The Unique Status of Grooming Verbs

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The goal of this thesis is to find cross-linguistic evidence to indicate that grooming-type verbs are syntactically distinct from other agentive verbs, prompted by the initial observation that the English sentence *John washed* allows a reflexive interpretation while *John defended* does not. A combination of literature review, native speaker elicitations and utilisation of the NWO funded project "Universals and the Typology of Reflexives" [AnaTyp] database of questionnaires has contributed to the identification of five reflexivisation strategies that were unique to grooming-type verbs in their respective languages. Further analysis of these strategies shows that in many languages, grooming-type verbs allow theta-role bundling (see Reinhart & Siloni 2005) in syntactic environments that do not licence bundling for other agentive verbs. Although further research must establish *how* grooming-type verbs facilitate bundling, and why this does not occur in all languages, this thesis can be a stepping stone towards a full understanding of the unique status of grooming-type verbs.

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List of abbreviations

1	first person
2	second person
3	third person
A	subject (agent-like argument) of canonical transitive verb
ABL	ablative
ABS	absolutive
ACC	accusative
ACT	active
ADJ	adjective
ADV	adverb(ial)
AGR	agreement
AGT	Agent theta-role
ALL	allative
AN	animate gender
ANTIP	antipassive
AOR	aorist
APPL	applicative
ART	article
ASP	aspect
AUX	auxiliary
BEN	benefactive
CAU	Cause theta-role
CAUS	causative
CL	clitic
CLF	classifier
COM	comitative
COMP	complementizer
COMPL	completive
COND	conditional
CONT	continuative
COP	copula
CVB	converb
DAT	dative
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DIST	distal
DISTR	distributive
DL	delimitative
DU	dual
DUR	durative
ELA	elative
EMPH	emphasis
ERG	ergative
EXCL	exclusive
EXP	Experiencer theta-role
F	feminine
FOC	focus
FUT	future
GEN	genitive
HAB	habitual
HON	honorific
IMP	imperative
INCL	inclusive
IND	indicative
INDF	indefinite
INF	infinitive
INS	instrumental
INTR	intransitive
IPFV	imperfective
IRR	irrealis
LOC	locative
M	masculine
MID	middle
N	neuter
N-	non- (e.g. NSG – non-singular, NPST – non-past)
NEG	negation, negative
NMLZ	nominalizer/ nominalization
NOM	nominative
OBJ	object
OBL	oblique
P	object (patient-like argument) of canonical transitive verb
PASS	passive
PFV	perfective
PL	plural
PM	phase marker
PN	proper noun
POSS	possessive
PRED	predicative
PRF	perfect
PRO	pronoun
PRS	present
PROG	progressive
PROH	prohibitive
PROX	proximal/ proximate
PST	past
PTCP	participle
PTV	partitive
PURP	purposive
Q	question particle/marker
QUOT	quotative
REA	realis
RECP	reciprocal
REFL	reflexive
REL	relative
RES	resultative
S	single argument of canonical intransitive
SBJ	subject
SBJV	subjunctive
SG	singular
SOC	sociative
THM	Theme theta-role
TOP	topic
TR	transitive
VOC	vocative

1. Introduction

Each word in a sentence contains rich conceptual information, yet whether a sentence is grammatical or not has very little to do with the meanings of individual words. Consider, for instance, Chomsky's (1957) famous example below in sentence (1).

(1) Colorless green ideas sleep furiously.

Although the sentence makes little to no sense, it is grammatically well-formed. The syntax cannot see that ideas cannot sleep or that green is a colour, and for the most part, none of that matters to the syntax. For example, the verbs *kick* and *slap* may involve different body parts, but they are still passivized in the exact same manner.

Nevertheless, syntax is sensitive to the semantic roles allowed by the verb, as shown by the contrast between sentences (2a-b) below.

(2) a. John gives Mary her baby.

b. *John sleeps Mary her baby.

In sentence (2a), the verb *give* can assign the roles of 'giver' (Agent), 'getter' (Recipient), and 'gift' (Theme). Contrastively, the verb *sleep* in sentence (2b) can only assign the role of 'sleeper'. This sentence is ill-formed, because the other participants are role-less. Similarly, sentences (3a-b) below show that roles cannot be left unassigned.

(3) a. John sleeps.

b. *John gives.

This thesis focuses on the lines of communication between syntax and semantics. How much semantic information is visible to the syntax, and in what way? Specifically, this thesis is inspired by the contrast between the available interpretations of sentences (4) and (5) below.

(4) The children washed.

(5) The children defended.

Sentence (4) receives the interpretation that 'the children wash themselves'. To allow this reflexive interpretation, the semantic roles of 'washer' (Agent) and 'washee' (Theme) are bundled into one complex role and assigned to *the children* (cf Reinhart & Siloni 2005). The verbs *to wash* and *to defend* assign the same semantic roles, or theta-roles (cf Reinhart 2000, 2002), yet in sentence (5) the reflexive interpretation that 'the children defend themselves' is not readily available; they could be defending anything. In this thesis, I shall investigate the difference between reflexivisation of wash-type verbs and defend-type verbs in a cross-linguistic typological survey, and prove that there is a difference between these two types of verbs that is visible to the syntax. The question posed here is inspired by recent works on theta-roles (see Reinhart 2000, 2002) and their role in reflexivization (see Reinhart & Siloni 2005).

1.1. The Theta System

The present thesis elaborates on ideas in Reinhart's (2002) Theta System. Reinhart identifies two core features involved in theta-roles: [c]ause change and [m]ental involvement. As shown below in Table 1, these two binary features can be used to define a core set of four theta-roles.

Table 1
Feature distribution of classic theta-roles

	agent	[...] instrument	theme (patient)	experiencer
[c]ause change	+	+	-	-
[m]ental involvement	+	-	-	+

(Reinhart 2000:25)

In addition to these archetypal theta-roles, Reinhart (2002) argues that features can be left unspecified in a verb's theta-grid. Consider, for instance, sentence (6) below.

(6) George$_{[\text{AGENT}]}$ / the key$_{[\text{INSTRUMENT}]}$ / the wind$_{[\text{CAUSE}]}$ opened the window.

The external theta-role of the verb *open* can be realized by an Agent [+c+m], as well as a Cause[+c] or Instrument [+c-m]. According to Reinhart, this is because the external role in the

verb's theta-grid is unspecified for /m and can only be classified as [+c], which makes it consistent with both [+c+m] and [+c-m]. Including under-specified options, we end up with the following nine possible theta-role feature combinations.

a. [+c +m] Agent

b. [+c -m] Instrument

c. [-c +m] Experiencer

d. [-c -m] Theme / Patient

e. [+c] Cause

f. [-c] Goal / Beneficiary

g. [+m] Sentient(?)

h. [-m] Source / subject matter

i. [ ] ARB(itrary)

(Reinhart 2002)

The [+m] role, tentatively named 'sentient', occurs with verbs like *love, know* and *believe*, and always merges externally as the subject. For a theory incorporating the null-role or arbitrary role, I refer the reader to Marelj (2004).

