Tobias Scheer
Université de Nice, CNRS 6039
scheer@unice.fr

Government-Dependency Phonology Workshop
Leiden, 3 December 2004
this handout and more stuff at www.unice.fr/dsl/tobias.htm

Melodic representation – what is left after the 80s-90s battle ?

(1) General landscape

a. The empirical focus of linguists changes over time in quite unpredictable fashion. A recurrent motivation for switching to another thematic field seems to be desperation: when a theory turns without gaining ground and no fresh data can help, people leave it as it is and turn to another area, either empirically or theoretically speaking. Anderson (1985): going back and forth between computation and representation.

1. In the 70s and early 80s, phonologists were concerned with computation (abstractness – concreteness, rule ordering, Lexical Phonology).
2. Following the autosegmental revolution, they then switched to representations, especially to the internal structure of segments: all individual theories of the 80s are based on and differentiated by contrasting assumptions on segmental structure: Feature Geometry, Dependency Phonology, Particle Phonology, Government Phonology (only Lexical Phonology is agnostic here).
3. By the late 80s/ early 90s, arguments were exchanged, and advances either on the empirical or on the conceptual side were rare (except perhaps in Government Phonology). Since the early 90s, the focus is back on computation (OT, Declarative Phonology). In OT, representations as an autonomous referee of grammaticality have been evacuated altogether: the arbitral award of autosegmental representations is always outranked by the constraint chamber; most of the time, there are no segmental representations left at all: *[dorsal] and the like are not representations since they cannot be ill-formed.

b. the revenge of structuralism

1. basic structuralist idea: **the system**
   a sound is not a linguistic object by itself. It becomes a linguistic object only if it contracts a relation with other sounds. It properties are defined by these relations, i.e. by its systemic properties. If the system changes, the properties of individual sounds also change, even though they may be phonetically unmodified. Therefore, a sound may not be studied without looking at the other sounds present in the system. Systemic pressure exists.
2. generative phonology has always ignored (neglected, refused, denied…) this insight. Sounds are studied by themselves and for themselves without any reference to the system. The only influence they are subject to comes from the context. The same sound in different systems has identical properties.
3. both the structuralist and the generative view is wrong in isolation: sound varies according to contextual and systemic pressure. Phonological structure and processes are the result of both universal and language-specific properties.
4. recent rediscovery of structuralist thinking in generative phonology
   - one incursion in the late 80s: contrastive underspecification (Steriade 1987, Clements 1988 et Archangeli 1988).
   - Government Phonology in the 90s: development of Licensing constraints at SOAS (Kaye 2000,2001, Charette & Göksel 1994,1996, see the summary in Scheer 2003).
   - Grounded Constraints in OT: phonological events have exclusively non-phonological causes: functional, phonetic, psycho-linguistic etc. (Hayes 1999, Steriade 1997, Hayes *et al.* 2004, Beckman 1997). This motivates for example constraints against the loss of contrast.

- Clements (2001,2002): statistic measures on cross-linguistic systems plus minimalist construction of feature-geometric trees ("build only if you need to"). For example, [f] is significantly more frequent in systems where [v] is also present: both sounds "support" each other. Minimalist construction introduces some kind of privativity.

variable explicitness of the structuralist issue: mention and discussion in Clements' work, simple mention of some references but no discussion of the issue in OT, no mention nor discussion in GP.

(2) things that are fairly consensual today and will still be relevant 20 years form now
   a. the same set of primes for vowels and consonants.
   b. the existence of a dominance relation among melodic primes (dependency, Licensing Constraints, tree…).
      As everywhere else, the 80s have paid a lot of attention to the representational side, while neglecting the computational issue, i.e. the relation among primes, and their interaction with the primes themselves. Licensing Constraints are on the way…
   c. the implementation of melodic primes into autosegmental representations.

