A Kite Analysis of Person

Limitations on Concept Formation of Person
### The atoms of person (English):

<table>
<thead>
<tr>
<th></th>
<th>sg</th>
<th>pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>I</em></td>
<td><em>we</em></td>
</tr>
<tr>
<td></td>
<td>speaker</td>
<td>speaker + associates</td>
</tr>
<tr>
<td>2</td>
<td><em>you</em></td>
<td><em>you</em></td>
</tr>
<tr>
<td></td>
<td>hearer</td>
<td>hearer + associates</td>
</tr>
<tr>
<td>3</td>
<td><em>he, she, it</em></td>
<td><em>they</em></td>
</tr>
<tr>
<td></td>
<td>non-participant</td>
<td>non-participant + associates</td>
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<tr>
<td></td>
<td><em>i</em></td>
<td><em>ia</em></td>
</tr>
<tr>
<td>2</td>
<td><em>u</em></td>
<td><em>ua</em></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td><em>oa</em></td>
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### Problem: inclusive
(Tümpisa Shoshone (Dayley 1989))

<table>
<thead>
<tr>
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<tr>
<td>1</td>
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<td>2</td>
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<td>mü-mmü</td>
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<tr>
<td>3</td>
<td>(demonstr)</td>
<td>(demonstr)</td>
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<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td></td>
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Question:
Claim:
E.g. Tümpisa Shoshone

1. Atoms of Person

<table>
<thead>
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<tr>
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<td>ta-mmü</td>
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<tr>
<td>i</td>
<td>nü</td>
<td>nü-mmü</td>
</tr>
<tr>
<td>u</td>
<td>ü</td>
<td>mü-mmü</td>
</tr>
<tr>
<td>o</td>
<td></td>
<td>(Demonstratives)</td>
</tr>
</tbody>
</table>
Claim

- Combinations of person atoms:
  - $i + u = \text{INCL}
  - $i + o$
  - $u + o = \text{UNLEXICALISABLE}$

- Predicted by the Concept Formation Constraint in the kite framework
Outline

1. The Concept Formation Constraint
2. Syncretism
3. Number
4. Conclusion
5. Questions
Outline

1. The Concept Formation Constraint
2. Syncretism
3. Number
4. Conclusion
5. Questions
1. Concept Formation Constraint

1.1. The Kite Framework
1.2. Claim
1.3. A Mereology
1.4. Deriving the Person Kite
1.5. The Unlexicalised Combinations
Lexicalisation in certain closed lexical fields is restricted by a concept formation constraint (Jaspers 2012, Seuren & Jaspers 2014):

- Logical hexagon
  (Jacoby, Sesmat, Blanché)
  O and U never lexicalised

- Result: kite structure
1.1. The Kite Framework

The Hexagon

A → U → Y → E → O → I → A

A → I → U → E → Y → O → A
1.1. The Kite Framework

The Kite

\[ \text{Diagram of the Kite Framework} \]
1.1. The Kite Framework

Logical square of Aristotle
Ambiguity of “some”

• Some, possibly all:
  “If some students pass the test, I’ll throw a party”
  ➔ “If all students pass the test, I’ll throw a party”

• Some but not all:
  “Some people are allergic to chocolate”
  “All people are allergic to chocolate”
  ➔ According to a.o. Grice: pragmatic restriction
According to a.o. Seuren & Jaspers:

“Since this difference is a crisp truth-conditional one, we speak of **semantic and not of pragmatic ambiguity**, even if a pragmatic principle may play a role in the genesis of the ambiguity.”

(Seuren & Jaspers 2014, p. 620)
1.1. The Kite Framework

Propositional Logic Quantifiers

Jacoby, Sesmat, Blanché
1.1. The Kite Framework

Seuren & Jaspers 2014
1.2 Claim

Person deixis: corresponding limitations on concept formation
1.2. Claim
1.3. Mereology

Mereology = theory of parthood relations
(Jaspers 2012, Varzi 2016)

• $i$ and $u$ are proper parts of $iu$

• $iu = \text{mereological sum of } i \text{ and } u$
Differences

Logical systems
• Quantifiers
• Relations:
  – Entailment
  – Contradiction
  – Contrariety
• I-O-U: disjunction