1.2. Reflexivisation strategies

Reflexivity is a property of predicates. A predicate is reflexive if and only if one of its arguments bears two of its semantic roles (Reinhart & Reuland 1993). This situation can arise in two ways, as demonstrated below in sentence (7).

(7) a. John loves himself.

b. John dressed.

Above in sentence (7a), the direct object is bound by the subject. This way, the subject *John* indirectly bears two semantic roles. In sentence (7b), there is only one syntactic argument, and it directly bears two semantic roles (details to follow in Section 1.3).

In line with Reuland (2011) and others, I distinguish between 'binding' and 'co-reference'. Below in sentence (8) is an example of local co-reference in which two arguments have the same referent, but there is no dependency.

(8) Poor Lucy. Everyone hates her; even *Lucy* hates *her*.

Although both of the words in italics refer to the same person, the object *her* is not bound by its subject *Lucy*. Hence, no reflexive predicate is formed and licensing is not necessary. As such, this is a case of co-reference rather than reflexivity.

Languages generally use special means to express reflexivity, and many languages have more than one way to form a reflexive predicate. As shown below in examples (9) through (12), Dutch and Norwegian use two types of nominal reflexives: a simplex form (Dutch *zich* and Norwegian *seg*) marked *SE* in the present paper, and a complex form (Dutch *zichzelf* and Norwegian *seg selv*) which contains the *SE* element.

Dutch

(9) Max wast zich / zichzelf.

Max washes SE / SE-self

(10) Max haat *zich / zichzelf

*Max hates *SE / SE-self*

(Reinhart & Reuland 1993: 665-6)

Norwegian

(11) Jon wasket seg / seg selv.

Jon washed SE / SE self

(12) Jon foraktet *seg / seg selv.

*Jon despised *SE / SE self*

(Hellan 1988:chap. 3)

The above examples demonstrate that the simplex anaphor is not available for all transitive verbs. Reinhart and Reuland (1993) argue that it can only license reflexivity in verbs that are "inherently reflexive"[1], while the complex anaphor can enforce reflexivity in its syntactic predicate.

Crucially, the contrast between reflexivisation with a full reflexive and affixal or simplex reflexivisation is pervasive cross-linguistically. In Russian, for instance, agentive verbs like *myt'* 'wash', or *zashchishchat'* 'defend', allow reflexivisation with the affix *-sja*, but EXP-subject verbs like *videt'* 'see', *nenavidet'* 'hate', require the full reflexive *sebja*. Similarly, Modern Greek has a contrast between reflexivisation with the full reflexive *eaftostou*, and the medial form of the verb, with a similar restriction on the latter (Papangeli 2004). The contrast also exists in Semitic languages (in Hebrew, for instance, the affixal form is reflected in the *hitpa'el* template), in a Turkic language such as Sakha (Vinokurova 2005), but also in Uralic languages, such as Mari, Udmurt, Komi-Zyrian, Erzya and Khanty (Volkova 2014, Volkova and Reuland 2014). It also occurs in languages and language families as typologically distant as Iroquoian (Barrie and Alboiu 2008), Austronesian (see Kartono 2013 for an overview of Bahasa Indonesia and related languages), Dravidian (Telugu) (see Subbārāo 2012, Lust et al. 2000 for an overview of South Asian languages), and Australian languages (see Franssen

[1] A word of caution: the term "inherently reflexive" in this context is outdated, and is now used to refer to verbs that can only appear with reflexive morphology (cf Reinhart & Siloni 2005, Reuland 2011). See Section 1.3 for a theta-role based approach to the contrast in available reflexive strategies.

2010 for an overview). Although the number of languages that have been studied in sufficient depth is still limited, the restriction on affixal reflexivisation seems systematic.

1.3. Bundling

Reinhart and Siloni (2005) observe that the verb-based restriction on reflexivisation strategies appears to be driven by the types of theta-roles verbs can project. The full reflexive is available to all types of verbs, while affixal or simplex reflexivisation is limited to AGT-THM verbs. In addition, Reinhart and Siloni argue that the affix or simplex anaphor is not an argument and does not receive a theta-role. Volkova and Reuland (2014) show in sentence (13) onder that some reflexive strategies allow a proxy reading (cf Jackendoff 1992), while others do not.

(13) a. {Upon a visit to Mme Tussaud wax museum,} *Ringo washed himself.*
(OKRingo, OKRingo's statue)

b. {Upon a visit to Mme Tussaud wax museum,} *Ringo washed.*
(OKRingo, *Ringo's statue)

(Volkova & Reuland 2014:604)

As illustrated above in (13a), the complex anaphor *himself* can be interpreted as Ringo himself, or as the statue depicting Ringo. In the latter situation, the man washed the statue. Yet sentence (13b) only allows the interpretation that the man washed the man. No proxy reading is allowed and both Agent and Theme are associated with Ringo.

Additionally, Dimitriadis and Everaert (2004) use ellipsis to show that the Dutch complex reflexive *zichzelf* allows object comparison (14), while the simplex *zich* does not (15).

(14) Peter verwondt zichzelf vaker dan haar.
Peter injures SE-self more.often than her.ACC

= Peter injures himself more often than ~~Peter injures~~ her.

"Peter injures himself more often than he injures her."

(15) *Peter wast zich vaker dan haar.

Peter washes SE more.often than her.ACC

= Peter washes *SE* more often than ~~Peter washes~~ her.

Intended: "Peter washes himself more often than he washes her."

(Dimitriadis & Everaert 2014:255)

The impossibility of object comparison with the simplex reflexive *zich* shows that the predicate is syntactically intransitive; only the subject is assigned a theta-role. This seems paradoxical considering our earlier definition of a reflexive predicate, which states that two semantic arguments must be co-valued within the same syntactic predicate (cf Reinhart & Reuland 1993). After all, how can a single syntactic argument value two semantic arguments when no more than one theta-role can be assigned to the same syntactic argument?

Reinhart and Siloni propose that the arity operation in reflexivization is not reduction (16) or saturation (17) of a theta-role, but bundling of two theta-roles into one complex theta-role (18).

(16) a. Sarah opened the door.

∃e [open(e) & CAU(e, Sarah) & THM(e, the door)]

b. The door opened.

∃e [open(e) & *Del* & THM(e, the door)]

(17) a. Jenny threw the ball.

∃e [throw(e) & AGT(e, Jenny) & THM(e, the ball)]

b. The ball was thrown.

∃e [throw(e) & *Sat*(AGT) & THM(e, Jenny)]

(18) a. Tim washed himself.

∃e [wash(e) & AGT(e, Tim) & THM(e, Tim)]

b. Tim washed.

∃e [wash(e) & AGT-THM(e, Tim)]

Sentence (18a) shows reflexivization of an AGT-THM verb with a complex reflexive, which occupies the object position and receives the THM theta-role. In sentence (18b), the two theta-roles have been bundled into one, complex theta-role and assigned to the subject position. The simplex anaphor *zich* licenses the arity operation (cf Reuland 2011).