Issues under debate

(3) privativity vs. binarity
privativity has won de facto, even though this has never been made explicit; binarity survives only because of tradition, e.g. in OT where representations do not matter anyway (see Scheer 2004;§309).
   a. privativity: there is no negative specification for properties that are absent.
   b. privativity is the grounding for many classical theories: Dependency Phonology where it has been invented (Anderson & Jones 1974), Government Phonology, Particle Phonology.
   c. in Feature Geometry, privativity runs under the label of Underspecification (summary in Steriade 1995). No credit has ever been given to privativity (or the word pronounced) in the underspecification literature.
      Clements' (2001) minimalist trees are de facto underspecified and hence privative.
   d. standard arguments
      - against binary systems: sth that isn't there cannot spread, hence the fact that nasality spreads in many languages but non-nasality never does, is predicted. On the binary account on the contrary processes whereby nasal objects are turned into non-nasal ones should exist.
      - against privative systems: they are unable to characterize the set of high vowels as a natural class. The only thing that [i,u,y] share is the absence of A.

(4) general melodic architecture:
   a. the SOAS project of reducing the number of primes, from 10 (1985) to 5 (revised model of elements, difficult to provide a global quote, Kaye and Charette haven't produced any text, though see f) below).
   b. motivation: overgeneration. Everybody I believe is sympathetic with the project and its goal – the way it is implemented however raises a number of questions and may not be consensual.
   c. overall strategy:
      - encode melodic information structurally, rather than as primes.
      - add a structural relation among primes: Licensing Constraints.

d. observation: out of the 10 original primes, Manner primes are singled out for attack: ?, h, N, ATR, see (8) below. Nobody has ever thought of getting rid of the Place definers I,A,U. I will come back to this natural imbalance: Place is the only thing that is shared by all segments, and I believe it is the only thing that complexity counts.
e. representation of Place – some fairly uncontroversial advances since 1990
   - R is dead.
   - A (co-)defines dentals, or rather a subset thereof:
     - all obstruents [t,d,s,z], but not sonorants [r,l,n]: revised model.
     - fricatives [s,z] and sonorants [r,l,n], but not stops [t,d], which are empty: Scheer (1999,2004).
     - "classical plus [r]": only [r] has A – Harris (1994).
   - gutturals are (co-)defined by A.
   - a controversial one: the representation of velars [k,g,x,ɣ], see (9) below.
f. some proposals that cover the entire consonantal space:
   - the revised model (Kaye 2000,2001, Charette & Göksel 1994,1996 and Cobb1997).
   - Harris & Lindsey (1995)
   - Cyran (1994)
   - Weijer (1994)
   - Rennison & Neubarth (2003,ms)
   - Scheer (1996,1999,2004)

(5) complexity – the most significant advance
a. John Harris' notion of segmental complexity allows to derive sonority, a non-observational property of sound, from independent considerations (regular segmental alternations) and hence frees the discussion from circularity.
b. sonority is a non-observational property of sound: no phonetic (acoustic or articulatory) measure allows to rank a given sound on the sonority scale. The only way to determine the sonority value of a sound is to observe its phonological behaviour. For example "does or does not participate in final devoicing", "may or may not occur as the second member of a branching Onset", "does or does not close the syllable", "has spontaneous vs. non-spontaneous voicing" etc.
c. all codings of sonority that are not based on complexity are circular:
   - how do we know that a sound is a sonorant? Because it bears [+son].
   - how do we know that a sound bears [+son]? Because it is a sonorant.
   This is true for all codings that use features, and for Charm as well: there is no reason why the vectors of non-spontaneous voicing, L and H, have been chosen for bearing negative Charm, rather than any other element. The only reason was to guarantee that obstruents which are the only sounds that bear L,H, have negative Charm, and to make follow syllabification from Charm.
d. complexity does away with circularity: sonorancy is calculated by looking at a formal property of sound that is established on grounds which are entirely independent from the set of observations that determine whether a sound is a sonorant or not.
   Under the rule of complexity, every move you make regarding the internal structure of consonants has a consequence for their sonority. Before, you could say whatever you wanted regarding place and manner, there were no consequences on sonority. Now there are.
   Complexity has established a link between regular segmental alternations and sonority. If you want to establish one, you have to discuss the other.