Mereologies
• Person
• Relations
  – Proper parthood
  – Exhaustive complementarity
  – Non-exhaustive complementarity
• I-O-U: mereological sum
• I-O-U: disjunction

• I-O-U: mereological sum

1.3. Mereology
1.4. Deriving the Person Kite

Mereology:
Kite follows from a single *proper parthood* rel
(Seuren & Jaspers 2014)
1.4. Deriving the Person Kite

Mereology:
Kite follows from a single proper parthood rel
(Seuren & Jaspers 2014)
Proper parthood
1.4. Deriving the Person Kite

Complementarity

{i \leftarrow iu \rightarrow o}
Non-exhaustive complementarity
1.4. Deriving the Person Kite
1.4. Deriving the Person Kite

\[ i \xrightarrow{\text{iu}} u \xleftarrow{\text{iu}} o \xrightarrow{\ast \text{uo}} u \xleftarrow{\text{i}} o \]
1.4. Deriving the Person Kite
1.4. Deriving the Person Kite
1.5. Conclusion

The kite: INCLUSIVE as only complex person:

\[ \text{iu} \quad \text{io} \quad \text{uo} \]

\[ \text{i} \quad \text{u} \quad \text{o} \]

Other combinations: predicted by kite to be unlexicalised
Tümpisa Shoshone
(Dayley 1989)

1.5. Conclusion

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1.5. Conclusion

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<td><strong>I</strong></td>
<td><strong>we</strong></td>
</tr>
<tr>
<td><strong>u</strong></td>
<td><strong>you</strong></td>
<td><strong>you</strong></td>
</tr>
<tr>
<td><strong>o</strong></td>
<td><strong>he,</strong> <strong>she,</strong> <strong>it</strong></td>
<td><strong>they</strong></td>
</tr>
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</table>
2.5. The Unlexicalised Combinations: \(*io \& *uo*

- Sample: 39 lgs
- Typological literature:
  - Daniel 2005
  - Bobaljik 2008
  - Cysouw 2009
  - Forchheimer 2014
  - Harbour To Appear
- 2 side notes:
  - Syncretism
  - Number
Outline

1. The Concept Formation Constraint
2. Syncretism
3. Number
4. Conclusion
5. Questions
A Lexicalised *uo*?

- Some lgs: synchr *u* and *o*

  E.g. Warekena (Cysouw 2009)

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
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<td></td>
<td>waya</td>
</tr>
<tr>
<td>i</td>
<td>nuya</td>
<td>waya</td>
</tr>
<tr>
<td>u</td>
<td>piya</td>
<td>niya</td>
</tr>
<tr>
<td>o</td>
<td>(demonstratives)</td>
<td>niya</td>
</tr>
</tbody>
</table>
A Lexicalised \textit{uo}? 

- Some lgs: syncr \textit{u} and \textit{o} 
  E.g. Warekena \textit{waya} 

\begin{tabular}{l|l}
  pl &  \\
  \textit{iu} & \textit{waya} \\
  \textit{i}  & \textit{waya} \\
  \textit{u}  & \textit{niya} \\
  \textit{o}  & \textit{niya} \\
\end{tabular}

- NOT the same as lexicalised \textit{uo}
Motivation

• Lexicalised combination:
  – Mereological sum: AND
  – \([\alpha \land \beta]\)

• Syncretism:
  – No mereological sum: OR
  – \([\alpha \lor \beta]\)
• Compare with non-incl Ig: English
  – Syncretism: OR
2. Syncretism

• Compare with non-incl Ig: English
  – Syncretism: OR: $ia V iua$
    • We have excellent coffee
      $\rightarrow ia$
      $\rightarrow iu(a)$
• Compare with non-incl Ig: English
  – Syncretism: OR: $ia \lor iua$
    • *We have excellent coffee*
      $\rightarrow ia$
      $\rightarrow iu(a)$

• Compare with incl Ig: Tümpisa
  – Lexicalised combination: AND
    • $iu: i \oplus u$
    • Necessarily: $i \land u \rightarrow iu$ (tammū)
    • Impossible: $i \lor u \rightarrow i$ (nümmū) OR $u$ (mümmū)
  ➔ EXPECTATION *niya*: OR ➔ SYNCRETISM
He (the toad) told them (his cousins) to go, “\textit{you} hunt, to kill game for us, I shall stay home”

Aikhenvald 1998
Same for sg pronouns: Sanapaná (Harbour to appear):

**Hlejap** metko patakon ap- angok.
**2S/3S** NEG money 2/3- POSS

‘He doesn’t have money.’