This arity operation is not available in all languages. For example, the French *se* clitic is known to occur in reflexive predicates with any type of verb, as demonstrated below with an agentive verb (19) and an EXP-subject verb (20).

(19) Jean se lave.

John SE_{CL} *washes*

"John draws himself."

(Reinhart & Siloni 2005:404)

(20) Jean s' aime.

John SE_{CL} *loves*

"John hates himself."

(Reinhart & Siloni 2005:411)

Reinhart and Siloni attribute this difference to the timing of the bundling operation. They argue for a lex-syn parameter that establishes the timing of the bundling operation for each language. If it occurs in the lexicon, as in Dutch and Scandinavian among others, then the thematic restriction would apply. Meanwhile, bundling in syntax, as with Romance languages, would have no thematic restrictions. However, I refer the reader to Marelj and Reuland (2015) for a discussion on why 'bundling in syntax' is a theoretically redundant and unnecessary concept.

1.4. Bundling in English

The initial observation leading to the present study rests in the bundling operation, or something akin to the bundling operation, in the English language. Compare the following set of reflexive predicates in Dutch and English.

Dutch

(21) Tim wast zich / zich-zelf.

Tim washes SE / SE-self

(22) Tim verdedigt zich / zich-zelf.

Tim defends SE / SE-self

(23) Tim haat *zich / zich-zelf.

*Tim hates *SE / SE-self*

English

(24) Tim washes (himself).

(25) Tim defends *(himself).

(26) Tim hates *(himself).

In Dutch, the AGT-THM verb *wassen* (‘to wash’) and *verdedigen* (‘to defend’) both allow the bundling operation (21)-(22), while the EXP-subject verb *haten* (‘to hate’) (23) does not allow it (23). In English, the AGT-THM verb *wash* allows object omission with a reflexive interpretation (24), and the EXP-subject verb *hate* disallows it (26), just as in Dutch. However, the verb *defend* also disallows object omission with a reflexive interpretation (25), despite being an AGT-THM verb just like *wash*. The reflexive object omission is restricted to a subset of AGT-THM verbs that deals with acts of grooming or bodily care (cf Levin 1993).

1.5. Structure of this thesis

The purpose of this study is to find answers to the following three questions.

i) Is there cross-linguistic evidence to indicate that grooming-type verbs can be distinguished from other Agent-Theme verbs in the syntax?

ii) How can a difference between grooming-type verbs and other Agent-Theme verbs be characterized in such a way as would be visible in syntax?

iii) Can the different treatments of this verb class in various languages be predicted on the basis of (independent) facts about these languages?

The next section focuses on question i). In it, I shall explore the available literature for evidence for a separate class of grooming-type verbs. Section 3 contains an attempt to characterize the members of the subset as precisely as possible, suggesting various tests to establish membership of this verb class in a move towards an answer to question ii). The NWO funded project "Universals and the Typology of Reflexives" [AnaTyp] has distributed questionnaires to native speakers of a large and typologically diverse sample of languages, which I analyse in Section 4, making note of various reflexivisation strategies and their behaviours. Section 5 follows this up with a classification and analysis of five distinct reflexivisation strategies that are unique to grooming-type verbs in their respective languages, which may serve as a starting point for the solution to question iii). Finally, Section 6 contains a brief overview of this thesis' findings as well as some concluding remarks.

2. Languages – literature review and informant cooperation

The languages in this section were investigated primarily through literature review, and supplemented with native speaker informants. Not all of the data from native speakers has been included in the analysis. A compilation of all judgements gathered from native speakers can be reviewed in the appendices.

2.1. English

In English, transitive verbs can be reflexivised by using a reflexive anaphor in the direct object position, which needs to be locally bound (cf. Chomsky 1981, Reuland 2001). Consider for example sentence (27) onder.

(27) John defended *(himself).

The reflexive anaphor 'himself' licenses and enforces the reflexive interpretation of the predicate; without it, no reflexive reading emerges. However, some verbs allow a reflexive reading in absence of a reflexive anaphor. For example, sentences (28) and (29) have the same reflexive interpretation despite the lack of a direct object in (29).

(28) John washed himself.

(29) John washed.

Levin (1993) uses this understood reflexive object alternation (ibid:35-6) in her exploration of verbs of grooming and bodily care (ibid:227-30), which she presents as a cluster of "syntactically relevant, semantically coherent verb classes" (ibid:22). However, the syntactic relevance of grooming verbs seems to be based purely on meaning. There are no known elements visible in syntax that identify a difference between agentive verbs in general and agentive verbs concerning grooming and bodily care (see Reinhart 2002 for an overview of the Theta System).

So how is it that the syntax can distinguish between grooming and non-grooming verbs in its treatment of understood reflexive object alternation? If there is a structural feature of grooming-type verbs that licenses the reflexive interpretation, then there should be cross-linguistic evidence to motivate splitting the existing category of AGT-THM verbs into two distinct verb classes. Therefore, the first task is to establish whether syntactic tests can identify a consistent grooming verb class across a wide variety of languages.

2.2. Dutch

The Dutch language contains two types of reflexive anaphors, as demonstrated below in sentences (30)-(32).

(30) Tessa$_{AGT}$ wast zich / zichzelf.

Tessa washes SE / SELF

(31) Tessa$_{AGT}$ verdedigt zich / zichzelf

Tessa defends SE / SELF

(32) Tessa$_{EXP}$ haat *zich / zichzelf.

*Tessa hates *SE / SELF*

Sentence (30) contains a grooming verb, sentence (31) contains a non-grooming agentive verb, and sentence (32) contains an EXP-subject verb. The complex anaphor *zichzelf* can be used with any type of predicate, and will enforce a reflexive reading. The simplex anaphor *zich*, on the other hand, can occupy the direct object position of agentive verbs, but not of other types of transitive verbs. Reinhart and Reuland (1993) argue that the simplex anaphor *zich*, or *SE* anaphor, can license reflexive interpretations of predicates that inherently allow reflexive interpretations, but that the *SE* anaphor cannot enforce reflexive interpretations. Reinhart and Siloni (2005) further show a strong correlation between a verb's theta grid and its inherent reflexivity. In doing so, they show that the term 'inherent reflexivity', traditionally reserved

for grooming-type verbs, actually includes most (if not all) agentive verbs. The sentences (30)-(31) above are consistent with their observation that *SE* anaphors can be bound by Agent subjects, but not by Experiencer subjects. Unlike English, Dutch does not distinguish between various agentive verbs in the requirement of a full *SELF* anaphor. This seems to argue against a cross-linguistic verb class of grooming type verbs.

However, further evidence from nominalization does support a relevant distinction between grooming AGT-THM verbs and non-grooming AGT-THM verbs.

(33) Wassen is gezond.

"Washing (oneself) is healthy."

(34) Haten is niet gezond.

"Hating (only someone else) is not healthy."

(Reinhart & Reuland 1993 p. 666)

(35) Verdedigen is gevaarlijk.

"Defending (something or someone) is dangerous."