e. complexity is a FORMAL property of sound. It is therefore modality-independent. Modality independence is a condition on autonomous phonology: human speech is vocal only by accident. Grammar sits in the brain and does not care how it is transmitted from one brain to another – the only thing it cares for is THAT there is secure transmission. The regular channel is vocal, but we know that there is at least one other possible channel when vocal transmission is corrupted for physiological impairment: sign language.
There is good reason to believe that signs have an internal structure, and that they are organised in syllables (Perlmutter 1992, Sandler 1993, Hulst 2000). Since syllable structure depends on sonority on any account, signs must be more or less sonorous. This however is impossible because only sounds are more or less sonorous. Any structure, however, is more or less complex. **Hence complexity is a condition on modality independence.**

f. complexity supposes privativity: all feature-geometric trees are equally complex since they bear the same number of primes and branches.

(6) are sonorants or obstruents the heavy (= complex) guys ?
this question is related to the headedness of syllabic constituents: uncontroversially, the head of a structure must be more complex (or at least not less complex) than the dependent.
Hence the question of complexity is transposed into one of headedness: if in a branching Onset TR the obstruent is the head, it must be the heavy guy; if the sonorant is the head, it must be the heavy guy.

a. classical view in GP since Harris (1990) (but also outside GP: Dogil 1988): obstruents are heads, sonorants dependents. Hence
sonorants = light
obstruents = heavy
the more complex the less sonorous
syllable structure in Standard GP depends on this. If it happens not to be true, the entire syllabic system of Standard GP crashes.

b. reverse view: sonorants are heads, obstruents dependents. Hence
sonorants = heavy
obstruents = light
logic: within all constituents, the most sonorous item is the head: syllable, Nucleus, Coda, Onset etc. ("small syllables"). Along these lines:
Anderson (1987:32) "*t* is simultaneously dependent of *s* and *r*, and the entire onset forms a construction headed by *r*"
Sauzet (1993:75ss,143ss,1999:65).
Rice (1992): the more complex the more sonorous.
Sonority is a direct function of the amount of geometric structure (i.e. melodic primes and nodes): sonorants need a lot of geometric specification in order to be defined. On the other hand, obstruents (and stops among these) are the unmarked consonants. Therefore, they are defined by default with appeal to a smaller amount of geometric elements.
Scheer (1996,1999,2004).

c. increasing evidence based on segmental alternations that sonorants are the big guys: they contain a lot of place definers: A, I, U. For example, [r] notoriously lowers preceding vowels (e.g. Harris 1994:244, Lindau 1985, Broadbent 1991,1996,1999) and appears as a low vowel when vocalized (English, German). Nasals have also lowering power.
Coronal sonorants [r,l,n] are I-providers. E.g. Austrian German (Rennison 1978), Caribbean Spanish (Harris 1993, Harris 1997), Dutch (Scheer 1999), Italian (platea > piazza etc.).
Richness of sonorants: Torre (2003), Sebregts (2004).

(7) what exactly is counted when complexity is computed? All melodic primes or only place definers? (Scheer 2004:§52)

a. is there a formal segregation of place- and manner definers in the first place?

classical GP: no – but tacitly yes: "resonance elements" vs. the rest
everybody else: yes

Dependency: Categorial (Manner) vs. Articulatory (Place) Gesture (Anderson & Ewen 1987). Hulst (1994, 1995:92s, 1999:94ss,2000): Place in the Locational or the Place Gesture vs. the Categorial or Manner Gesture.
Feature Geometry: in different branches.

