

# Irish initial consonant mutation: Disentangling phonology from morphosyntax

Anna Laoide-Kemp

University of Edinburgh

PhD supervisors: Pavel Iosad and Peter Ackema

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# What is initial consonant mutation?



## Initial consonant mutation (ICM)

Systematic **phonological alternation** of word-initial consonants, depending on **morphosyntactic context**

## Examples

- *bróg* 'shoe' (initial /b/) → **Base form**
- *an bhróg* 'the shoe' (initial /v/) → **Lenition**
- *ar an mbróg* 'on the shoe' (initial /m/) → **Eclipsis**

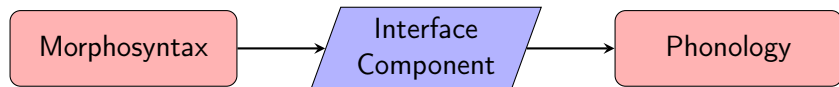
# What is initial consonant mutation?

## Mutation environments:

- Trigger word: *roimh mhaidin* 'before morning'
  - Trigger Constraint
- Linear non-adjacency: *ár dhá gcapall* 'our two horses'
- No overt trigger: *dhúisigh mé* 'I awoke'
- Morphosyntactic features: *muintir Sheáin* 'Seán's family'

(Lieber 1983)

# Preview: a modular analysis of ICM



## Proposal: two distinct mutation subtypes

- **Type 1:** Fundamentally associated with a trigger word
- **Type 2:** Fundamentally associated with the target word

- 1 The modular hypothesis
- 2 Two challenges from Irish ICM
  - Palatalised consonants as mutation triggers?
  - Coronal blocking of mutation
- 3 Towards a strictly modular account of ICM

# The modular hypothesis

## Modularity of mind

(Fodor 1983)

The human cognitive system is built up from a number of **distinct** and **independent** subsystems.

- Domain specificity
- Informational encapsulation

## Modularity in linguistic theory

(Scheer 2010; Bermudez-Otero 2012)

- Implicitly assumed by most generative theories
- Regularly violated in practice

# The modular hypothesis

## Initial consonant mutation (ICM)

Systematic **phonological alternation** of word-initial consonants, depending on **morphosyntactic context**

Morphosyntax



Responsible for the  
triggering of mutation

Phonology



Responsible for the  
phonological changes

# Challenges for strict modularity

## Challenge 1: Palatalised consonants as mutation triggers?

- Lenition of attributive adjectives and nouns after a plural noun ending in a palatalised consonant
- e.g. *buidéil bhainne* ‘bottles of milk’ vs. *gloiní bainne* ‘glasses of milk’

## Challenge 2: Coronal blocking of mutation (CB)

- Blocking of mutation when two coronals come together at word boundary
- e.g. *an teanga*, \**an theanga* ‘the language’

(De Bhaldraithe 1953; Christian Brothers 1960; Ó Sé 2000; Ó Curnáin 2007)



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Evidence against “phonological triggering”:

- Dialectal variation – mutation following schwa
- English plural borrowings: *teorams mhaith* ‘good terms’
- No other mutation environment makes direct reference to phonology

(de Bhaldraithe 1953; Ó Curnáin 2007)

# Challenge 1: Palatalised consonants as mutation triggers?

## Proposal

Lenition is triggered not by plural nouns ending in palatalised consonants, but by nouns that belong to a particular plural class.

e.g. Carnie's plural class "W1"

(Carnie 2008)

- "Weak" plural forms
- Formation of plural does not increase syllable count
- Common plural form ends in palatalised consonant
- Includes schwa forms mentioned earlier

## Challenge 2: Coronal blocking of mutation

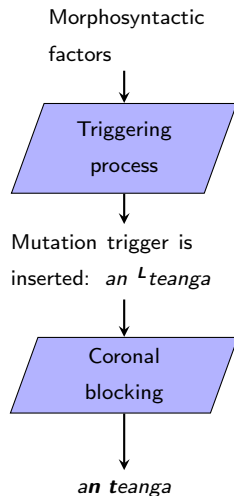
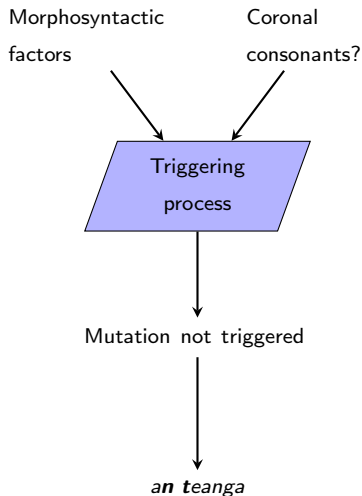
### Challenge 2: Coronal blocking of mutation (CB)

- Blocking of mutation when two coronals come together at word boundary
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Two questions:

- Does phonology play a role in the triggering process?
- What factors determine where CB applies?