Shown above, nominalization supports a reflexive interpretation for the grooming verb *wassen* ('to wash') in sentence (33), while the nominalized experiencer verb *haten* ('to hate') in sentence (34) does not allow a reflexive reading. The nominalization of AGT-THM verb *verdedigen* ('to defend') in sentence (35) does not strictly preclude a reflexive interpretation, but still the elicited interpretation is the act of defending in general rather than defending oneself. These data suggest that there are grammatical operations of reflexivity that are only available to grooming-type verbs, which necessarily means that the syntax can somehow distinguish these verbs from other AGT-THM verbs, similar to how agentive verbs can be treated differently than EXP-subject verbs. Nevertheless, sentence (36) below differs from English in that the grooming verb does not elicit a reflexive interpretation when only one syntactic argument is realised.

(36) Jan wast.

"John washes (someone or something)."

In order to truly prove grooming verbs to be a cross-linguistic verb class, the theory will have to account for the difference in reflexive strategies from language to language. Still, the evidence provided by nominalizations of AGT-THM verbs shows that grooming verbs behave differently from non-grooming verbs with regards to the availability of a reflexive interpretation.

2.3. Scandinavian

Just like Dutch, Scandinavian languages use a strong and a weak nominal reflexive. In the present study, Swedish and Danish are examined in closer detail. As seen above for Dutch, the weak reflexive can be used with AGT-THM verbs (see (37) and (39)), while experiencer-subject verbs require the full reflexive (see (38) and (40)).

Danish

(37) John vil barber sig / sig selv

John wants to.shave SE / SELF

(38) Marie hader *sig / sig selv

Marie hates SE / SELF

Swedish

(39) Bill sa till Mary att beskriva sig / sig själv

Bill said to Mary that describe SE / SELF

(40) Etta hatar *sig / sig själv

Etta hates SE / SELF

The weak reflexive can be used with any type of AGT-THM verb that would semantically allow a non-proxy reading (see the discussion of *aanrijden* ('to hit with a car') in Lemmen 2005 and Reuland 2011), so it cannot be used to independently identify a grooming-type verb. Upon

closer investigation, however, additional evidence from nominalizations can make the necessary distinction.

Danish

(41) Hans konstante barbering er beundringsværdigt

3SG.M.GEN constant shaving is admirable

"His constant shaving (of himself) is admirable."

(42) Hendes konstante klemmen er irriterende

3SG.F.GEN constant pinching is annoying

"Her constant pinching (of others) is annoying."

Swedish

(43) Hans rakning är beundransvärd.

3SG.M.GEN shaving is admirable

"His shaving (of himself) is admirable."

(44) Hennes nypningar är irriterande.

3SG.F.GEN pinching is irritating

"Her pinching (of others) is irritating."

(45) Hennes fortsatta förvarande är effektivt.

3SG.M.GEN constant defending is effective

"Her constant defending (of something or someone) is effective."

Sentences (41) and (43) above show that nominalizations of grooming-type verbs in Danish and Swedish elicit reflexive interpretations. Meanwhile, a non-grooming-type verb such as pinching elicits a non-reflexive interpretation (see (42) and (44)). In addition, sentence (45) proves that a non-grooming verb more commonly used reflexively still elicits a non-reflexive interpretation under nominalization. These data prove that Scandinavian syntax distinguishes grooming-type verbs from other AGT-THM verbs in nominalizations, further aligning the Scandinavian languages with the Dutch language.

2.4. Frisian

Frisian is very similar to Dutch and Scandinavian in its reflexive strategies, except in that there is no *SE* anaphor in Frisian. For those verbs where Scandinavian or Dutch would use a *SE* reflexive (see (46) through (48)), Frisian uses a locally bound pronoun (see (49) through (51)).

Dutch

(46) Tessa$_{AGT}$ wast zich / zichzelf.

Tessa washes SE / SELF

(47) Tessa$_{AGT}$ verdedigt zich / zichzelf

Tessa defends SE / SELF

(48) Tessa$_{EXP}$ haat *zich / zichzelf.

*Tessa hates *SE / SELF*

Frisian

(49) Winnie waske him / him sels

Winnie washed him / him self

(50) Klaske ferdigenet har / harsels

Klaske defends her / herself

(51) Winnie bewundere *him / him sels

*Winnie admired *him / himself*

(Reuland, personal communication)

Reuland (2011) argues that the locally bound Frisian pronoun checks off residual accusative case after the bundling operation, just like the *SE* anaphors in Dutch and Scandinavian, and similarly does not carry a thematic role. In other words, this pronoun can license bundling, as evidenced by its inability to occur with the EXP-subject verb in (51), which does not allow bundling. The similarities do not end there. Sentences (52)-(54) below show that Frisian syntax differentiates between grooming-type verbs and other agentive verbs in the domain of nominalizations.

(52) Waskjen is sûn.

"Washing (oneself) is healthy."

(53) Goed ferdigenjen is swier/hurd

"Defending (in general) is difficult."

(54) Jin goed ferdigenjen is swier/hurd.

"Defending oneself is difficult."

(Reuland, personal communication)

Nominalizations of grooming-type verbs receive a reflexive interpretation without additional marking, as in sentence (52). However, nominalizations of non-grooming verbs without additional marking do not receive this reflexive interpretation, as in (53). Sentence (54) shows that an accusative impersonal pronoun (cf Hoekstra 2010) is needed to elicit the reflexive interpretation.

2.5. Malayo-Polynesian

This next group of languages lies outside the Indo-European language family. Recent empirical studies of Malayo-Polynesian languages (Kartono 2013, Van der Kallen 2015), spoken primarily in the Indonesian isles, reveals a surprisingly strong similarity to the English situation. A collection of questionnaires distributed among native speakers of eleven Malayo-Polynesian languages revealed that reflexive predicates are typically realized by a complex reflexive or half-reflexive[2] in the object position (see Kartono 2013).[3] However, all of the

[2] A half-reflexive exhibits both pronominal and anaphoric traits, in that it can be bound by a local antecedent but can also have antecedent that does not c-command it (cf Kartono 2013). This also distinguishes the half-reflexive from long distance reflexives, as discussed in detail by Cole and Hermon (1998, 2005).

investigated languages allowed full object omission without loss of reflexive meaning with verbs of grooming or bodily care, as shown in examples (55)-(58) below.

City Jambi

(55) John becukur

John shave

"John shaved [himself]."

Sundanese

(56) Maneh ibak

2SG wash

"You washed [yourself]."

Malay Manado

(57) Paul mandi

Paul wash

"Paul washed [himself]."

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[3] In addition to these nominal reflexive strategies, ten of the eleven investigated languages can also use the particle *diri* or *dighei*, meaning body, to reflexivise a strict subset of verbs, as shown below in sentences I-III.

Indonesian

I. Dia_i lupa diri_i.
3SG forget self
"He forgets himself."

Malay Pontianak

II. Die berbangge diri.
3SG proud self
"He is proud of himself."

Lampung Nyo

III. Yow gantung dighei.
3SG hang self
"He hanged/killed himself."

However, the subset of verbs which allow this strategy of reflexivisation is inconsistent with the set of grooming verbs under investigation in the present study.