b. arguments for a formal segregation of Place and Manner

- headedness 1:
  vocalic representations can only be headed by Place definers – this has never been made an explicit requirement, but all systems of privative vocalic structure follow it. That is, no vowel is headed by L, H, N. Only I, A, U, v head vocalic expressions.
- headedness 2:
  in Harris' (1990) system, Manner primes can head consonantal expressions. For example, bilabial stops are ?-headed, while labio-dentals are h-headed (probably just in order to have a means to make them different, the salient property of both being the presence of U as a dependent).
  If the notion of headedness is taken seriously and includes a phonetic correlate, heads contribute more to the phonetic output than operators. Hence ?-headed stops (such as bilabials) are expected to be more "stoppish" than those stops where the occlusion element ? is only an operator (such as dentals and velars). This prediction is not echoed by any kind of phonetic or phonological evidence: all stops are equally "stoppish".
- vocalic sonority
  the three degrees of aperture high, mid and low define vocalic sonority. They are calculated in complete absence of any specification regarding Manner: whether a vowel is nasal or not, whether it bears a high or a low tone, is entirely irrelevant for its sonority. Only I,AU define the sonority of vowels. So why should that be any different for consonants?
- counting manner definers is not fair play
  Charm was a hidden [±son] prime: the overt opposition between spontaneous and non-spontaneous voicing was simply recast as Charm, which in turn determined governing abilities and hence headship. The question why the low and the high tone, rather than any other prime, were selected as the vector of negative Charm was never raised, let alone answered.
  This contrast in complexity when Manner primes are counted is just as artificial as was the one established by Charm: sonorants will never be able to compete with obstruents because they lack the tone elements L and H as well as the noise element h by definition.
  Let us compare what is comparable: Place is the only feature that is shared by all sounds: vowels, sonorants and obstruents. Only here is a competition possible. L, H, N, h, ? are specifics.

(8) how should manner be encoded: by particular primes or structurally ?
The idea that manner should be encoded structurally rather than by specific primes has gained much ground since the early days of privative representation.
This is true for all areas:

a. ATR
   - Harris (1994): -ATR vowels are empty-headed.
   - revised system SOAS: -ATR vowels are headless, ATR vowels are headed.
b. occlusiveness = getting rid of ?
   Jensen (1994)
c. Manner as such = occlusiveness ? and noise h
   Ritter (1997)
   headedness alone decides on stricture. That is, stops and laterals are headed (but never by a Manner-defining prime, except the glottal stop which is H-headed), while fricatives and rhotics are headless. Only nasals are L-headed.
d. Hulst (2002): no melody, just structure.
e. interpreting Manner as a structural property has been way less successful than making ATR structural.
f. everybody adheres to the general project of eliminating Manner primes. If one day we succeed in getting rid of them (by whatever means), the question raised under (7) becomes pointless: only Place definers will be left, and they will be the only thing that complexity can count.
   ==> the two projects 1) only Place definers count for complexity and 2) getting the number of primes down to 5 are consubstantial: 1) actually anticipates on / supposes the success of 2).

(9) the triangle [u,w] – labials – velars (Scheer 2004:§43)

a. every theory must be able to somehow express the fact that labial consonants, velar consonants and [u,w] alternate with each other. They form a natural class.
b. this fact has been recognised since Jakobson's system. Its original motivation was an over acoustic correlate between labials and velars.
   In early post-SPE feature systems, it was represented by the feature [grave] (Hyman 1973, Vago 1976, Odden 1978).
   In autosegmental feature-geometric trees, [grave] was captured structurally, rather than as an independent prime: the place-dominated node "peripheral" (Clements & Hume 1995, Avery & Rice 1989, Rice 1994,1996,1999a,b).
c. all privative systems propose one single prime, U, for roundness and labiality. Hence both properties are undissociable. Moreover, roundness is held to be the salient property of U. This makes wrong predictions (Roca 1994:120):
   - U is absent from any non-rounded articulation. Back unrounded vowels [ɯ,ɤ,ʌ] exist.
   - U must be absent from velar consonants [k,g,x,ɣ], which are all unrounded. Therefore velar consonants cannot alternate with either labial consonants or [u,w].

