Effects of Impoverishment and Obliteration in Morphology

The Aftermath of Destruction

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26.05.2022

Introduction

- *Impoverishment* (and its more radical subtype *Obliteration*) is a morphological operation that is used to derive a wide variety of phenomena.
- *Some* examples that have been discussed in the literature:
  a. **Metasyncretism**: Frampton (2002), Harley (2008)
  b. **Enabling Patterns**: Harley (2008, 269-274)
  c. **Participant Dissimilation**: Arregi and Nevins (2012), Trommer (2003)
  d. **Person Case Constraint (PCC)**: Bonet (1991), Arregi and Nevins (2012)
  e. **(Default) Agreement Effects**: Keine (2010), Keine and Müller (2020)
  f. **Effects on Number Morphology**: Kouneli (2021)

Introduction II - Impoverishment and Obliteration

- *Impoverishment* = **featural deletion** in morphologically marked environments
- Because of this featural deletion, less specific contexts appear in more specific environments (= *Retreat to the General Case*, Halle et al. (1994)).

- *Obliteration* = **deletion of morphemes** in morphologically marked contexts
- In contrast to Impoverishment, Obliteration deletes whole nodes and thus makes it impossible for any material to appear in a certain morphological position.

Introduction III - Impoverishment vs. Obliteration

	Impoverishment	**Obliteration**
Deleted Material	Features	Whole Morphemes
Consequence	General Exponence	Non-Exponence
Environment	Marked	Marked

Table 1: Impoverishment vs. Obliteration

Theoretic Preface I

- Basic Principles necessary for understanding this talk:
    a. **Subset principle** (aka: Pāṇinis Principle, *Elsewhere* Principle)
    b. **Compatibility**
    c. **Specificity**
    d. **Underspecification**
    e. **Syncretism**

Theoretic Preface II

(1) **Subset Principle** (Keine and Müller, 2020, 2-3)
A vocabulary item V is inserted into a functional head H iff (i) and
(ii) hold:

   a.   *Compatibility*
      The morphosyntactic features of V are a subset of the
      morphosyntactic features of H.

   b.   *Specificity*
      Vocabulary item V1 is more specific than a vocabulary item
      V2, iff V1 contains more morphosyntactic features than V2.

Theoretic Preface III

(2) **Underspecification**
A consequence of the Specificity Condition (1-b) is that Vocabulary items do not have to be fully specified to be inserted but rather just *specific enough*. Thus, vocabulary items need not bear full feature matrices but can also just bear partial feature matrices.

(3) **Syncretism** (Harley, 2008, 1)
[Syncretism is] when a single vocabulary item 'realizes' more than one combination of features in a syntactic terminal node[1].

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[1]This is of course only a way to describe D(istributed)M(orphology)-style syncretism, but the principle still obtains for other theories as well. Moving forward I will adapt DM-style termini for ease of exposition.

Meta-Syncretism I

- Meta-Syncretism = syncretism patterns obtain *across paradigms*
- some examples for this phenomenon:
  a. Latin Dative/Ablative Plural syncretism (Harley, 2008)
  b. Russian 3rd Plural Pronouns (across cases) and Nominative Adjective Suffixes (Harley, 2008)
  c. German verbal inflection (Keine and Müller, 2020)

Meta-Syncretism II - Latin, Data from Harley (2008)

Class I	SG	PL
NOM	-a	-ae
ACC	-am	-as
DAT	-ae	-is
ABL	-a	

Class II	SG	PL
NOM	-us	-i
ACC	-um	-os
DAT	-o	-is
ABL	-o	

Class III	SG	PL
NOM	(var)	-es
ACC	-em	-es/-is
DAT	-i	-ibus
ABL	-a	

Class IV	SG	PL
NOM	-us	-es
ACC	-um	
DAT	-ui	-ibus
ABL	-u	

Meta-Syncretism III - Latin

Class I	SG	PL
NOM	-a	-ae
ACC	-am	-as
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ABL	-a	-is

Class II	SG	PL
NOM	-us	-i
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ABL	-es	-is

Class III	SG	PL
NOM	(var)	-es
ACC	-em	-es/-is
DAT	-i	-ibus
ABL	-a	-ibus

Class IV	SG	PL
NOM	-us	-es
ACC	-um	-es
DAT	-ui	-ibus
ABL	-u	-ibus

Metasyncretism IV - Latin

(4)   Decomposition of Case Features in Latin

Case	α-Value	β-Value	γ-Value
NOM	+	+	+
ACC	+	+	-
DAT	+	-	-
ABL	-	-	-

(5)   Impoverishment Rule for Latin (across the nominal paradigm)

    a.   Informal Description: In the context of Plural, the distinguishing feature between dative and ablative case becomes neutralized.

    b.   Formal Description: $[\pm\alpha, -\beta, -\gamma] \rightarrow [-\beta, -\gamma] \ / \ \_\_ \ [-\text{SG}]$

Metasyncretism V - Why all the hassle?