Batak Toba

(58) Ahu marpahean

1SG *dress*

"I dressed [myself]."

(Kartono 2013)

As is the case with English, this understood reflexive object alternation is not available for all verbs, or even all AGT-THM verbs, but is instead restricted to grooming-type verbs. It is interesting to note that in such sentences, the verbs are presented in their base form. Sentences (59)-(62) show the extent of object omission in more detail.

Indonesian

(59) *John me-mandi-kan

John *MEN-wash-KAN*

Intended meaning: "John washed [himself]."

(60) John me-mandi-kan diri-nya sendiri

John *MEN-wash-KAN* *body-3SG* *self*

"John washed himself."

(61) John me-mandi-kan diri-nya

John *MEN-wash-KAN* *body-3SG*

"John washed himself / his body."

(62) *John mandi diri-nya sendiri

John *wash* *body-3SG* *self*

Intended meaning: "John washed himself."

(ibid)

As can be seen above, the transitive use of *mandi* requires the eventive frame *meN-…-kan*, which is only occurs in transitive predicates (cf Sneddon et al. 2012), whereas the object omission only occurs with the bare verb. Further research may reveal whether the eventive

framework can give any further clues to the semantic content of grooming verbs as opposed to non-grooming verbs.

2.6. German

The Dutch weak reflexive *zich* may appear equivalent to the German *sich*, but the latter is far more productive. It can license reflexive use of any type of verb, regardless of the corresponding theta-grid.

The simple reflexive *sich* is available for all transitive verbs in German, as opposed to Dutch *zich*'s limited distribution (cf Reuland & Reinhart 1995, Reuland 2011, Hendriks et al. 2014). Nevertheless, grooming verbs are not entirely indistinguishable from other AGT-THM verbs, as the following sentences will show.

(63) Hier wurde sich gewaschen.
here was SE washed
"People washed here."
(Schäfer 2013, p. 336)

(64) Hier wurde sich geirrt.
here was SE mistaken
"People made mistakes here."

(65) *Hier wurde sich gemalt.
here was SE painted
"People painted themselves here."
(Hendriks et al. 2014)

Sentences (63) and (64) show that German is one of the few languages that allow reflexive constructions to be passivized (Schäfer 2013). Unlike active reflexive constructions, however, the passive reflexive construction is limited in scope. It is available for grooming-type verbs

as in (63) and for mandatorily reflexive verbs as in (64), but other types of verbs including AGT-THM verbs such as in (65) are excluded from the passive reflexive construction.

On closer examination, German syntax is more nuanced than meets the eye. Gast and Haas (2008) argue that German *sich* has two lexical entries: pronominal *sich* and clitic *sich*. The pronominal $sich_{PRO}$ is a reflexive anaphor that can occupy noun phrase positions, can optionally receive stress and can be fronted to a focus position, while the clitic $sich_{CL}$ co-occurs with middle constructions and reciprocals, is cliticised to the verb phrase and cannot receive stress or be focussed. With this in mind, an informal query was posed to six native speakers of German. The participants were asked for grammaticality judgements on sentences (66) through (71) below, which probe the influence of verb type (grooming-type, non-grooming agentive and mandatorily reflexive) and the prominence of *sich* (unfocussed, focussed).

(66) ?Hier wurde sich gewaschen.
here was SE washed
"People washed themselves here."

(67) ?Hier wurde sich verteidigt.
here was SE defended
"People defended themselves here."

(68) ?Hier wurde sich geiirt.
here was SE mistaken
"People were mistaken here."

The sentences (66) through (68) received divided judgements. Out of the six participants, two accepted all three, two rejected all three, and the final two were unsure of the sentences' acceptability. However, results were far clearer for the following sentences (69)-(71), in which *sich* is focussed and therefore must be the pronominal form.

(69) *Sich wurde hier gewaschen.

SE_{PRO} was here washed

“Themselves, people washed here.”

(70) *Sich wurde hier verteidigd.

SE_{PRO} was here defended

“Themselves, people defended here.”

(71) *Sich wurde hier geiirt.

SE_{PRO} was here mistaken

“Themselves, people were mistaken here.”

Five out of the six native speakers of German firmly rejected all three sentences above. The final participant allowed *sich* in sentence (66) to be stressed, yet rejected sentence (69). Although this informal study bears no statistical weight, it seems evident that the *sich* that appears in passive constructions is a clitic modifying the verb, rather than an object pronoun that receives a theta-role. This would entail that *sich* does not receive a theta-role, and the Agent and Theme role are bundled into a complex semantic role before the passivization process has taken place. The passivization process in turn saturates the external (bundled) theta-role, and no syntactic argument is realised in the surface structure. The suggested process is spelled out in example (72) below.

(72) Hier wurde sich gewaschen.

here was *SE_{CL}* *washed*

∃e [wash(e) & *Sat*(AGT-THM)]

In summary, Schäfer (2013) argues that in German, agentive verbs are distinct from other agentive verbs in allowing the simplex anaphor *sich* to occur in a passivized environment. Incorporating Gast and Haas’ (2008) distinction between *sich* in clitic and anaphoric form, a small and informal grammaticality judgement task has shown that only the clitic *$sich_{CL}$* can

occur in passivized environments, which suggests that bundling has taken place. No evidence was found to suggest that German syntax distinguishes grooming-type verbs from other agentive verbs.

2.7. Sranantongo

In the early stages of the Surinamese Creole language Sranantongo (also known as Sranan), there are multiple ways to express reflexive predicates. Van den Berg (2009) consulted 18th century sources from the Suriname Creole Archive [SUCA], and shows that the pronoun + *srefi* (a highly productive grammatical particle often translated as 'self') construction was most productive, but Early Sranan also featured locally bound bare pronouns in object position of agentive verbs. This reflexive strategy, which mostly involved 1st and 2nd person, is consistent with bundling theory. Sentence (73) below provides an example of a 1st person bare pronoun used in a reflexive predicate.

(73) mi wassi mi
1SG wash 1SG
'I wash myself.'
(Van den Berg 2009:335)

However, Early Sranan additionally contained reflexive predicates without (overt) reflexive licensing. As shown below in sentence (74), the verb *wassi* ('to wash') could occur without an (overt) object pronoun while maintaining the reflexive interpretation.

(74) mi go wassi ∅ haffo
1SG go wash half
'I am going to wash myself a little.'
(Van den Berg 2009:340)

Van den Berg (2009) observes that a null form reflexive was "in particular the case with verbs denoting self-directed actions such as grooming or change of posture or position" (ibid:339). It is clear from these data that Early Sranan grammar distinguishes between standard agentive verbs and grooming-type verbs.

