Weak Drop in Context

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Weak Drop

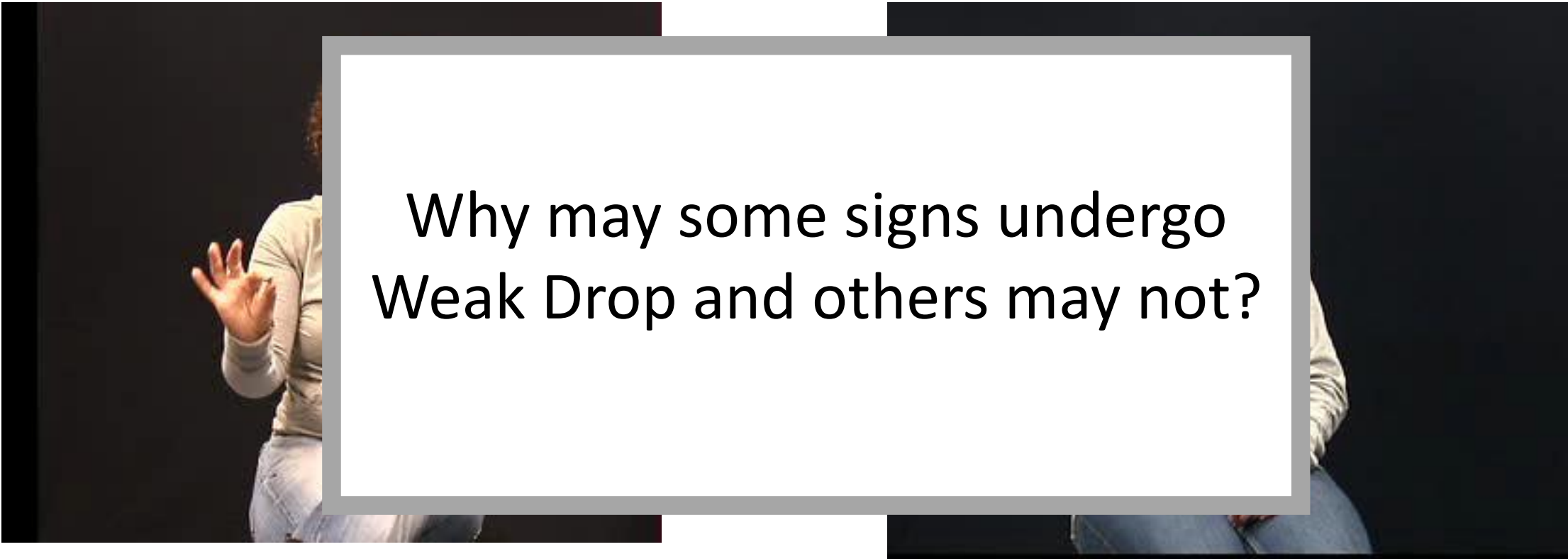
Two-handed variant

One-handed variant

Weak Drop

Two-handed variant

One-handed variant

Why may some signs undergo Weak Drop and others may not?

Background

1. FORMAL ASPECTS: Weak Drop is linked to the amount of phonological information that would be lost in the realisation of one-handed variants

	ASL (Battison 1974, Brentari 1995*)	NGT (van der Kooij 2001)
Fully symmetrical signs	**+**	**90%**
Asymmetrical signs	**✕**	60%
Except when the weak hand = B	**+**	**75%**
Alternating movement	**✕**	55%
Contact between the hands*	**✕**	63%

Background

1. FORMAL ASPECTS

Weak Drop is linked to the amount of phonological information that would be lost in the realisation of one-handed variants (Battison 1974, Brentari 1995, van der Kooij 2001)

2. ICONICITY

When the signs refer to concepts that involve two objects or referents, Weak Drop is less likely to occur (Van der Kooij 2001)

3. PHONETIC CONTEXT

When a two-handed sign is surrounded by one-handed forms, Weak Drop is more likely to occur (Nishio 2009)

Background

1. FORMAL ASPECTS

2. ICONICITY

3. PHONETIC CONTEXT

What can corpus data tell us about the impact of these factors on Weak Drop?

