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**Introducing *Diri*:
Is It an Argument or Something Else?**

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Introduction

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- ❑ There is substantial variation in the way languages express reflexivity (Reuland 2011, 2017), which cannot be captured by the binding theory of Chomsky (1981).
- ❑ One of the goals of the current project is to investigate the unity underlying this diversity, by teasing apart the different factors involved in expressing interpretive dependencies.
- ❑ 1. Def: A (transitive) predicate is reflexive iff one argument bears two of its theta-roles
- ❑ Russian: Ivan mojetsja – English John washes
- ❑ How derived? as in (2)?
2. $(\lambda x (\lambda y (V_{\theta_1, \theta_2} (x, y)))) \rightarrow (\lambda x (V_{\theta_1, \theta_2} (x, x)))$
Not an innocuous operation:
- ❑ Russian: *Ivan nenavidetsja – English *John hates

Introduction

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- - Natural language avoids identical expressions in a local domain –Local identity avoidance (see Reuland 2017 for a detailed discussion) → reflexivity must be licensed
- Captures certain standard instances of condition B of Canonical Binding Theory (CBT, Chomsky 1981): Pronominals are free in a local domain

3. a. *Juliet_i men-cinta-i diai_k.* [Indonesian]
Juliet AV-love-CAU her

‘Juliet loves her.’

b. **Juliet_i (λx (mencintai_{θ₁,θ₂} (x, x)))*

- Licensing reflexivity:
 - 4. a. Detransitivization: Reducing one argument and bundling the roles into a composite theta-role (Reinhart & Siloni 2005)
 - b. Keeping the arguments distinct (protection) → near reflexivity (Reuland 2001, Lidz 2001, Reuland 2011)

Introduction

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- Some Austronesian languages including Indonesian, two dialects of Jambi, Palembangnese, Javanese, and others have elements that are in some sense in-between anaphors and pronominals (Kartono 2013), and are puzzling for the CBT (see Cole et al. 2008, 2015).
- I refer to these as '**half reflexives**', since they can be both locally and non-locally bound.
- Kartono (2013), Reuland (2016, 2017): Their existence is expected: *dirinya* is sufficiently complex to keep the arguments distinct, but does not enforce local binding.

5. a. *Andi_i mem-(p)ukul diri-nya_{i/i}.* [Indonesian]
Andi AV-hit body-3SG.GEN
'Andi hit himself.'

b. *Andi_i meng-(k)ata-kan mereka mem-(p)ukul diri-nya_i.*
Andi AV-say-kan 3PL AV-hit body-3SG.GEN
'Andi said that they hit him.'

c. *Andi_i (λx (memukul _{θ_1, θ_2} (x, [diri x])))*

Introducing *Diri*: Verb + *diri*

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- Indonesian has another strategy with the element *diri*
- *Diri* traditionally means ‘body’ or ‘self’
- Combining a verb + *diri* results in a reflexive interpretation

6. Dia **mem-basuh diri** di sungai. [Indonesian]

3sg **AV-wash** **body** in river

‘He washed himself in the river.’

*Prefix *meN-*: - Active Voice (Sneddon 1996, Arka 2000, Mintz 2002, Nuriah 2004)
- Subject agreement (Voskuil 1990, Cole et al. 1999, Sato 2010)

Introducing *Diri*: Verb + *diri*

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- Elements similar to *diri* can be also be found in other Austronesian languages, such as in **two dialects of Jambi**, **two dialects of Palembangnese**, and **two dialects of Lampungnese**.

7. Anton **m-basuh diri** di sungai. [City Palembangnese]
Anton **AV-wash body** in river
'Anton washed himself in the river.'
8. Dio **nge-basuh diri** balik kerjo. [City Jambi]
3sg **AV-wash body** return work
'He washed himself after work.'
9. Rita **mbasuh dikhi** pas mulang kerja. [Lampungnese dialect O]
Rita **AV-wash body** when return work
'Rita washed herself after she returned from work.'

Introducing *Diri*: Verb + *diri*

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- Similarly to simplex anaphors like Dutch *zich*, or affixes like Russian *-sja*, Indonesian *diri* is restricted to a subset of agent-theme verbs such as *to defend*, *to injure*, *to wash* and *to pimp*.

10. Anton mem-basuh diri.

Anton AV-wash body

‘Anton washed (himself).’

[Indonesian]

- By contrast, verbs such as *to love*, *to hate*, *to like* and *to see* cannot be combined with *diri*.

11. *Anton mem-benci diri.

Anton AV-hate body

‘Anton hates himself.’