2.8. Telugu

The Dravidian language Telugu, spoken in southern India, forms a peculiar addition to the analysis of grooming-type verbs. Before the status of grooming-type verbs in Telugu can be examined, a level of familiarity with Telugu's reflexive system is required. Reflexivity in Telugu is expressed by the highly systematic interplay of the verbal reflexive marker *kon*, the strong (reduplicated) nominal reflexive *tan tan* (case marking omitted), and weak anaphor *tan*. Sentences (75) and (76) below show that *kon* enforces a subject-oriented local reading when the verbal clitic *kon* co-occurs with the singular *tan*, and that and *tan* is part of the predicate's theta-grid.

(75) samiir$_i$ nargis-ki$_j$ **tana$_{i,j}$** gurinci cepp-ee-Du.
*Samir Nargis-to **self** about tell-PST-AGR*
"Samir told Nargis about himself$_i$ / herself$_j$."

(76) samiir$_i$ nargis-ki$_j$ **tana$_{i,*j}$** gurinci ceppu-**konn**-aa-Du.
*Samir Nargis-to **self** about tell-**KON**-PST-AGR*
"Samir told Nargis about himself$_i$ / herself$_{*j}$."

(Subbārāo & Lalitha Murthy 2000, p.235)

Taking things one step further, sentences (77) and (78) below demonstrate the effect of *kon* on reference resolution in a ditransitive possessive construction.

(77) pramood$_i$ raaju-ki$_j$ **tana$_{i,j}$** pillali-ni cuupinc-ee-Du.

Pramod king-DAT ***self****.GEN children-ACC show-PST-AGR*

"Pramod$_i$ showed his$_{i,j}$ children to the king$_j$."

(78) pramood$_i$ raaju-ki$_j$ **tana$_{i,*j}$** pillali-ni cuupincu-**konn**-aa-Du.

Pramod king-DAT ***self****.GEN children-ACC show-**KON**-PST-AGR*

"Pramod$_i$ showed his$_{i,*j}$ children to the king$_j$."

(Subbārāo & Lalitha Murthy 2000: 238)

The appearance of *kon* in a ditransitive verb forces the possessive *tan* to co-refer with the subject (66), while in absence of *kon* the anti-local reflexive *tan* can co-refer just as easily with the subject as with the indirect object (65).[4]

Now, let's consider the nature of grooming-type verbs in Telugu. As shown below in sentence (79), the possessive *tan* can be omitted entirely when referring to inalienable possession in a grooming-type verb, while the verbal clitic *kon* is required to ensure a reflexive interpretation. Furthermore, sentence (80) shows that the possessive *tan* can still be included for a contrastive reading, and the verbal clitic *kon* must be omitted when the predicate does not contain any reflexive elements.

(79) maadhuri moham kaDugu-**kon**-di.

*Madhuri face wash-**KON**-AGR*

"Madhuri washed her (own) face."

[4] The verbal clitic can normally only affect elements on the theta-grid, so how can it apply to this possessive element? Landau (1999) explores the Possessive Dative Construction in Hebrew and Romance, in which a semantic argument of the possessee behaves like a syntactic argument of the verb. In Telugu, those roles appear to be reversed. While *tan* is syntactically a genitive argument of the possessee, it behaves as (or is raised to) an argument of the semantic predicate.

(80) madhu [**tana** ceetulu kaDugu-**kon**-akunDaa] pillala

Madhu ***self****.GEN* *hands* *wash-**KON**-without* *children.GEN*

ceetulu kaDigindi.

hands *washed-AGR*

"Madhu washed the children's hands without washing her own hands."

(Subbārāo & Lalitha Murthy 2000: 239)

According to Subbārāo and Lalitha Murthy (2000), the omission of *tan* is due to the occurrence of inalienable possession. Consider, however, the following sentence (81).

(81) nēnu (*nā) cokkā- vēsu konn- ā- nu

I *my* *dress* *wear-* ***KON-*** *PST-* *AGR*

"I wore my dress."

The dress in sentence (76) above may be considered alienable possession in Telugu[5], in which case the omission of possessive *tan* cannot require inalienable possession. This leads us to review the class of verb used. The grooming-type verb in (81) is augmented by the verbal clitic *kon*, and its complement does not include a possessive *tan*. In addition, the non-reflexive possessive *nā* is illicit. Contrast this with sentences (77) and (78), where the ditransitive non-grooming verb elicits neither obligatory *kon* nor the absence of *tan*. In conclusion, evidence suggests that Telugu, too, is sensitive to an inherent distinction between grooming-type verbs and other agentive verbs.

[5] In the Turkic language Sakha, a person's coat is considered inalienable possession (Reuland, citing Nadya Vinokurova, personal correspondence). In Siberia, where Sakha is spoken, where outside temperatures can get as low as -50°C or -60°F in winter, going anywhere without your coat would be equivalent to suicide.

2.9. Italian

Italian, a Romance language, uses the verbal clitic *si* in reflexivised predicates. This clitic is highly productive, as it also appears in reciprocal, passive, impersonal and middle constructions. In addition, the clitic appears with reflexive interpretations of agentive and non-agentive verbs. Reinhart and Siloni (2005) argue that the clitic licenses thematic arity operations in syntax, and that this type of grammatical operation is not sensitive to thematic roles. However, Castella (2010) reveals that Italian syntax can still be used as a probe to distinguish grooming-type verbs from other verbs. The lexical prefix *auto-* can turn a transitive verb into a reflexive verb, at which point it requires the clitic *si* to check off residual case, as demonstrated below in sentence (82). Notably, this operation is unavailable for grooming-type verbs such as 'shave' (83) or 'dress' (84).

(82) Quel politico si è autoeletto
that politician SE_{CL} *is* AUTO-*elected*
"That policitian elected himself"

(83) Gianni si (*auto-) sbarba
Gianni SE_{CL} AUTO- *shaves*
"Gianni shaves [himself]."

(84) Gianni si (*auto-) veste
Gianni SE_{CL} AUTO- *dresses*
"Gianni dresses [himself]."

(Castella 2010)

The different nature of grooming-type verbs is also evident in causative constructions (see Castella 2010, Marelj & Reuland 2015). Unlike the French clitic *se*[6], the Italian clitic *si* cannot occur in causative constructions. Nevertheless, in sentences (85) and (86) below a reflexive interpretation is elicited without overt reflexive marking.

(85) Fai (*si) lavare Gianni
make.2SG *SE$_{CL}$* *wash* *Gianni*
"Make Gianni wash (himself)."

(86) Fai rasare Gianni
make.2SG *shave* *Gianni*
"Make Gianni shave (himself)."
(Castella 2010:37-8)

In contrast, sentences (87) through (89) illustrate the manner in which non-grooming verbs are interpreted in the same causative construction.

(87) Fai difendere Gianni
make.2SG *defend* *Gianni*
"Make someone defend Gianni."

(88) Fai odiare Gianni
make.2SG *hate* *Gianni*
"Make someone hate Gianni."

---

[6] As shown below, French allows the *se* clitic to occur in causative constructions, in which case the verb behaves syntactically intransitive.

IV. Je ferai se laver Paul.
1SG *make.FUT.1SG* *SE$_{CL}$* *wash* *Paul*
"I will make Paul wash himself."
(Reinhart & Siloni 2005:393)

(89) Fai spaventare Gianni

make.2SG scare Gianni

"You scare Gianni."