Data

- Annotated parts (20%) of the Corpus NGT
  - 92 signers, age 17-82, 6 regions

- Two-handed signs
  - At least 15 tokens
  - At least 5 different signers

- 302 sign types – 19,745 tokens

Data: Spotting Weak Drops

- One-handed forms

Weak Drop

- Two-handed forms

No Weak Drop

- Complex forms

Weak Drop in the Corpus NGT
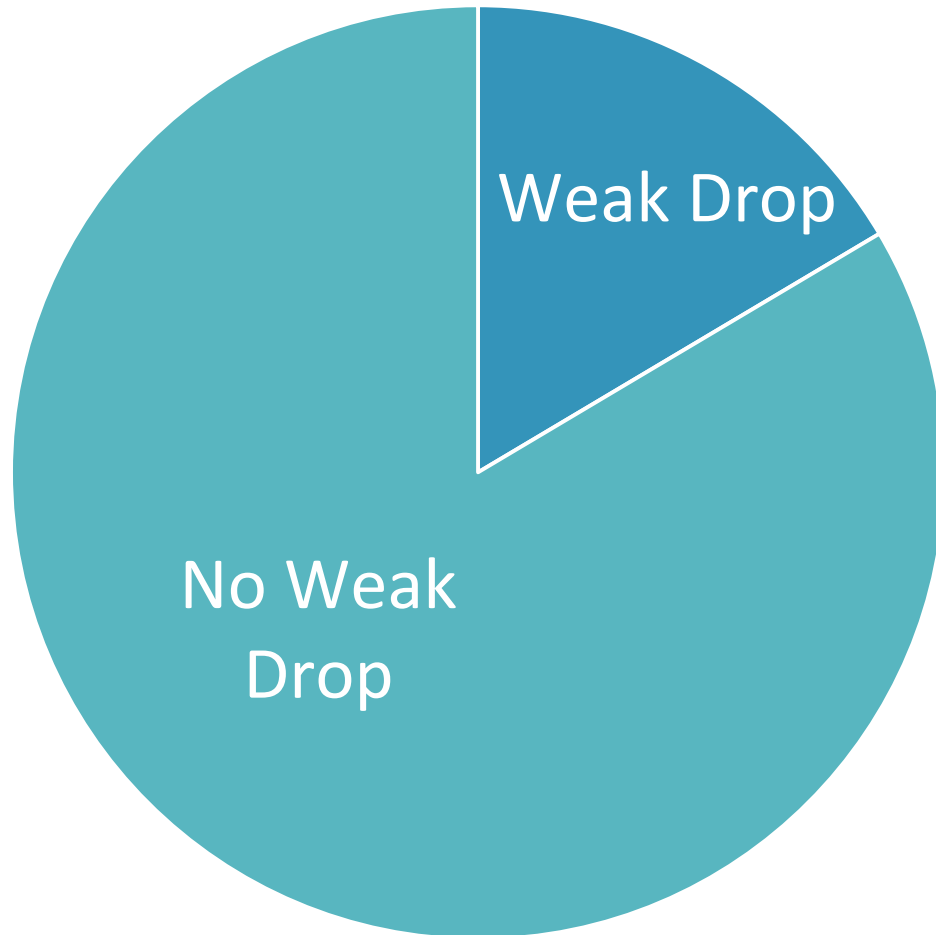
16 % of the tokens of two-handed signs are realised with one hand

Weak Drop

No Weak Drop

Weak Drop per sign

ID-Glosses	Number of tokens	Weak Drop ratios (%)	
BEAUTIFUL	280	65	
SCHOOL	384	60	
OR	261	42	**High Weak Drop ratios**
ALREADY	400	40	
NOT	254	36	
STAY	268	35	
SIGN	1358	2	
SAME	686	2	
GROUP	271	1	**Low Weak Drop ratios**
HANDICAP	281	1	
TOGETHER	229	1	
WORK	256	0	

Mixed effects models

Dependent variable	Random factors	Fixed factors
		1. FORMAL ASPECTS
WEAK DROP VS. NO WEAK DROP	SIGNERS & SIGNS	2. ICONICITY
		3. PHONETIC CONTEXT

1. Formal aspects

	Symmetrical		Asymmetrical	
	Non-alternating	Alternating	Weak hand = B	Weak hand = other

STAY	SIGN	PAY	COFFEE
180 sign types 11,535 tokens	42 sign types 3,457 tokens	52 sign types 3,150 tokens	28 sign types 1,603 tokens

