Typologies of sound change

3 long-standing questions

- a. Typology: Why are some sound changes common while others are rare or nonexistent?

- b. Conditioning: What role do lexical and morphological factors play in sound change?

- c. Actuation: What triggers a particular sound change at a particular time and place?

Typologies of sound change

- Historical linguistics textbooks classify sound changes according to a superficial typology (as we did previously).

- An explanatory classification of surface patterns should reflect a typology of causes (Garrett & Johnson 2013:54).

- Most classic typologies involve binary classification of changes (in the form of 'most changes vs. residue').

- Neogrammarians (& Bloomfield 1933) held that the major type of sound change was phonetically gradual, imperceptible while under way, and regular.

Osthoff & Brugman (1878)

- Origin of most sound changes:

    'mechanical' (articulatory)

- Residual type:

    Origin: 'psychological'.

    Examples: dissimilation; metathesis.

Paul (1880, 1920)

- Origin of most sound changes:

    articulatory reduction

- Residual type:

    Origin: speech errors?

    Examples: metathesis; non-local assimilation and dissimilation.

Bloomfield (1933)

- Origin of most sound changes:

    articulatory simplification?

- Residual type:

    Origin: unclear.

    Examples: articulatory leaps; dissimilation; haplology;

        metathesis; non-local assimilation.

Kiparsky (1995)

- Origin of most sound changes:

  variation in production

- Residual type:

  Origin: 'perception and acquisition'.

  Examples: compensatory lengthening; dissimilation; tonogenesis; context-free reinterpretation ([kw] > [p]).

Grammont (1939)

- a. **Unconditioned changes**: explanation unclear (language contact?)
- b. **Locally conditioned changes**:

    ASSIMILATION: motivated by articulatory ease

    DISSIMILATION: motivated by perceptual clarity

    METATHESIS: motivated by perceptual clarity & phonotactic optimization
- c. **Nonlocally conditioned changes**:

    ASSIMILATION: explanation unclear, but evidently articulatory in origin

    DISSIMILATION: originates in motor-planning errors

    METATHESIS: motivated by perceptual clarity & phonotactic optimization

Change from perceptual ambiguity

- In listener based models of sound change (Ohala 1981, 1993; Blevins 2004), perceptual ambiguity due to coarticulation is the trigger of sound change in the form of innocent misinterpretations of intended sequences.

- Correction involves adequate compensation for coarticulation.

- Lack of adequate compensation yields change.

Ohala, J.J. 1981. The listener as a source of sound change. In Masek et al. (eds.) *Papers from the Parasession on Language and Behavior*. CLS, 178-203.

Ohala, J.J. 1993. The phonetics of sound change. In C. Jones (ed.) *Historical Linguistics: Problems and Perspectives*. London: Longman, 237-278.
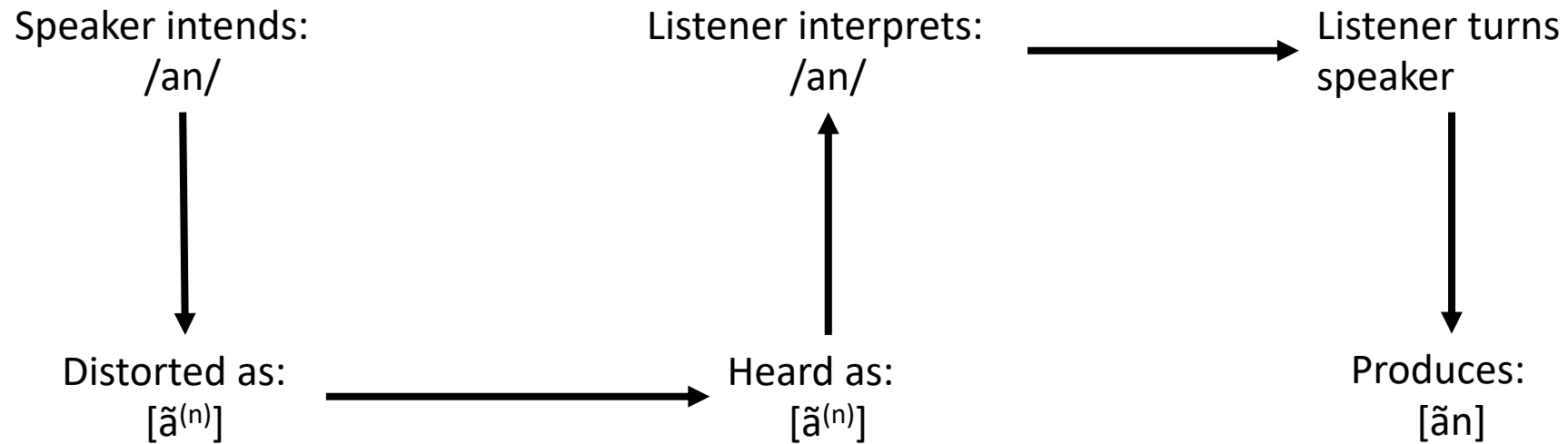
Blevins, J. 2004 Evolutionary Phonology. Cambridge: CUP.