d. example alternation velar consonants – u: Czech vocative

	Nominative	Vocative	spelling	gloss
-i / Cpal__	kuuɲ	kɔɲ-i	kůň, koni	horse
	tɔmaaʃ	tɔmaaʃ-i	Tomáš, Tomáši	Thomas
	muʃ	muʒ-i	muž, muži	man
	lhaař	lhaař-i	lhář, lháři	liar
	złɔɟɛj	złɔɟɛj-i	zloděj, zloději	thief
	słɛc	słɛɟ-i	sled', sledi	herring
-u / Cvel__	hɔx	hɔx-u	hoch, hochu	boy
	gɔŋk	gɔŋg-u	gong, gongu	gong
	zdɛɲɛk	zdɛɲk-u	Zdeněk, Zdeňku	first name
	ptaak	ptaak-u	pták, ptáku	bird
-ɛ / elsewhere	pɛs	ps-ɛ	pes, pse	dog
	dɔktɔr	dɔktɔr-ɛ	doktor, doktore	doctor
	hɔłup	hɔłub-ɛ	holub, holube	pigeon
	hrat	hrad-ɛ	hrad, hrade	castle
	ʃɛf	ʃv-ɛ	šev, šve	seam

e. interaction of [u,w] with labials is uncontroversial: everybody takes this as a fact.

f. interaction of velar and labial consonants: Latin > Romanian

lat	rom	gloss
noktem	noapte	night
lukta	lupta	fight
pectus	piept	breast

(10) what should be the impact of cross-linguistic counts (segmental markedness) on the internal structure of segments?

a. possible answers:
   - direct and full:
     what is unmarked is the truth and should be encoded by linguistic structure.
     Marked objects come into being by an extra operation based on the unmarked truth.
     OT is on this line.
     Feature Geometry is sympathetic.
     GP rejects this point of view.
   - none
     linguistic theory ought to encode what a possible, not what a probable language is.
     Lass (1984:278s):
     "I propose introducing |ɯ| 'velarity' and |ω| 'labiality'/'roundness', and dispensing with |u| completely. |u| seems to conflate too many properties anyhow. […] Overall I think it's a good idea for ALL markedness considerations to be excluded from phonological characterizations. […] Segments ought to code only their own properties, not statistics of cross-language distribution".
     Newmeyer (1998): "The irrelevance of typology for linguistic theory"

b. what do we do when there are several candidates for a given representation, some qualifying in some langue, others in others?
   Example: who is empty? Dentals or velars (talking of stops only)?
   - g-zero alternation in Pular, which alone has founded the view in GP that velars are empty-headed (and bear no other place defining prime). By the way, this information cannot be retrieved from the GP literature, where the Pular case is left unmentioned and the empty-headedness of velars unmotivated. You need to talk to Jonathan if you want to know about it.

- t-zero alternations in many languages; the glottal stop left aside, [t] is the typical eptenthetic consonant.
  e.g. in French: numéro – numéro-t-er, bijou – bijou-t-ier, café – café-t-ier etc., cf. Pagliano (2003).
  e.g. in German (Sprosskonsonant): mhg saf, obeʒ, bâbes > Saft, Obst, Papst
- coronality is inert
  [t,d] are very often and very easily affected by phonological processes such as palatalisation etc., but never constitute their output (except epenthesis of course). If [t,d] lack melodic content, this observation receives a natural explanation: phonological processes transport, replace or delink primes. Hence, the adjunction of a prime to a given structure cannot possibly produce an empty object. On the other hand, nothing can be replaced within or eliminated from an empty object. Backley (1993) and Scheer (1999) along these lines.

c. what about structural markedness, i.e. implicational relationships of the kind "if a language bears fricatives / front rounded vowels, it also bears stops / front unrounded vowels, while the reverse is not true" ?
   Should phonological theory ignore this one as well? As a matter of fact GP does not: front rounded vowels are front unrounded vowels plus something, fricatives are stops plus something.
   I believe that structural markedness should be taken seriously: a theory where fricatives are the typical/ representationally fundamental consonants must be wrong.

