

Pulmonic ingressive speech: a neglected universal?

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Prolegomenon

- Review paper under revision
- >26K words, ~430 references, 1 plate, 7 figures, 3 tables
- Ergo: few references given here, instead see...
- Website: <http://ingressivespeech.info>
- This talk a summary / focuses on conclusions
- Caveat: simplifications galore!

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Pulmonic ingressive speech

- Speech produced on inhalation lung airstream
- Six possible ways to produce airstreams:

Pulmonic	Egressive Ingressive	most speech sounds paralinguistic use
Glottalic	Egressive Ingressive	ejectives implosives
Velaric	Egressive Ingressive	unknown (impossible?) clicks

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Sound production

- Sounds can be produced without airstream proper
- Percussives
 - teeth – gnashing, scraping, clashing, grinding
 - jaw – move from side to side
 - lips – open/close
- No breathing differences between sexes observed
- Breathing differences between different age groups

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Animals (1)

- Pulmonic ingressive phonation observed in:
 - dogs, foxes, horses, donkeys, birds (Segond 1848)
 - cats, pumas, cheetahs, ocelots (Darwin 1872)
 - cats, pigs, ox (Waller 1891)
 - cows, birds, horses, cats (Negus 1929)
 - painter frogs (Weber 1974)
- ... and more

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Animals (2)

- Monkeys
 - langurs (Tenaza 1989)
 - geladas (Richman 1976, 1978, 1993)
 - wild Japanese monkeys (Itani 1963)
 - gibbons (Geissmann 1984, 1991, 2000 and more)
- ... and more

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Animals (3)

- Apes
 - orangutans (Hornaday 1922, Dixson 1998 and more)
 - chimpanzees (Marler 1969, Goodall 1986 and more)
- Ingressive hoots *not* observed in gorillas
- Ergo: ingressive phonation has biological basis...
- ... which also shows up in...

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Humans (1)

- Infants
 - sobbing (Darwin 1872, Negus 1929 and more)
 - cries (Zwaardemaker 1909, Bosma 1964 and more)
 - vegetative sounds (Stark 1986)
 - displeasure (Papoušek, Papoušek & Koester 1986)
- ... and more

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Humans (2)

- Adults
 - laughter (Negus 1929 and more)
 - crying (Moore & Van Leden 1958 and more)
 - yawning, snoring (Viëtor 1884 and more)
 - pain (Klinghard 1914, Bhaskararao 1976, Crystal 1997)
 - surprise (Orlikoff, Baken & Kraus 1997 and more)
- ... and more

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Other uses (1)

- Engastromyths (ventriloquists) and other shamans
- Goal: make people believe effigies/dead were speaking, e.g., the Pythea at Delphi (the "oracle")
- Ingressive voice added "other-worldliness"
- Long thought to be how ventriloquism was achieved (from van Helmont 1657 to Liskovius 1846)
- *Not* how ventriloquial voice is achieved, but used by many
- Used by modern ventriloquists for effects (Knowles, p.c.)

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Other uses (2)

- Quaker founder George Fox (Voltaire 1734)
- Used ingressive voice to sound "inspired"
- Taught his disciples this way of speaking
- Voltaire likened Fox to the Pythea at Delphi
- Found in *stuttering* and other *pathological* phenomena
- Used *therapeutically*
- Used as *methodological* tool

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Other uses (3)

- "Throat Games"
 - kattajaq Inuit (Canada)
 - rekkukara Ainu (Japan)
- Two persons sit close to each other, face-to-face
- Part speech, part song
- Perform on each other's air

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Other uses (4)

- Whistled languages
- Several locations in the world, e.g., USA, Mexico, Nepal, France, Turkey, Canary Islands
- Whistling while speaking (reduced phonemic inventory)
- Carry far – whistles can be loud (110 dB)
- Some bilabial whistles performed ingressively
- Ingressive whistles observed in Tepehua (Mexico) and Chepang (Nepal)

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Ingressive phonemes (1)

- Tsou (Taiwan)
- Fuller (1990): informant with ingressive phonemes
- Ladefoged & Zeitoun (1993) recorded speakers in Fuller's informant's home village
- Found no ingressive phonemes
- Idiosyncratic trait?