Ohala (1981, 1993)

- Hypocorrection: A listener does not parse coarticulation with its source.

    Examples: umlaut; many other assimilations.

- Hypercorrection: Listeners over-normalize for the contextual effects of coarticulation.

    Example: dissimilations.

- Confusion of acoustically similar sounds: the listener's failure to recover some feature found crucially in one sound but not the other.
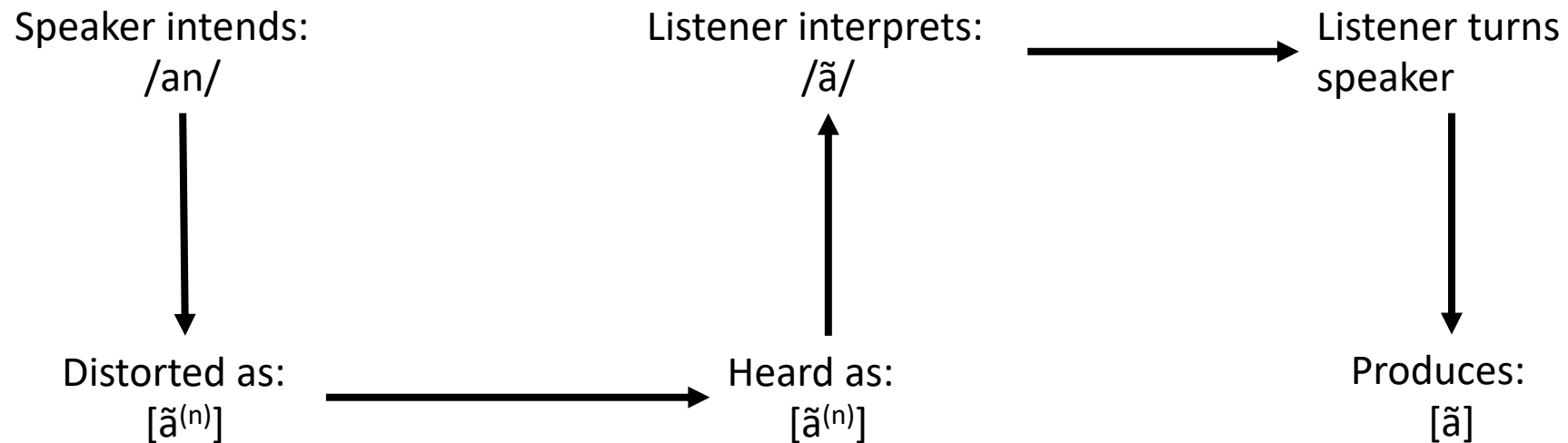
    Examples: [θ] > [f]; [gi] > [di].