(11) summary
things to be sorted out in the future

a. structuralism: any theory needs to somehow express systemic **and** universal influence on sound. Generative systems must find a way to implement/ express systemic forces. There is surely a variety of ways to do that, Licensing Constraints is one of them. Since
   1) Licensing Constraints have not been created for that purpose and
   2) the insight that there is sth as systemic pressure is only slowly growing in generative quarters,
   various solutions will hopefully run against each other – we are just at the very outset of research in this area.
b. markedness: segmental (=cross-linguistic counts) and structural (=implicational relationships). To which extent should segmental representations reflect them? My best guess: the former not at all, the latter yes.
c. privativity vs. binarity: privativity has won de facto.
d. reducing the number of primes – yes, but how?
   - structural encoding – yes, but this solution has its limits, cf. Jensen (1994).
   - relations among primes…
e. complexity – YES!
   but how is it computed? Counting all primes or just Place? If Manner primes disappear, this question disappears as well.
f. are sonorants or obstruents the big guys? HEAVY consequences since syllable structure entirely depends on this question. All of Standard GP crashes if sonorants turn out to be rather complex. There is increasing evidence that indeed they are. So branching Onsets must be thought of as head-final… (Scheer 2004 is built on this scenario).
g. particular issues regarding place
   - the triangle: [u,w] – labials – velars.
   - which are the empty consonants: dentals (which ones) or velars?
   - to which extent does A (co-)define dentals?

References

Anderson, Stephen 1985. Phonology in the Twentieth Century. Chicago: University of Chicago Press.

Anderson, John 1987. Structural Analogy and Dependency Phonology. Explorations in Dependency Phonology, edited by John Anderson & Jacques Durand, 15-48. Dordrecht: Foris.

Anderson, John & Charles Jones 1974. Three theses concerning phonological representations. Journal of Linguistics 10, 1-26.

Anderson, John & Colin Ewen 1987. Principles of Dependency Phonology. Cambridge: Cambridge University Press.

Archangeli, Diana 1988. Aspects of underspecification theory. Phonology 5, 183-208.

Avery, Peter & Keren Rice 1989. Segment structure and coronal underspecification. Phonology 6, 179-200.

Backley, Philip 1993. Coronal: the undesirable element. UCL Working Papers in Linguistics 5, 301-323.

Beckman, Jill 1997. Positional Faithfulness, Positional Neutralisation and Shona Vowel Harmony. Phonology 14, 1-46.

Broadbent, Judith 1991. Linking and Intrusive r in English. UCL Working Papers in Linguistics 3, 281-302.

Broadbent, Judith 1996. The representation of coronal segments. Ph.D dissertation, University College London.

Broadbent, Judith 1999. A new approach to the representation of coronal segments. Issues in phonological structure, edited by S.J. Hannahs & Mike Davenport, 1-25. Amsterdam: Benjamins.

Charette, Monik & Asli Göksel 1994. Vowel Harmony and Switching in Turkic languages. SOAS Working Papers in Linguistics and Phonetics. 4, 31-52. Also in Kardela, Henryk, Bogdan Szymanek (eds), A Festschrift for Edmund Gussmann, 29-56. Lublin 1996: University Press of the Catholic University of Lublin.

Charette, Monik & Asli Göksel 1996. Licensing constraints and vowel harmony in Turkic languages. SOAS Working Papers in Linguistics and Phonetics 6, 1-25. Also in Cyran, Eugeniusz (ed), Structure and Interpretation. Studies in Phonology, 65-88. Lublin 1998: Folium.

Clements, George 1988. Toward a Substantive Theory of Feature Specification. Proceedings of NELS 18, Vol 1, edited by James Blevins & Juli Carter, 79-93. Amherst: GLSA.

Clements, George 2001. Representational economy in constraint-based phonology. Distinctive Feature Theory, edited by Tracy Hall, 71-146. Berlin, New York: Mouton de Gruyter.

Clements, George 2002. Economie de traits et représentations lexicale. Paper presented at the 4è Journées Internationales du GDR Phonologies, Grenoble 6-8 June 2002.