1. Formal aspects

No contact

Contact

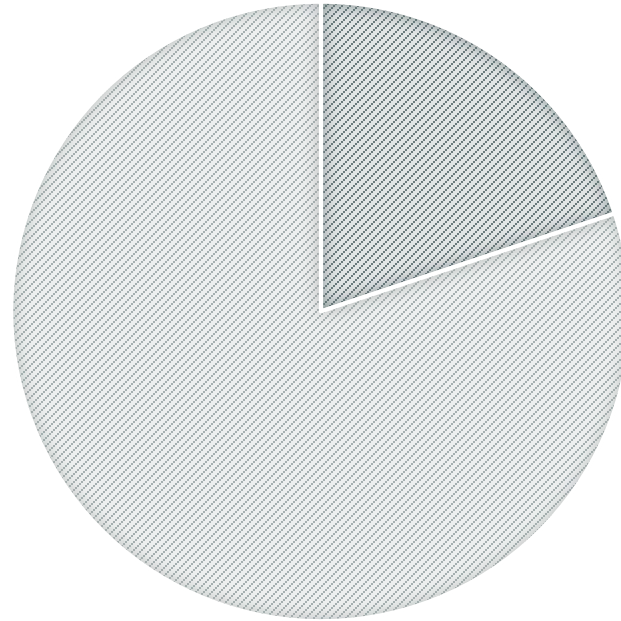
STAY

COFFEE

186 sign types
12,559 tokens

116 sign types
7,186 tokens

1. Formal aspects: results
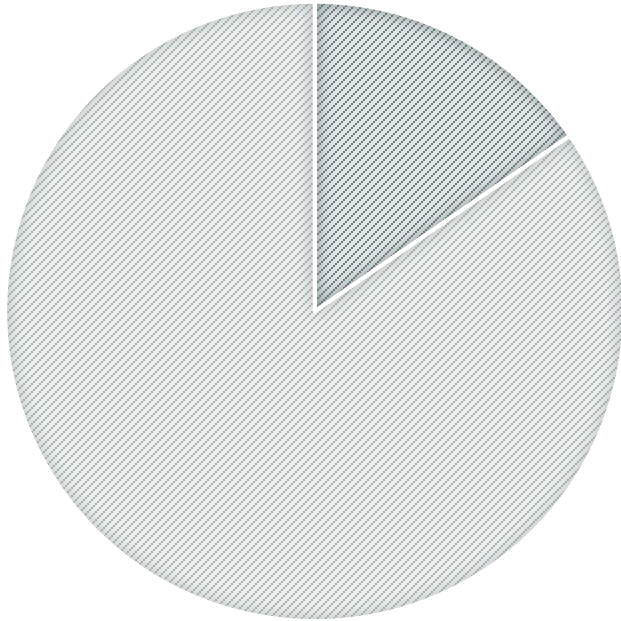
SYMMETRICAL

ASYMMETRICAL
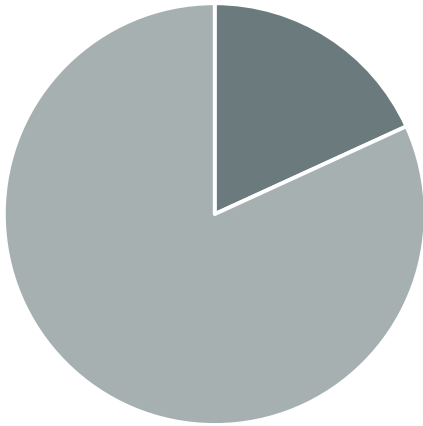
p= >0.05

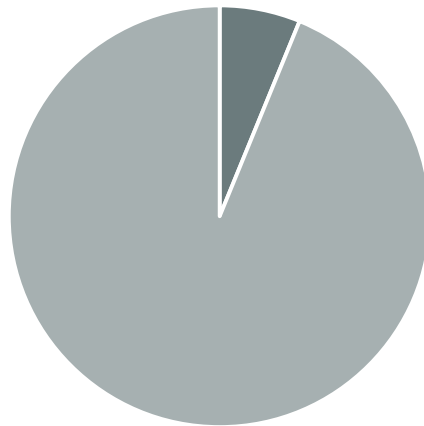# 1. Formal aspects: results

SYMMETRICAL

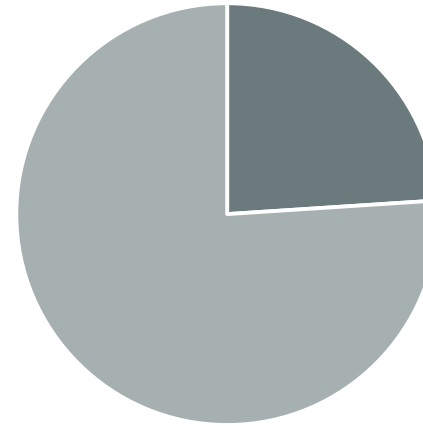ASYMMETRICAL

NON-ALTERNATING

ALTERNATING

WEAK HAND = B
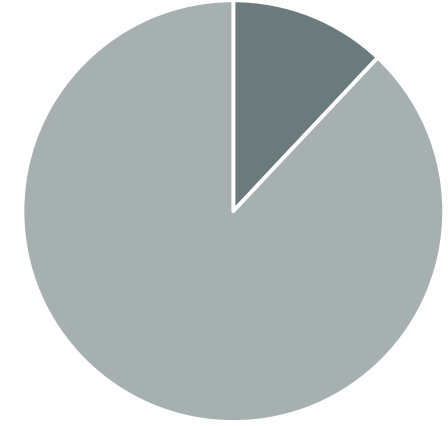
WEAK HAND = OTHER

p=0.004

p=0.05

1. Formal aspects: results
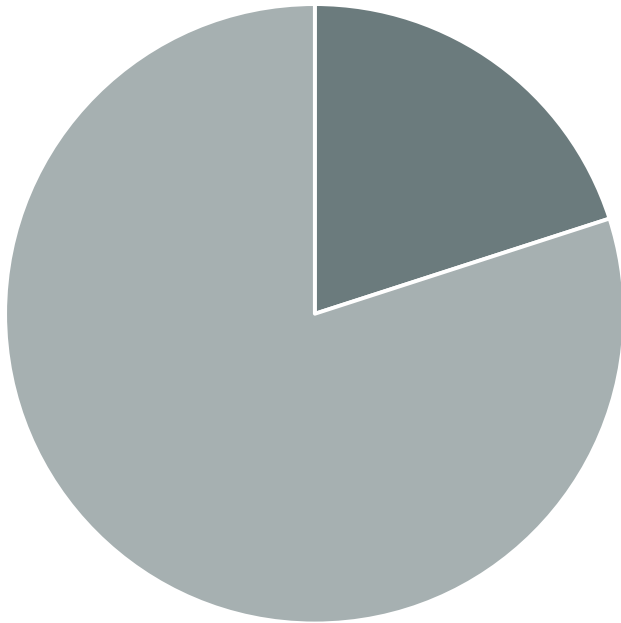
NO CONTACT

CONTACT

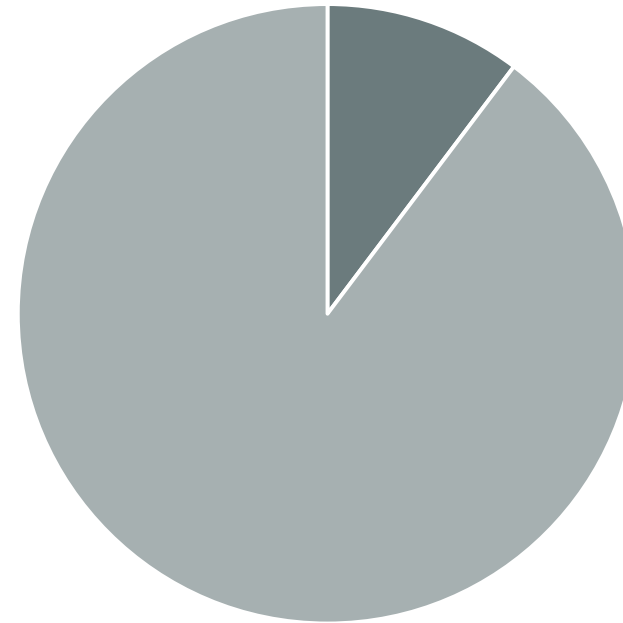**p= 0.02**

2. Iconicity of two-handedness

Non Iconic   **Iconic**

Body parts   **Two entities**   **Figure-Ground**   **Outline**

ALREADY   HANDICAP   CONSIDER   READ   GROUP

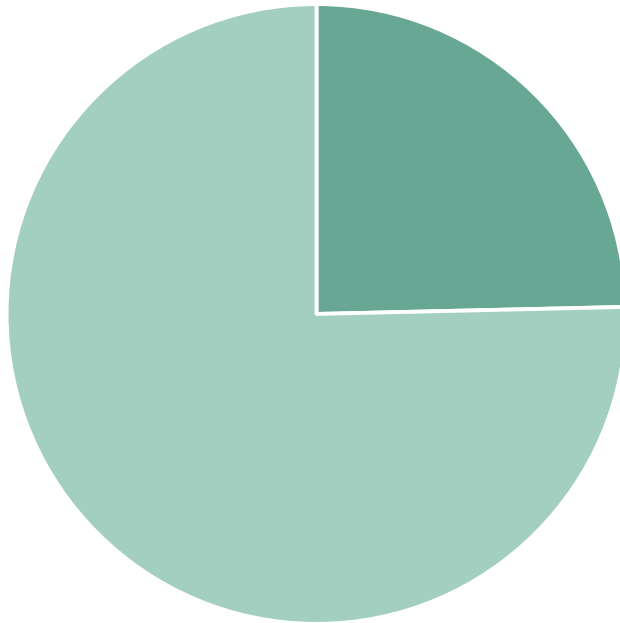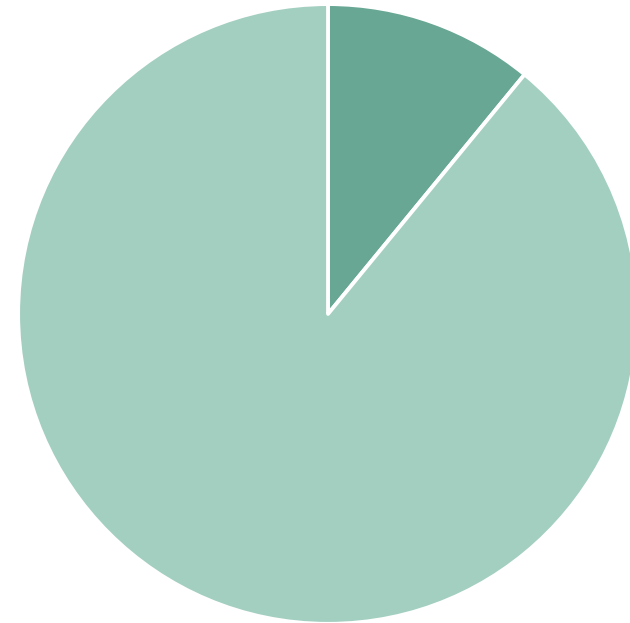| 127 sign types 7,988 tokens | 71 sign types 4,698 tokens | 66 sign types 4,576tokens | 12 sign types 981 tokens | 25 sign types 1,502 tokens |