Reanalysis of phonetic cues: Correction (Ohala 1981, 1993)
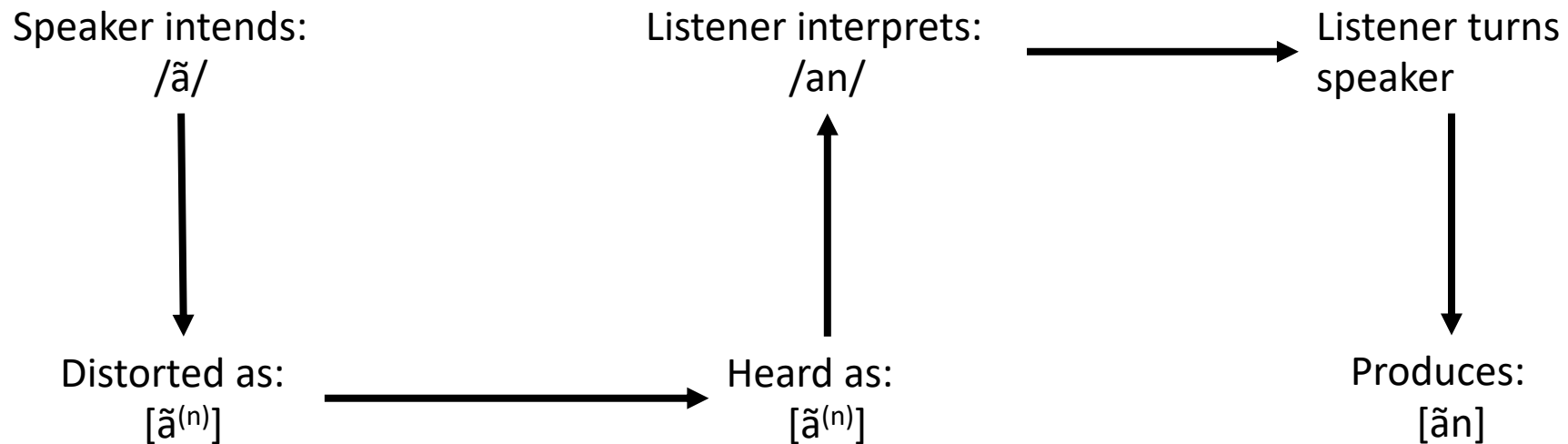
- Correct interpretation of VN coarticulation:

Speaker intends:
/an/

Listener interprets:
/an/

Listener turns
speaker

Distorted as:
[ã$^{(n)}$]

Heard as:
[ã$^{(n)}$]

Produces:
[ãn]

Reanalysis of phonetic cues: Hypocorrection (Ohala 1981, 1993)

- Development of contrastive nasalization from VN coarticulation:

Speaker intends:
/an/

Listener interprets:
/ã/

Listener turns speaker

Distorted as:
[ã$^{(n)}$]

Heard as:
[ã$^{(n)}$]

Produces:
[ã]

Reanalysis of phonetic cues: Hypercorrection (Ohala 1981, 1993)

- Development of a non-etymological stop from a nasal vowel:

Speaker intends: /ã/	Listener interprets: /an/	Listener turns speaker
↓	↑	↓
Distorted as: $[\tilde{a}^{(n)}]$ →	Heard as: $[\tilde{a}^{(n)}]$	Produces: $[\tilde{a}n]$

CHOICE (Blevins 2004, 2015)

- **CHOICE**: Articulatory variation (coartic., assim., lenit., fort.) can be due to compression or expansion along the hyper-to-hypoarticulation continuum, imprecision, gestural overlap, aerodynamic features of the vocal tract, etc.

Examples: vowel reduction and syncope; vowel shifts; stop debuccalization; final devoicing; umlaut; etc.

CHANGE (Blevins 2004, 2015)

- **CHANGE**: Listener misinterpretation due to acoustic/perceptual similarities and human perception biases.

Examples: [θ] > [f]; [anpa] > [ampa]; [akta] > [atta].

CHANCE (Blevins 2004, 2015)

- **CHANCE**: Intrinsic phonological ambiguity of the phonetic signal. Elongated phonetic cues.

Examples: dissimilation; metathesis.

Garrett & Johnson (2013)

PRODUCTION AND PERCEPTION BIASES
- Motor planning

    Examples: Consonant harmony; anticipatory displacement
- Aerodynamic constraints

    Examples: Rhotacism, other fricative-to-glide shifts; final devoicing.
- Gestural mechanics

    Examples: Palatalization; umlaut; VN > V; vowel coalescence.

SYSTEMIC BIASES
- Auditory enhancement

    Examples: Interdental fricative labialization; back vowel rounding.