Clements, George & Elizabeth Hume 1995. The Internal Organization of Speech Sounds. The Handbook of Phonological Theory, edited by John Goldsmith, 245-306. Oxford: Blackwell.

Cobb, Margaret 1997. Conditions on Nuclear Expressions in Phonology. Ph.D dissertation, SAOS, London.

Cyran, Eugeniusz 1994. Vocalic Elements in Phonology. A study in Munster Irish. Ph.D dissertation, University of Lublin.

Dogil, Grzegorz 1988. Phonological configurations: natural classes, sonority and syllabicity. Features, Segmental Structure and Harmony Processes (Part 1), edited by Harry van der Hulst & Norval Smith, 79-103. Dordrecht: Foris.

Harris, James 1983. Syllable Structure and Stress in Spanish. Cambridge, Mass.: MIT Press.

Harris, John 1990. Segmental complexity and phonological government. Phonology 7, 255–300. TOB.

Harris, John 1994. English sound structure. Oxford: Blackwell.

Harris, John 1997. Licensing Inheritance: an integrated theory of neutralisation. Phonology 14, 315-370.

Harris, John & Geoff Lindsey 1995. The elements of phonological representation. Frontiers of Phonology, edited by J.Durand & F.Katamba, 34-79. Harlow, Essex: Longman.

Hayes, Bruce 1999. Phonetically driven phonology: the role of Optimality Theory and Inductive Grounding. Functionalism and formalism in linguistics. Vol.1: General papers, edited by Michael Darnell, Edith Moravcsik, Frederick Newmeyer, Michael Noonan & Kathleen Wheatley, 243-285. Amsterdam: Benjamins. ROA (#158).

Hayes, Hayes, Robert Kirchner & Donca Steriade 2004 (eds.). Phonetically-Based Phonology. Cambridge: Cambridge University Press.

Hulst, Harry van der 1994. Radical cv phonology: the locational gesture. UCL Working Papers in Linguistics 6, 439-478.

Hulst, Harry van der 1995. Radical CV Phonology: the categorial gesture. Frontiers of Phonology: Atoms, Structures, Derivations, edited by Jacques Durand & Francis Katamba, 80-116. London & New York: Longman.

Hulst, Harry van der 1999. Features, segments and syllables in Radical CV Phonology. Phonologica 1996, edited by John Rennison & Klaus Kühnhammer. The Hague: Holland Academic Graphics.

Hulst, Harry van der 2000. Modularity and Modality in Phonology. Phonological Knowledge. Conceptual and Empirical Issues, edited by Noel Burton-Roberts, Philip Carr & Gerard Docherty, 207-243. Oxford: Oxford University Press.

Hulst, Harry van der 2002. No melody, just structure. Talk presented at the 9th International Phonology Meeting, 1-3 November 2002, Vienna.

Hyman, Larry 1973. The feature [Grave] in phonological theory. Journal of Phonetics 1, 329-337.

Jensen, Sean 1994. Is ? an element? Towards a Non-segmental Phonology. SOAS Working Papers in Linguistics and Phonetics 4, 71-78.

Kaye, Jonathan 2000. A Users' Guide to Government Phonology. Ms. TOB.

Kaye, Jonathan 2001. Working with licensing constraints. Constraints and Preferences, edited by Katarzyna Dziubalska-Kol"aczyk, 251-268. Berlin & New York: Mouton de Gruyter. TOB.

Lass, Roger 1984. Phonology. An introduction to basic concepts. Cambridge: Cambridge University Press.

Lindau, Mona 1985. The story of /r/. Phonetic linguistics: essays in honor of Peter Ladefoged, edited by Victoria Fromkin, 157-168. Orlando: Academic Press.

Newmeyer, Frederick 1998. The irrelevance of typology for linguistic theory. Syntaxis 1, 161-197.

Odden, David 1978. Further evidence for the feature [GRAVE]. Linguistic Inquiry 9, 141-144.

Pagliano, Claudine 2003. L'épenthèse consonantique en français. Ce que la syntaxe, la sémantique et la morphologie peuvent faire à la phonologie. Ph.D dissertation, Université de Nice. TOB.