‘You and he don’t have money.’

Ta’asek akjehlna ap- ta- o **hlejap**?
which fruit 2/3- eat- Q **2S/3S**

‘Which fruit did you eat?’

‘Which fruit did you and he eat?’
2. Syncretism

Summary:

• Lexicalised combination:
  – Mereological sum:
    AND
  – \( iu = [i \wedge u] \)

• Syncretism:
  – No mereological sum:
    OR
  – \([i \vee u]\)
  – \([u \vee o]\)
Outline

1. The Concept Formation Constraint
2. Syncretism
3. **Number**
4. Conclusion
5. Questions
3. Number

Crucially: $3^{rd} \neq \text{pl}$

- Many analyses: $+3 = \text{pl}$
  - e.g.:
    - $3\text{sg} = 3\ o$
    - $3\text{pl} = 3+3\ oo$
    - $2\text{sg} = 2\ u$
    - $2\text{pl} = 2+3\ uo$

- $io$ & $uo$ are lexicalised

$io = 1\text{pl}$

$uo = 2\text{pl}$
Crucially: $3^\text{rd} \neq \text{pl}$
- Many analyses: $+3 = \text{pl}$
  - $3\text{sg} = 3$
  - $3\text{pl} = 3+3$
  - $2\text{sg} = 2$
  - $2\text{pl} = 2+3$
- $io \ & \ uo$ are lexicalised
Claim

- \( i = 1^{st} \) person
- \( u = 2^{nd} \) person
- \( o = 3^{rd} \) person
- \( iu = \) inclusive
- PLURAL:
  - \( a = + \) associates

(Different morphologically and semantically)

(Ackema and Neeleman, to appear)
3. Number
Semantic differences

• Deixis:
  – 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd} person: inherently deictic (Béjar 2003)
  – pl: never defined as deictic (e.g. Harbour 2008, Corbett 2004)

• Reference: (Ackema & Neeleman to appear, pp. 70-73)
  – “[W]hat is an o at a particular point in the discourse cannot be included in the reference of a first or second person plural pronoun without first being turned into an associate in some way.”
1. (Peter:) Do you know whether George Clooney likes good coffee?
   a) (Ad:) #Yes, we both drink Illy.
   b) (Ad:) Yes, he drinks Illy, just like me.

2. (Ad:) We both know good coffee when we see it.
1. (Peter:) Do you know whether George Clooney likes good coffee?
   a) (Ad:) # Yes, they both drink Illy.
   b) (Ad:) Yes, he drinks Illy, just like Julia Roberts.

2. (Ad:) They both know good coffee when they see it.
Morphological differences

- IF 3rd = pl THEN expectation:
  no 3rd pl needed
  - $2+3 \neq hr + 1$ other
  - $2+3 = hr + 1$ or more others
  - $+3 = +3 / +3 + 3' / +3 + 3' + 3'' / ...$
  - $3 = 3 / 3+3' / 3+3'+3'' / ...$
• IF 3rd = pl THEN expectation: lgs with same morpheme for pl as for 3rd

<table>
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<td>INCL</td>
</tr>
<tr>
<td>1</td>
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<td>β-δ</td>
</tr>
<tr>
<td>2</td>
<td>γ</td>
<td>γ-δ</td>
</tr>
<tr>
<td>3</td>
<td>δ</td>
<td>δ</td>
</tr>
</tbody>
</table>

3. Number
Alleged counterexample

Sample and typological literature:
1 alleged counterexample:
Kalaw Lagaw Ya  (Forchheimer 1953, p. 127)

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</tr>
<tr>
<td>1</td>
<td>ngai</td>
<td>ngoi, ngöi</td>
</tr>
<tr>
<td>(m)</td>
<td>nazo</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ngi</td>
<td>ngi-ta(na)</td>
</tr>
<tr>
<td>3</td>
<td>noi, nu</td>
<td>ta-na, ari</td>
</tr>
<tr>
<td>(m)</td>
<td>na, nadu</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td></td>
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</table>
3. Number