- The paradigms could have been accounted for without the Impoverishment rules here, however employing Impoverishment captures the generalisation that there shall never be a distinction between dative and ablative plural case markers.
- Harley (2008) also argues that some patterns can be accounted for more easily with Impoverishment as compared to a strategy that does not employ this operation.

Enabling Patterns I

- Underspecification is most often used to account for syncretisms. However, what if underspecification does not suffice?
- One such case would be an asymmetric-syncretism.

Enabling Patterns II

(6)   Asymmetric-Syncretism

	α	β
γ	A	A
δ	A	B
ϵ	B	B

- The problem is, that it seems impossible to account for both the syncretisms in red and in yellow at the same time.
- This is due to the fact that when you underspecify one distinction, e.g. α vs. β in the row δ, then one item would surface in 4 cells, whereas the other could only ever surface in the other 2.
- Harley (2008) suggests a solution for patterns like these (e.g. found in the Mongolian language Baoan)

Enabling Patterns III - Baoan

(7)   Baoan case suffixes (Keine and Müller, 2020, 6)

	NOUN	1/2 PRONOUN
GEN	-ne	-ne
ACC	-ne	-de
DAT/LOC	-de	-de

- Harley (2008) argues that this is most elegantly resolved via Impoverishment.
- In her analysis the feature distinguishing accusative from dative/locative case is impoverished in the pronominal paradigm.
- Thus, the exponent /-ne/ cannot surface in this cell because it is suddenly "too specific".

Enabling Patterns III - Baoan

(8)   Case Decomposition
   a.   GENITIVE: [+structural,–dependent,+oblique]
   b.   ACCUSATIVE: [**+structural**, +dependent,–oblique]
   c.   DATIVE/LOCATIVE: [**–structural**, +dependent,–oblique]

(9)   Vocabulary Items
   a.   /-ne/ ↔ [+structural]
   b.   /-de/ ↔ [+dependent]

(10)   Impoverishment Rule
   [+str, +dep, -obl] → [+dep,-obl] / [+participant] __

Participant Reduction I

- Moving on, there is an extensive analysis of Basque auxiliaries by Arregi and Nevins (2012), where they employ both Impoverishment and Obliteration to account for several effects.
- One such effect is the so-called *Participant Reduction* (PR).
- This is a phenomenon, where in a configuration of two participant-clitics (i.e. clitics that realise 1st or 2nd person pronominal information), only one can surface as is, where the other one is either Impoverished or Obliterated.
- Arregi and Nevins (2012) argue for a parallelism of Impoverishment and Obliteration, i.e. two sides of one operation, where the only thing that differs is *what material* they operate on.

Participant Reduction II

(11)   **Syntagmatic Participant Markedness** (Keine and Müller, 2020, 10)
An auxiliary M-word cannot contain two clitics Cl_1 and Cl_2, such that
Cl_1 is specified as [+participant,ϕ] and Cl_2 is specified as
[+participant,ψ] (where ϕ and ψ range over dialect-particular feature
sets).

- Informally: In Basque the realisation of two participant clitics is
  morphologically marked/ungrammatical.
- Since, however, nothing logically bans combinations of these, the
  language needs to adopt some kind of repair mechanism.
- This repair also seems to vary cross-dialectally, however importantly
  the morphological environments do not.