Perlmutter, David 1992. Sonority and Syllable Structure in American Sign Language. Linguistic Inquiry 23, 407-442.

Rennison, John 1978. Bidialektale Phonologie: Die Kompetenz eines Salzburger Sprechers. Ph.D dissertation, University of Slazburg.

Rennison, John & Friedrich Neubarth 2003. An x-bar theory of Government Phonology. Living on the Edge. 28 papers in honour of Jonathan Kaye, edited by Stefan Ploch, 95-130. Berlin, New York: Mouton de Gruyter.

Rennison, John & Neubarth, Friedrich ms. An x-bar theory of Government Phonology. Ms, University of Vienna. Available at http://www.univie.ac.at/linguistics/gp/papers/index.htm.

Rice, Keren 1992. On deriving sonority: a structural account of sonority relationships. Phonology 9, 61-99.

Rice, Keren 1994. Peripheral in Consonants. Canadian Journal of Linguistics 39, 191-216.

Rice, Keren 1996. Default variability: the coronal-velar relationship. Natural Language and Linguistic Theory 14, 493-543.

Rice, Keren 1999a. Featural markedness in phonology: Variation. Part 1. Glot International 4.7, 3-6.

Rice, Keren 1999b. Featural markedness in phonology: Variation. Part 2. Glot International 4.8, 3-7.

Ritter, Nancy 1997. Headedness as a means of encoding stricture. Phonology in progress - Progress in phonology, edited by Geert Booij & Jeroen van de Weijer, 333-365. Leiden: Holland Academic Graphics.

Roca, Iggy 1994. Generative Phonology. London: Routledge.

Sandler, Wendy 1993. A sonority cycle in American Sign Language. Phonology 10, 243-279.

Sauzet, Patrick 1993. Attenance, gouvernement et mouvement en phonologie. Les constituants dans la phonologie et la morphologie de l'occitan. Ph.D dissertation, Université de Montpellier.

Sauzet, Patrick 1999. Linéarité et consonnes latentes. Recherches Linguistiques de Vincennes 28, 59-86.

Scheer, Tobias 1996. Une théorie de l'interaction directe entre consonnes. Ph.D dissertation, Université Paris 7. TOB.

Scheer, Tobias 1999. A theory of consonantal interaction. Folia Linguistica 32, 201-237. TOB.

Scheer, Tobias 2003. Privative melodic representations and structuralist thinking: Licensing Constraints. Talk presented at the Colloque du PFC, Paris 11-13 December 2003. Handout at TOB.

Scheer, Tobias 2004. A Lateral Theory of Phonology. Vol.1: What is CVCV, and why should it be? Berlin: Mouton de Gruyter.

Sebregts, Koen 2004. The representation of complexity and Dutch /r/ variation. Talk presented at the 12th Manchester Phonology Meeting, May 2004.

Steriade, Donca 1987. Redundant Values. Papers from the 23rd Annual Regional Meeting of the Chicago Linguistic Society. Vol II, Parasession on Autosegmental and Metrical Phonology, edited by Anna Bosch, Barbara Need & Eric Schiller, 339-362. Chicago: Chicago Linguistic Society.

Steriade, Donca 1995. Underspecification and Markedness. The Handbook of Phonological Theory, edited by John Goldsmith, 114-174. Oxford: Blackwell.

Steriade, Donca 1997. Phonetics in Phonology: The case of Laryngeal Neutralization. Ms, University of California, Los Angeles. Available at http://web.mit.edu/afs/athena.mit.edu/org/l/linguistics/www/bibliography/steriade.html.

Torre, Erik-Jan van der 2003. Dutch sonorants. The role of place of articulation in phonotactics. Ph.D dissertation, University of Utrecht.

Vago, Robert 1976. More evidence for the feature [GRAVE]. Linguistic Inquiry 7, 671-674.

Weijer, Jeroen van de 1994. Segmental structure and complex segments. Ph.D dissertation, University of Leiden.