2. Iconicity of two-handedness: results

NON ICONIC

ICONIC

p= <0.001

2. Iconicity of two-handedness: results

ICONIC

BODY PARTS   TWO ENTITIES   FIGURE-GROUND   OUTLINE

p= 0.0003

Weak Drop per sign

ID-Glosses	Number of tokens	Weak Drop ratios (%)	Iconic	Formally complex
BEAUTIFUL	280	65	-	-
SCHOOL	384	60	+	+
OR	261	42	-	-
ALREADY	400	40	-	-
NOT	254	36	-	-
STAY	268	35	-	-
SIGN	1358	2	+	+
SAME	686	2	+	+
GROUP	271	1	+	+
HANDICAP	281	1	+	+
TOGETHER	229	1	+	+
WORK	256	0	-	+

- Figure-ground sign

- Contact + Weak hand = other
- One-handed variant is taboo

3. Phonetic context

BEFORE	TARGET	AFTER
1 hand	1,737 tokens	1 hand
1 hand	1,046 tokens	2 hands
2 hands	1,114 tokens	1 hand
2 hands	1,218 tokens	2 hands

3. Phonetic context: results

	BEFORE	TARGET	AFTER
	1 hand		1 hand
	1 hand		2 hands
	2 hands		1 hand
p= <0.001	2 hands		2 hands