Participant Reduction III - Alboniga Basque

(12)   Alboniga, Basque (Arregi and Nevins, 2012, 220)

    a.   Gu-k   seue-k   ikus-i $\boxed{\text{s}}$ -aitu $\boxed{\text{-}\emptyset}$

       us-ERG you(PL)-ABS see-PRF CL.A.2 -PRS.2.PL -CL.E.DFL

       -s   -e

       -2PL -CL.A.PL

       'We have seen you(Pl).'

    b. *Gu-k   seue-k   ikus-i $\boxed{\text{s}}$ -aitu $\boxed{\textbf{-gu}}$

       us-ERG you(PL)-ABS see-PRF CL.A.2 -PRS.2.PL -CL.E.1.PL

       -s   -e

       -2PL -CL.A.PL

Participant Reduction IV - Alboniga Basque

- In Alboniga it seems that the clitic that realises ergative shows what Arregi and Nevins (2012) call the "default clitic", whereas surfacing of the more specific clitic leads to ungrammaticality.
- It is important to note here, that in other configurations, the highly specific ergative clitic /-gu/ can actually surface in this form; it is *only* barred in the specific Participant+Participant configuration.
- Another important propoerty: there is independent evidence, that the "default clitic" in (12-a) is actually "overt" even though it has no phonological realization (more on that later).

Participant Reduction V - Alboniga Basque

(13)   **Alboniga 1pl-ergative Impoverishment**

a.   Structural Description: an auxiliary M-word with two Clitics Cl_1 and Cl_2 such that Cl_1 is [+motion,+participant,+author] and Cl_2 is [+participant].

b.   Structural Change: Delete [+participant] on Cl_1.

(14)   Feature Decomposition (Arregi and Nevins, 2012, 27)

a.   Person Features
   (i)   [+author,+participant] = 1st person
   (ii)   [-author,+participant] = 2nd person
   (iii)   [-author,-participant] = 3rd person

b.   Case
   (i)   [+motion,-peripheral] = ergative
   (ii)   [+motion,+peripheral] = dative
   (iii)   [-motion,-peripheral] = absolutive

Participant Reduction VI - Alboniga Basque

(15)   Vocabulary Entries (simplified)

    a.   Absolutive Clitics
        (i)   s- $\leftrightarrow$ [+participant, -author]/__T $\rightarrow$ *2Sg,2Pl*

    b.   Ergative Clitics
        (i)   -gu $\leftrightarrow$ [-peripheral,+motion,+participant,+author] $\rightarrow$ *1Pl*
        (ii)   -$\emptyset$ $\leftrightarrow$ [ ] $\rightarrow$ *Default Clitic*

- The impoverishment rule laid out in (13) makes it impossible for the clitic /-gu/ to surface, because it would realise a feature that is no longer present on the stem.
- Thus, after Impoverishment /-gu/ cannot be exponed because doing so would violate the Subset Principle (specifically, Compatibility).

Participant Reduction VII - Zamudio Basque

- The example below comes from Zamudio, another Basque dialect, and presents an interesting difference to the data in Alboniga.

(16) Eroa-n bear s   -ara   / *s   -aitu   -u
      take-NF must CL.A.2.SG -PRS.2.SG / CL.A.2.SG -PRS.2.SG -CL.E.1.PL
      eskola-ra
      school-ALL.SG
      'We have to take you(Sg) to school.' (Arregi and Nevins, 2012, 220)

Participant Reduction VIII - Zamudio Basque

- The auxiliary (/ara/ or /aitu/) in both Zamudio and Alboniga is (morphologically) sensitive to the presence or absence of clitics on the auxiliary.
- Arregi and Nevins (2012) analyse /ara/ as the "intransitive" (i.e. one clitic) auxiliary, whereas "aitu" is the transitive (i.e. two-clitic) variant.
- Thus in Alboniga even though there is no phonologically-overt ergative clitic, since the stem of the auxiliary surfaces as its transitive allomorph, there still seems to be a morphologically-overt ergative clitic.
- In contrast to this, the Zamudio auxiliary in the same configuration opts for the "intransitive" variant.
- To capture this, Arregi and Nevins (2012) propose Obliteration to take place.

Participant Reduction IX - Zamudio Basque

(17) Zamudio: 1Pl Obliteration (Arregi and Nevins, 2012, 217)

    a. Structural Description: an auxiliary M-word with two Clitics Cl_1 and Cl_2 such that Cl_1 is [+motion,+participant,+author] and Cl_2 is [+participant].

    b. Structural Change: Delete Cl_1.

Conclusion

- Even though Impoverishment and Obliteration are relatively simple in the way they operate, the effects they show are impressively varied.
- I have shown in this talk how Meta-Syncretism, Enabling Patterns and Participant Reduction effects have been derived via Impoverishment and Obliteration.
- However there is a great amount of different effects that I did not present here, that show a great variety of effects.

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Thank you for your attention and have a great time in Leeuwarden :)