCully, Christopher B. (2002). What's afoot with word-final C? Metrical coherence and the history of English. In Teresa Fanego, Belén Méndez-Naya & Elena Seoane (eds), *Sounds, words, texts and change. Selected papers from 11 ICEHL, Santiago de Compostela, 7-11 September 2000*. Volume 2. Amsterdam: John Benjamins. 173-188.
- McCully, Christopher B. & Richard M. Hogg (1990). An account of Old English stress. *Journal of Linguistics* 26: 315-339.
- Minkova, Donka (2003). *Alliteration and sound change in early English*. Cambridge: Cambridge University Press.
- Mitchell, Bruce, Christopher Ball & Angus Cameron (1975). Short titles of Old English texts. *Anglo-Saxon England* 4: 207-221.
- Mitchell, Bruce, Christopher Ball & Angus Cameron (1979). Short titles of Old English texts: addenda and corrigenda. *Anglo-Saxon England* 8: 331-333.
- Pater, Joe (2000). Non-uniformity in English secondary stress: the role of ranked and lexically specific constraints. *Phonology* 17: 237-274.
- Peinovich, M. P. (1979). *Old English noun morphology: a diachronic study*. (North-Holland Linguistic Series 41). Amsterdam: North-Holland Publishing Company.
- Pope, John C. (ed) (1967-8). *Homilies of Ælfric: a supplementary collection*. Volume I (1967), Volume II (1968). (Early English Text Society 259-260.) London: Oxford University Press.
- Prince, Alan & Paul Smolensky (1993). *Optimality Theory: constraint interaction in generative grammar*. Ms., Rutgers University Center for Cognitive Science Technical Report #2. (Revised August 2002: ROA 537.)
- Prince, Alan & Bruce Tesar (1999). Learning phonotactic distributions. Report no. RuCCS-TR-54. New Brunswick, NJ: Rutgers University Centre fo Cognitive Science. [Available from ROA.]
- Schröer, A. (ed.) (1885-8). *Die angelsächsischen Prosabearbeitungen der Benediktinerregel*. (Bibliothek der angelsächsischen Prosa 2). Kassel. 2nd edn (1964) with a supplement by H. Gneuss, Darmstadt: Wissenschaftliche Buchgesellschaft.
- Selkirk, Elizabeth O. (1984). On the major class features and syllable theory. In Mark Aronoff & Richard T. Oehrle (eds). *Language sound structure: Studies in phonology presented to Morris Halle by his teacher and students*. Cambridge, MA: MIT Press. 107-136.
- Selkirk, Elisabeth O. (1996). The prosodic structure of function words. In James L. Morgan & Katherine Demuth (eds), *Signal to syntax: bootstrapping from speech to grammar in early acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates. 187-213.
- Sievers, Eduard (1882). *Angelsächsische Grammatik*. 3<sup>rd</sup> edn (1898), Halle: Niemeyer.
- Simpson, J. A. & E. S. C. Weiner (prepared by) (1989). *The Oxford English dictionary*. 2<sup>nd</sup> edn. Oxford: Clarendon Press.
- Sisam, Kenneth (1953). The publication of Alfred's *Pastoral Care*. In *Studies in the history of Old English literature*. Oxford: Oxford University Press.
- Skeat, W. W. (ed) (1871-87). *The four gospels in Anglo-Saxon, Northumbrian, and Old Mercian versions*. 4 vols. Cambridge.
- Smolensky, Paul (1993). Harmony, markedness, and phonological activity. Handout from Rutgers Optimality Workshop I, New Brunswick, NJ. [Available from ROA.]
- Smolensky, Paul (1995). On the internal structure of the constraint component Con of UG. Handout of talk, University of Arizona. [Available from ROA.]

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- Smolensky, Paul (1996). The initial state and 'Richness of the Base' in Optimality Theory. Report no. JHU-CogSci-96-4. Baltimore: Department of Cognitive Science, John Hopkins University. [Available from ROA.]
- Spaelti, Philip (1994). Weak edges and final geminates in Swiss German. *Papers from the Annual Meeting of the North East Linguistic Society* 24: 573-588.
- Suphi, Menekse (1988). Old English stress assignment. *Lingua* 75: 171-202.
- Suzuki, Seiichi (1988). On the 1 sg. pres. ind. ending *-u* and High Vowel Deletion in Anglian and other West Germanic languages. *Indogermanische Forschungen* 93: 210-224.
- Sweet, Henry (ed) (1871-2). *King Alfred's West-Saxon version of Gregory's Pastoral care*. (Early English Text Society original series 45, 50). London: N. Trübner & Co. Reprinted (1958). London: Oxford University Press.
- Sweet, Henry (ed) (1883). *King Alfred's Orosius, part I: Old English text and Latin original*. (Early English Text Society original series 79). London: N. Trübner & Co.
- Sweet, Henry (ed) (1885). *The oldest English texts*. (Early English Text Society original series 83). London: N. Trübner & Co.
- Tesar, Bruce & Paul Smolensky (2000). *Learnability in Optimality Theory*. Cambridge, MA: The MIT Press.
- Thorpe, Benjamin (ed) (1844-46). *The homilies of the Anglo-Saxon Church. The first part, containing the Sermones Catholici, or homilies of Ælfric*. 2 vols. London.
- Vennemann, Theo (1988). *Preference laws for syllable structure and the explanation of sound change, with special reference to German, Germanic, Italian and Latin*. Berlin: Mouton de Gruyter.
- Wagner, Karl Heinz (1969). *Generative grammatical studies in the Old English language*. Heidelberg: Julius Groos.
- Wetzell, Claus-Dieter (1981). *Die Worttrennung am Zeilenende in altenglischen Handschriften*. Frankfurt: Lang.
- Whitelock, Dorothy (1975). *Sweet's Anglo-Saxon reader in prose and verse*. (2<sup>nd</sup> corrected reprint of the 1967 revised edn; first edn 1876.) Oxford: Clarendon Press.
- Wright, Joseph (1924). *Grammar of the Gothic language*. Oxford: Clarendon Press.