[Indonesian]

Research Questions

The element *diri* is allowed in constructions such as in (10) but not in (11). This triggers questions:

- What is actually the role of *diri*?
- Is it an anaphor in argument position or is it something else?

Investigating the role of *Diri*

- Reinhart and Sioni (2005) provide a detailed study of reflexivization. They argue that cross-linguistically, one of the operations involved in reflexivization is a lexical process of bundling and detransitivization, where an agent role and a theme are bundled into a complex [agent-theme] role which is assigned to the remaining subject argument.
- This accounts for the close connection between relexivization and detransitivization observed in many languages
- In this approach elements like Dutch *zich* or the Russian suffix *sjɑ* are not arguments, but elements licensing the lexical bundling operation by eliminating a residual marker of transitivity (such as Case in Dutch or Russian).

Bundling

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- Reinhart and Siloni (2005) argue that the operation underlying reflexivization involves a bundling operation reducing the internal argument and assigning the bundled role to the remaining argument:

Reflexivization - Bundling

$$[\theta_i] [\theta_j] \rightarrow [\theta_i - \theta_j]$$

where θ_i is an external θ -role

- (12) a. Verb entry: $\text{wash}_{\text{acc}} (\theta_1, \theta_2)$ (NB: transitive *wash* assigns Case)
b. Bundling output: $\text{wash} [\theta_1 - \theta_2]$ (NB: acc Case eliminated)
c. Logical syntax representation: $(\lambda x (\text{wash}_{[\theta_1 - \theta_2]} (x)))$.
d. $\dots V_{[\theta_1], [\theta_2]} (x, y) \rightarrow \dots V'_{[\theta_1 - \theta_2]} (x)$
(where $[\theta_1 - \theta_2]$ stands for the Bundling of θ_1 and θ_2)

Testing for argumenthood 1

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Proxy reading (Jackendoff 1992)

English Reflexive

13. {Upon a visit to a wax museum:} All of a sudden

*Ringo started undressing **himself**.*

(^{OK}Ringo, ^{OK}Ringo's statue)

14. {Upon a visit to a wax museum:} All of a sudden

Ringo started undressing.

(^{OK}Ringo, ^{*}Ringo's statue)

Testing for argumenthood 2

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Proxy reading

True Reflexive - Indonesian

15. {Upon a visit to a wax museum,}

Ringo memasuki museum yang dipenuhi banyak orang yang menunggu kedatangannya.

(‘Ringo entered a museum that was full of people who were waiting for his arrival.’)

Kemudian, *Ringo men-ampil-kan diri-nya sendiri.*

Then, Ringo AV-display-CAU *body-3gen self*

‘Then, Ringo displayed himself.’

(^{OK}Ringo, ^{OK}Ringo’s statue)

Testing for argumenthood 3

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Proxy reading

Half Reflexive - Indonesian

16. {Upon a visit to a wax museum,}
Ringo memasuki museum yang dipenuhi banyak orang yang menunggu kedatangannya.

('Ringo entered a museum that was full of people who were waiting for his arrival.')

Kemudian, *Ringo men-(t)ampil-kan diri-nya.*
Then, Ringo AV-display-CAU *body-3gen*
'Then, Ringo displayed himself.'

(^{OK}Ringo, ^{OK}Ringo's statue)

Testing for argumenthood 4

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Proxy reading

The element *diri* – Indonesian

17. {Upon a visit to a wax museum,}

Ringo memasuki museum yang dipenuhi banyak orang yang menunggu kedatangannya.

(‘Ringo entered a museum that was full of people who were waiting for his arrival.’)

Kemudian, *Ringo men-(t)ampil-kan diri.*

Then, Ringo AV-display-CAU *body*

‘Then, Ringo displayed himself.’

(^{OK}Ringo, *Ringo’s statue)

Further tests for argumenthood 1

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Object comparison

[English]

18. John **washes himself** more often than George.

Object comparison

John washes himself more often than ~~John washes~~ George.

allows object comparison: *himself* is argument

19. John **washes** more often than George.

Object comparison

***John washes himself more often than ~~John washes~~ George.**

Doesn't allow object comparison: no argument

(Dimitriadis and Everaert 2014)

Further tests for argumenthood 2

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Object Comparison

[Indonesian]

20. Budi mencubit **dirinya/dirinya** sendiri lebih sering daripada Anton.

a. **Object comparison**

Budi pinched himself more than ~~Budi~~-pinched Anton.

21. Susi **mem-basuh diri** lebih sering daripada Anna.
Susi AV-wash body more often than Anna

b. **Object comparison**

*Susi washes herself more than ~~Susi~~-washes Anna.