- ngoi
  - 1.pl

- ngai
  - 1.sg
  - incl

- ngal-pa
  - incl

- noi, tana
  - 3.sg, 3.pl

- ngt-ta(na)
  - 2.pl

- ngi
  - 2.sg
### 3. Number

#### (Ray 1907)

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<tr>
<td>2</td>
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</tr>
<tr>
<td>3</td>
<td>nui (m)</td>
<td>ta-na (f)</td>
</tr>
<tr>
<td>3</td>
<td>nui (f)</td>
<td>ta-na</td>
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</table>

#### (Ford & Ober 2004)

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</tr>
<tr>
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<td>ngoey</td>
</tr>
<tr>
<td>2</td>
<td>ngi</td>
<td>ngitha</td>
</tr>
<tr>
<td>3 (m)</td>
<td>nuy</td>
<td>thana</td>
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<td>3 (f)</td>
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### Deictic system

#### Proximate

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<tr>
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<td>in</td>
<td>ina</td>
<td>ipal</td>
<td>itha</td>
</tr>
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<td>inubi</td>
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<td>ipalbi</td>
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#### Remote

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<th>sena</th>
<th>sepal</th>
<th>setha</th>
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<tbody>
<tr>
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<td>senabi</td>
<td>sepalbi</td>
<td>sethabi</td>
</tr>
<tr>
<td>Not in view</td>
<td>senawiki</td>
<td>senaki</td>
<td>sepaliki</td>
<td>sethaki</td>
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</tbody>
</table>

#### 'over there'

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<th>pipalngap</th>
<th>pithangap</th>
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<td>pinangapki</td>
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#### 'up there'

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<th>pipalka</th>
<th>pithaka</th>
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<td>pithakaki</td>
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#### 'down there'

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<th>pipalguay</th>
<th>pithaguy</th>
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<td>pinaguyki</td>
<td>pipalguayki</td>
<td>pithaguyki</td>
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#### 'up at the front'

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<th>pinapay</th>
<th>pipalpay</th>
<th>pithapay</th>
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#### 'down at the back'

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<th>pipalpun</th>
<th>pithapun</th>
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### 3. Number

(Ray 1907)

<table>
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<tr>
<td>incl</td>
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</tr>
<tr>
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<td>ngai</td>
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<tr>
<td>2</td>
<td>ngi</td>
<td>ngita</td>
</tr>
<tr>
<td>3 (m)</td>
<td>nui</td>
<td>ta-na</td>
</tr>
<tr>
<td>3 (f)</td>
<td>na</td>
<td></td>
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</table>

= 2sg + PL  ≠ 2sg + 3pl

= PL + 3sg

(Ford & Ober 2004)

(Round & Stirling 2015)

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<td>ntha</td>
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<tr>
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<td>nuy</td>
<td>thana</td>
</tr>
<tr>
<td>3 (f)</td>
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</table>

= PL
3. Number

- ngoi
  - 1.pl
- noí, tana
  - 3.sg, 3.pl
- ngal-pa
  - incl
- ngai
  - 1.sg
- ngi
  - 2.sg
- ngi-ta(na)
  - 2.pl
3. Number

- **ngay, ngoey**
  - 1.sg, 1.pl

- **ngalpa**
  - incl

- **nuy, na, thana**
  - 3.sg, 3.pl

- ***io(a)**

- ***uo(a)**

- **ngi ngitha**
  - 2.sg
  - 2.pl
Summary

• Semantics:
  – deixis
  – reference

• Morphology:
  – number distinction for 3rd person
  – different morphemes for 3rd person and plural

3rd person: $o$

$\neq$

Plural: $a$
Outline

1. The Concept Formation Constraint
2. Syncretism
3. Number
4. Conclusion
5. Questions
Conclusion

• The Concept Formation Constraint can be applied to person.
• Inclusive is the only complex person ➔ Mereological sum $iu$.
• Other combinations of person atoms are unlexicalisable:
  – A syncretic $u$ and $o$ do not correspond to a lexicalised $uo$.
  – $uo$ and $io$ do not correspond to plural pronouns. Plural is formed by adding $a$. 
For further research

• Number in the kite: Ackema & Neeleman to appear: a is person, not number
  ➔ extension to a 4-atom universe (Roelandt 2016)
Thank you!
Outline

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