## Challenge 2: Coronal blocking of mutation



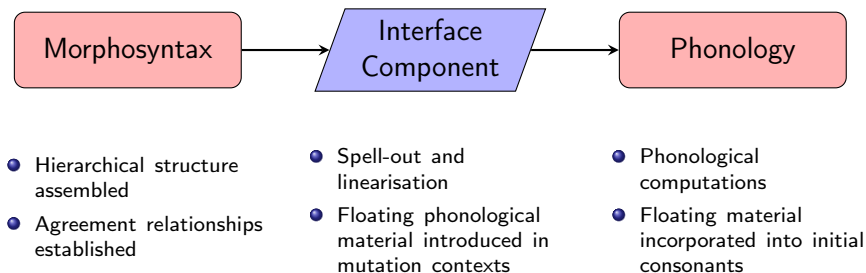
## Challenge 2: Coronal blocking of mutation

*sean* 'old' + *duine* 'person' → *sean-duine* 'old person'  
OR  
→ *sean[ə]dhuine* 'old person'

*an* 'very' + *te* 'hot' → *an-te* 'very hot'  
OR  
→ *an[ə]the* 'very hot'

(Ní Chíosáin 1991)

# Towards a strictly modular account of ICM



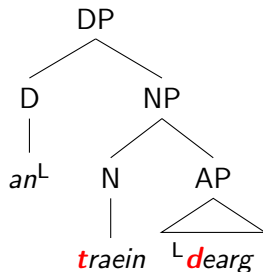
(building on the work of Breit 2019 and Embick 2010)

# Towards a strictly modular account of ICM

## Proposal: two distinct mutation subtypes

- **Type 1:** Fundamentally associated with a trigger word
- **Type 2:** Fundamentally associated with the target word

Figure: Illustrative example – *an traein dhearg* ‘the red train’



- Irish ICM is **compatible with strict modularity**
  - **Morphosyntax** responsible for triggering of mutation
  - **Phonology** responsible for phonological changes
  - **Interface component** mediates between these two modules
- Proposed **two distinct mutation subtypes**
  - Type 1 allows for coronal blocking effects
  - Type 2 allows for non-adjacency of trigger/target

**Go raibh míle maith agaibh! – Thank you!**



# References I

-  Bermúdez-Otero, Ricardo (2012). “The architecture of grammar and the division of labor in exponence”. In: *The morphology and phonology of exponence*. Ed. by Jochen Trommer. Oxford: Oxford University Press, pp. 8–83.
-  Breit, Florian (2019). “Welsh mutation and strict modularity”. *Doctoral dissertation*. University College London.
-  Carnie, Andrew (2008). *Irish nouns: a reference guide*. Oxford: Oxford University Press.
-  Christian Brothers (1960). *Graiméar Gaeilge na mBráithre Críostaí*. Baile Átha Cliath: MH Mac an Ghoill agus a Mhac.
-  de Bhaldraithe, Tomás (1945). *Gaeilge Chois Fhairrge: an deilbhíocht*. Baile Átha Cliath: Institiúid Árd-Léinn Bhaile Átha Cliath.
-  Embick, David (2010). “Localism versus globalism in morphology and phonology”. In: *Linguistic Inquiry Monographs*. Ed. by Samuel Jay Keyser. Vol. 60. Cambridge, MA: MIT Press.
-  Fodor, Jerry A (1983). *The modularity of mind*. Cambridge, MA: MIT Press.
-  Green, Antony D (2006). “The independence of phonology and morphology: the Celtic mutations”. In: *Lingua* 116.11, pp. 1946–1985.

# References II



Lieber, Rochelle (1983). "New developments in autosegmental morphology: consonant mutation". In: *Proceedings of the West Coast Conference on Formal Linguistics*. Vol. 2. Stanford Linguistics Association (Stanford University, Department of Linguistics), pp. 165–175.



Ní Chiosáin, Máire (1991). "Topics in the phonology of Irish". *Doctoral dissertation*. University of Massachusetts, Amherst.



Ó Curnáin, Brian (2007). *The Irish of Iorras Aithneach, County Galway; Volumes I-IV*. Dublin: DIAS.



Ó Sé, Diarmuid (2000). *Gaeilge Chorca Dhuibhne*. *Baile Átha Cliath: Institiúid Teangeolaíochta Éireann*.



Scheer, Tobias (2010). *A guide to morphosyntax-phonology interface theories*. Berlin/New York: De Gruyter Mouton.

# Appendix A: Phonology of mutations

Phonological alternations:

(adapted from Green 2006)

Radical	<i>p</i>	<i>t</i>	<i>k</i>	<i>b</i>	<i>d</i>	<i>g</i>	<i>f</i>	<i>s</i>	<i>m</i>	<i>n</i>	<i>l</i>	<i>r</i>
Lenited	<i>f</i>	<i>h</i>	<i>x</i>	<i>v</i>	<i>ɣ</i>	<i>ɣ</i>	∅	<i>h</i>	<i>v</i>	–	–	–
Eclipsed	<i>b</i>	<i>d</i>	<i>g</i>	<i>m</i>	<i>n</i>	<i>ŋ</i>	<i>v</i>	–	–	–	–	–

General observations:

- **Lenition:** stops to fricatives
- **Eclipsis:** voiceless consonants to voiced; voiced stops to nasals
- Irregular behaviour:
  - Coronals lose their place feature under lenition
  - *f* deletes under lenition
  - *s* is unaffected by eclipsis

## Appendix B: Morphology vs syntax

Distributed Morphology assumption:

- Late insertion
- Morpheme-based
- Triggering involves morphological and syntactic factors
- Parallels between inter- and intra-word mutation

Drawbacks:

- Inherently anti-modular
- Possible issues with spell-out phases

Alternative: Type 1 vs Type 2 ↔ syntax vs morphology?