Strict and Sloppy Readings

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□ VP Ellipsis

[Indonesian]

22. Anton *mem-basuh diri* di sungai dan Rudy juga.
Anton AV-wash body in river and Rudy also
'Anton washes himself in the river and so does Rudy.'

✓ Sloppy = Anton washes himself in the river and
Rudy washes himself in the river.

* Strict ≠ Anton washes Anton and
Rudy washes Anton.

Conclusions about *Diri*

Bare *diri* is not an independent argument since it lacks the relevant properties as shown by:

- The proxy reading test
- The object comparison test
- In VP Ellipsis it only allows a sloppy reading
- **This indicates that *diri* in such constructions is an element that licenses the lexical bundling operation.**
- **More specifically it eliminates a residual transitivity marker e.g. accusative case as in Reinhart and Siloni (2005) .**

How we do know that there is bundling?

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- Dimitriadis and Everaert (2014) develop a test to identify the presence of syntactically accessible agent and theme/patient roles regardless of their syntactic position.
- I apply the test to see whether these roles are active in the reflexive predicates involving the element *diri*.

Testing for Agents and Patients

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Testing for Agent

- Adverb *carefully* targets agents, not subjects (23a), whereas (23b) completely lacks an agent.

23. a. John threw the rock *carefully*.

[English]

b. *John feared the snake *carefully*.

- In Dutch the adverb *opzettelijk* ‘intentionally’ is used as an agent-oriented adverb (24).

24. Jan gooide de kei *opzettelijk*.

[Dutch]

Jan threw the rock *intentionally*.

Dimitriadis and Everaert (2014)

Testing for Agent

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- The same test is applied to see whether reflexive verbs with *diri* are also agentive (using the Indonesian counterparts of the adverbs used previously).

25. a. Ringo **membasuh diri** **dengan hati-hati**.
Ringo AV-basuh body with heart-DUPL

‘Ringo washes himself **carefully**.’

b. Anna **dengan sengaja** **ber-hias diri**.
Anna with intention INTRA-primp body

‘Anna primps herself **intentionally**.’

Testing Agent

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Other languages

26. Anna **nyelametke diri** dengan **ati-ati**. [City Palembangnese]
Anna AV-save-CAU self with heart-Dupl
'Anna saved herself carefully.'
27. Anna **sengaja** **mbasuh dikhi**. [Lampungnese dialect A (Api)]
Anna intentionally AV-wash body
'Anna washed herself intentionally.'
28. Anna **sengajao** **n-(t)unjuk-ken dighei** di depan ulun rame. [Lampungnese dialect O (Nyo)]
Anna intentionally AV-show-CAU self in front people many
'Anna displayed herself intentionally in front of many people.'

Testing for Patient 1

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- Some adverbs require a syntactically realized theme, such as *completely*, *painfully*. These can be used to demonstrate the presence of a theme role.
- This is illustrated in (29).

29. a. John sang (the song).

b. John baked (the cake).

c. John sang the song **completely**.

d. *John sang/baked **completely**.

(Dimitriadis and Everaert 2014)

Testing for Patient 2

- If the theme role is accessible in verbs with *diri*, then these verbs should allow modification by adverbs such *completely*, *partly* or *painfully*. The relevant examples are given in (30).

[Indonesian]

30. a. Anton membasuh diri *seutuhnya/seluruhnya*.
Anton AV-basuh body completely.
'Anton washes himself **completely**.'
- b. Anna berhias diri *selengkapnya*.
Anna INTRA-primp body completely.
'Anna primps herself **completely**.'

The sentences in (30a,b) are both grammatical. This shows that the theme role is indeed present in both examples.

Testing for Patient 3

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Other languages

31. Anto **ngebasuh diri** **seutuhnya**. [City Palembangnese]
Anto AV-wash body completely
'Anto washed himself **completely**.'
32. Anto **mbasuh dikhi** **seutuhni**. [Lampungnese dialect A (Api)]
Anto AV-wash body completely
'Anto washed himself **completely**.'
33. Anto **nyulukken dighei** **segalano** di depan ulun rame. [Lampungnese dialect O (Nyo)]
Anto AV-display-CAU body completely in front many people
'Anto displayed himself **completely** in front of many people.'

Conclusion

- Given the tests for argumenthood, the element *diri* is not an argument.
- The tests for agent and patient show that these roles are still accessible after bundling.
- Bare *diri* functions as an element that licenses the lexical bundling operation yielding reflexive verbs.
- More specifically it does so by eliminating a residual marker of transitivity, such as accusative case.

Thank you

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