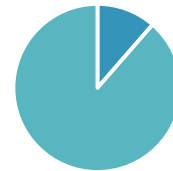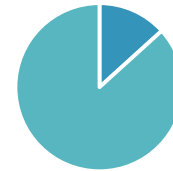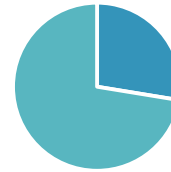
Conclusions

1. FORMAL ASPECTS

- Same amounts of Weak Drop in symmetrical and asymmetrical signs
- Contact and alternating movement disfavour Weak Drop
- Weak B handshape favours Weak Drop

2. ICONICITY

- Body parts, two entities and outline disfavour Weak Drop
- Figure-ground favours Weak Drop

3. PHONETIC CONTEXT

- Weak Drop favoured between one-handed forms

Further issues

INTER & INTRA SIGNER VARIATION
- personal styles & personal lexicons
- Age, gender, region
- Registers

DISCOURSE STRUCTURE
- Repetitions
- Role in discourse

Discourse structure & personal styles

Signer 1
Weak hand lowering

Signer 2
Weak Drop

First occurrence of the sign BEAR

Overtime reduction

Reintroduction of the sign

Selected references

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Thank you!

Corpus NGT

http://www.ru.nl/corpusngtuk/
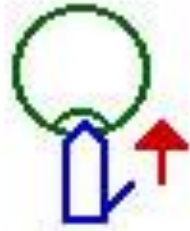
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