(Castella 2010:38)

The above sentences demonstrate that non-grooming AGT-THM verbs (87) and EXP-subject verbs (88) are interpreted as passives, while the psych-verb in (89) can only receive a causative reading.

In short, Italian syntax distinguishes grooming-type verbs from other AGT-THM verbs in several ways.

2.10. Spanish

Similar to Italian, fellow Romance language Spanish uses the verbal clitic *se* in reflexivised predicates, which can be accompanied by the complex anaphor *SE+self* to enforce a reflexive interpretation. Sentence (90) onder shows a standard transitive predicate, and sentence (91) has been reflexivised.

(90) Juan vi-o a María

Juan[NOM.SG] see-PST.3SG ACC María[ACC.SG]

"John saw Mary."

(91) Juan se vi-o (a sí mismo)

Juan[NOM.SG] SE_{CL}.3 see-PST.3SG (ACC SE.3 self-M.SG)

"John saw himself."

The *SE+self* construction is optional, but in its absence other arity reductions may be more salient. For example, sentence (92) onder invokes a reciprocal interpretation, and sentence (93) receives an inchoative reading.

(92) Los estudiante-s se alav-an

DET.M.PL *student-PL* *SE$_{CL}$.3* *praise-PRS.3PL*

"The students praised each other."

(93) Etta se asust-a

Etta[NOM.SG] *SE$_{CL}$.3* *scare-PRS.3SG*

"Etta is scared."

With grooming-type verbs the clitic is also enough to elicit a reflexive interpretation, and the *SE+self* construction can be added for emphasis, as shown in sentence (94) onder.

(94) Se lav-aron (ell-o-s mism-o-s / a sí mism-o-s)

SE$_{CL}$.3 *wash-PST.3PL* *(NOM.3-M-PL* *self-M-PL* */* *ACC* *SE.3* *SELF-M-PL)*

"They washed themselves."

The sentence above, which contains the verbal clitic *se*, elicits a reflexive interpretation with the *SE+self* construction, the *PRN+self* construction, and without either. Note that the *PRN+self* construction is not available in non-grooming AGT-THM relations. Instead, it commonly occurs with non-subject-oriented reflexives as in (95) onder.

(95) María le = describi-o a él / sí mism-o a Bill

María *3SG.DAT=* *describe-PST.3SG* *ACC* *3SG.M.NOM / SE.3* *self-M.SG* *DAT* *Bill*

"Maria described Bill to himself."

Yet the non-subject-oriented reflexive in sentence (95) cannot be accompanied by the verbal clitic, while the same is mandatory in the reflexivised grooming verb in (94).

With EXP-subject verbs, the *SE+self* construction must accompany the verbal clitic, as in sentence (96) onder, to avoid the inchoative interpretation, seen in sentence (93) boven.

(96) Etta se asust-a a sí mism-a

Etta *SE$_{CL}$.3* *scare-PRS.3SG* *ACC* *SE.3* *self-F.SG*

"Etta scares herself."

Similar to Italian, sentence (97) onder shows that the reflexive interpretation can be strengthened by the *auto-* prefix, while sentence (98) onder shows that, as in Italian, the *auto-* prefix is not available for grooming-type verbs.

(97) Pedro se (auto-)defendió

Pedro SE_{CL} *AUTO-defended*

"Pedro defended himself."

(98) Pedro se (*auto-)lava

Pedro SE_{CL} *AUTO-washes*

"Pedro washed himself."

(Márquez-Mendoza 2010:8)

These data show that Spanish distinguishes between grooming-type verbs and other AGT-THM verbs in the computational system.

2.11. Serbo-Croatian

Slavic languages like Serbo-Croatian feature a clitic *se* that is similar in use and productivity to the Romance reflexive clitic *si/se*. Just like the Italian *si* reviewed above, Serbo-Croatian *se* appears in a broad array of grammatical constructions, and can be used in reflexive predicates with any type of verb. In addition, Serbo-Croatian has a lexical prefix *samo-* ('alone' or 'self') which can strengthen a reflexive interpretation in conjunction with the *se* clitic, as shown below in sentence (99).

(99) On se samo-uništava

he SE_{CL} *SELF-destruct*

"He destroys himself."

(Marelj & Reuland 2015)

The lexical prefix *samo-* is not compatible with grooming-type verbs, as shown below in sentences (100) and (101).

(100) Jovan se (*samo-) našminkao

Jovan SE_{CL} *SELF-* *made-up*

"Jovan applied make-up to himself."

(101) Jovan se (*samo-) obukao

Jovan SE_{CL} *SELF-* *dressed-up*

"Jovan dressed himself up."

In summary, the Slavic language Serbo-Croatian distinguishes between grooming-type verbs and other AGT-THM verbs in the same way as the Romance language Italian.

3. Expanding “grooming-type” verbs

3.1. Inherent reciprocals

The Italian *auto-* prefix is also incompatible with reciprocal verbs such as ‘kiss’, as shown below in sentences (102) and (103).

(102) Gianni e Maria si baciano
Gianni and Maria SE_{CL} *kiss*
“Gianni and Maria kiss [each other].”
or “Gianni and Maria kiss themselves.”

(103) *Gianni e Maria si autobaciano
Gianni and Maria SE_{CL} *AUTO-kiss*
intended: “Gianni and Maria kiss themselves.”
(Castella 2010:40)

Similarly, causative constructions allow a reciprocal interpretation in absence of the *si* clitic. Sentence (104) below allows both a reciprocal reading and a non-reciprocal causative reading (i.e. “Make them kiss someone”).

(104) Fai baciare Gianni e Maria
make.2SG kiss Gianni and Maria
“Make Gianni and Mary kiss (each other).”

The evidence from Italian points to a natural class of verbs that is larger than simply verbs of grooming and bodily care, but smaller than the class of AGT-THM verbs. In other words, this piece of evidence from Italian may lead us to conclude that the natural class that affects grooming verbs also affects (typically) reciprocal verbs. Looking back at English, this actually fits the evidence like a glove. For grooming verbs, the crucial difference for English was the possible omission of ‘himself’ as a reflexive marker. Now consider the sentences (105) and (106) below.

(105) John and Mary kissed.

(106) John and Mary kicked.

Clearly, sentence (105) carries the meaning that John and Mary kissed *each other*, while sentence (106) does not imply reciprocality. Yet sentence (105) contains no reciprocal markers such as ‘one another’ or ‘each other’. Based on this evidence, the potentially natural class of grooming verbs may need to be expanded to include reciprocal verbs.

3.2. Posture and body-movement

In Early Sranan, the object pronoun was absent in reflexive predicates with verbs of changing posture or position, as well as with verbs of grooming and bodily care (Van den Berg 2010), which suggests a relation between grooming-type verbs and (self-)movement verbs. Levin’s (1993) understood reflexive object alternation test, described above in Section 2.1, also applies to some verbs of movement, as shown below in (107).