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Ingressive phonemes (2)

- Damin (Australia)
- Ritual language in Lardil (Mornington Island)
- Contained ingressive lateral fricative [L] (Hale 1973)
- Also contained several other phonemes not known in any other language
- Invented language, deliberately "strange"?
- Last speaker died in the 1990s

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Countries with ingressive speech

- Oldest source (?): Cranz (1765) on Eskimo female speech



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Distribution: common view



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Ingressive non-linguistic sounds



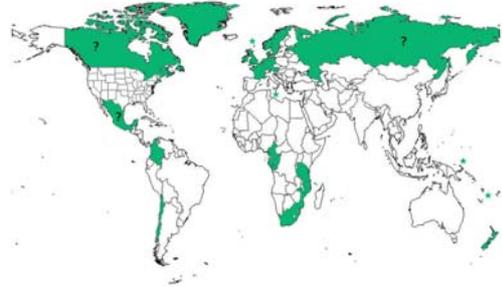
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Ingressive linguistic sounds



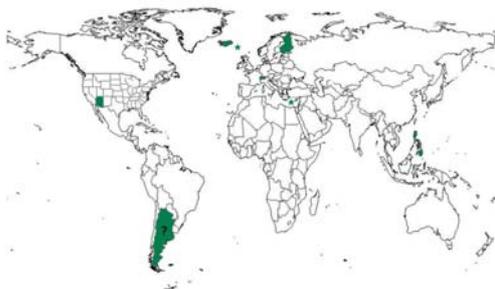
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Ingressive words



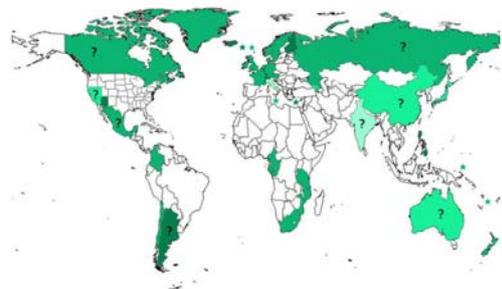
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Ingressive phrases / sentences



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Distribution: sum total



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Ingressive speech summed-up

- Found “everywhere”, in genetically unrelated languages
- Almost always paralinguistic (e.g., as agreement signal)
- Some related zones obvious, e.g., “Transatlantic Zone” but other zones are likely independent occurrences
- Large hidden number assumed – many field linguists not focusing on phonetic detail (e.g., Bible translators)
- In most sources referred to as “peculiar”, “exotic”, “strange” or even “highly marked”
- ... but

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Rare or common?

- How often can something be “rare”?
- Different ways something can be “common” or “rare”, e.g.,
Scarce distribution + frequent use
vs.
Wide distribution + infrequent use
- No doubt extremely *frequent* in Scandinavia (Eklund 2002), while *rare* in e.g., Germany or the Netherlands
- Few sources provide quantified data, alas

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Thus

- Ingressive speech found on all continents
- Serves similar paralinguistic functions
- Often occurs independently
- Biological basis in ape and monkey calls (also infant cry)
- Reason to believe in (substantial) hidden number
- Also: surely have not obtained *all* sources
- So: what does it take to be **universal**?
- Croft (2003) identifies four different types of universals

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Universals: Croft (2003)

- a. "Linguistic phenomena that are areally widespread, and common in genetically closely related languages may be frequent and stable"
- b. "Phenomena that are widespread but relatively sporadic within genetic groups may be frequent but unstable"
- c. "Phenomena that are relatively scarce in the world's languages, but common in genetic groups in which they occur"
- d. "[P]henomena that are both scarce and sporadic may be unstable and infrequent"

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Discussion

- How accurate is the map?
- Many sources not very clear with regard to language, location, linguistic items, etc.
- Synchronic vs. diachronic perspective?
- Rare in Argentina now (sources from 1945–1960)?
- However, diachronic instability part of Croft's definition

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Conclusions

- Ingressive speech not exclusively Swedish/Scandinavian (although beyond doubt extraordinarily frequent)
- Instead, found everywhere in unrelated genetic groups
- Serves similar paralinguistic purposes in dialog
- Large hidden number likely
- Probably not insane to suggest that it might reflect a **universal linguistic process**

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Finally

- Ingressive speech as a safety measure



Courtesy of Dairy Queen

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Website

- The author is maintaining an ingressive speech website:
<http://ingressivespeech.info>
- Will contain bibliography, maps, lists, sound files etc.
- For comments, questions, contributions (!) etc., email
email@ingressivespeech.info



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