(107) a. We pulled ourselves free.

b. We pulled free.

In addition, the understood body-part object alternation test (ibid:34-5) identifies various verbs of movement as well as bodily care, as seen below in (108) and (109).

(108) a. The children clapped their hands.

b. The children clapped.

(109) a. I flossed my teeth.

b. I flossed.

The verbs unveiled by this test may be part of the same natural class of verbs as the grooming-type verbs unveiled by the understood reflexive object alternation test.

4. Languages – Anaphora Typology database

Now that the group of 'grooming-type' verbs has been expanded with reciprocals and posture-verbs, this next section is dedicated to finding more evidence for this potential verb class among a large set of raw language data. This section consists of cursory analyses of languages included in the Anaphora Typology Project's [AnaTyp] database. Informants answered a questionnaire, in which they were asked to translate and gloss reflexive and non-reflexive sentences from English to their native language.[7] The purpose of this part of the thesis is to locate and classify languages with evidence of bundling and/or grooming-type verbs in finite clauses.

4.1. Slavic languages

This first category contains all the Slavic languages in this part of the study. Like Serbo-Croatian treated above in Section 2.11, each of these languages uses a nominal anaphor, an object clitic, and an intensifier *sam* ('alone'). This category is the only one that directly correlates with language genealogy.

4.1.1. Bulgarian

Bulgarian is a Slavic language with approximately 7 million native speakers. The language uses a nominal reflexive *sebe*, a clitic variant *se/si*, and an intensifier *sam*. Sentences (110) and (111) below demonstrate how the clitic is used to reflexivise a simple transitive predicate.

[7] Eleven languages were excluded from analysis below, either due to insufficient glossing or time constraints. They are: Georgian, Kordi, Kutchi, Lari, Lori, Piedmontese, Prinmi, Northern Sami, Swahili, Torki and Turkmen.

(110) John go vid-ja

John *3SG.M.ACC* *see-3SG.AOR*

"John sees him."

(111) John se vidja

John *SE_{CL}.ACC* *see-3SG.AOR*

"John sees himself."

As shown above, the non-reflexive predicate in (110) features a pronoun, which cannot be bound by the subject 'John'. In sentence (111), the pronoun is replaced by the reflexive clitic, which receives accusative case. Below are examples of the clitic in indirect object position (112) and as a possessive marker (113).

(112) Peter si govor-i

Peter *SE_{CL}.DAT* *speak-3SG.PRS*

"Peter spoke to himself."

(113) John iz-but-a kola-ta si do garazh-a

John *PFV-push-3SG.AOR* *car-3SG.F.DEF* *SE_{CL}.GEN* *to* *garage-3SG.M.DEF*

"John pushed his car to the garage." [i.e., John's car.]

In prepositional phrases, the nominal *sebe* is used with the genitive form of the *se/si* clitic, as shown below in sentence (114).

(114) Peter govor-i za sebe si

Peter *speak-3SG.AOR* *about* *SELF* *SE_{CL}.GEN*

"Peter spoke about himself."

The complex anaphor *sebe si* can only be bound by the subject. Sentence (115) below shows that a pronoun is required to co-refer with a non-subject such as the indirect object.

(115) Peter ni razkaz-a za nas

Peter *1PL.DAT* *tell-3SG.AOR* *about* *1PL.ACC*

"Peter told us about ourselves."

The intensifier *sam* can occur as an adverb (116) or as an adjective (117).

(116) Peter si govor-i sam na sebe si

Peter *SE_{CL}.DAT* *speak-3SG.AOR* *alone.ADV* *to* *SELF* *SE_{CL}.GEN*

"Peter spoke to himself." (implied: "Peter is mad.")

(117) Maria opis-a Bill na nego sam-ija

Maria *describe-3SG.AOR* *Bill* *to* *3SG.M.ACC* *alone.ADJ-SG.M.DEF*

"Maria described Bill to himself."

The adjective form of *sam* in sentence (117) agrees with the pronoun *nego*, while the adverbial form in (116) modifies the verb.

The following sentences show that the reflexive clitic is available for EXP-subject verbs (118) as well as grooming-type verbs (119).

(118) Paul se iz-mi

Paul *SE_{CL}.ACC* *PFV-wash.3SG.AOR*

"Paul washed himself."

(119) Etta se mraz-i

Etta *SE_{CL}.ACC* *hate-3SG.PRS*

"Etta hates herself."

However, the EXP-subject verbs can also occur with the complex *SELF+SE.GEN* structure in object position, as shown below in sentence (120).

(120) Etta mraz-i sebe si

Etta *hate-3SG.PRS* *SELF* *SE_{CL}.GEN*

"Etta hates herself."

A final note of interest is that in three-place predicates, the direct object and indirect object can both be reflexivised, as shown below in sentences (121) and (122).

(121) Tja se vəzxišta-v-a na sebe si

3SG.F.NOM *SE_{CL}.ACC* *admire-IPFV-3SG.PRS* *on* *SELF* *SE_{CL}.GEN*

"She admired herself."

(122) Tja si se vəzxišta-v- a

3SG.F.NOM *SE_{CL}.DAT* *SE_{CL}.ACC* *admire-IPFV-3SG.PRS*

"She admired herself."

Sentence (121) shows the formal, accepted register, while (122) represents an informal register that is often perceived as uneducated.

To summarise, the Slavic language Bulgarian uses two reflexive strategies. Firstly, there is a reflexive clitic *se/si* that can serve as a direct object, indirect object or possessive. Secondly, Bulgarian has a subject-oriented nominal anaphor *sebe*. This anaphor appears exclusively in the *SELF+SE.GEN* construction, which primarily occurs in prepositional phrases. In addition, Bulgarian can use the intensifier *sam* ('alone') as an adverb or as an adjective. The Bulgarian data reveals no difference in reflexive strategies between grooming-type verbs and other agentive verbs, but EXP-subject verbs differ from agentive verbs in allowing the *SELF+SE.GEN* construction in direct object position.

4.1.2. Czech

The Slavic language Czech has a complex agreement system with seven cases and four genders, and has different agreement suffix surface forms depending on morphological features. There also exists a reflexive possessive anaphor in Czech (not to be confused with a genitive reflexive), which shall not be discussed at present. Below in sentence (123) is a transitive predicate, which has been reflexivised in the following sentence (124).

(123) John viděl Mary.

John see.PST.AGR Mary

"John saw Mary."

(124) John se u-viděl.

John SE_{CL}.ACC PFV-see.PST.AGR

"John saw himself."

The reflexive predicate in (124) features an accusative clitic *se*, which precedes the verb, and the verbal aspect has been changed from imperfective to perfective (for a discussion of Czech verbal aspect affixes, see Gehrke 2003). It is not clear from the present data whether the different aspects play a role in Czech reflexivisation. The accusative clitic *se* has a dative counterpart *si*, as shown in sentence (125) below.

(125) John si koupil knihu.

John SE_{CL}.DAT bought book

"John bought a book for himself."

In addition to the clitic *se/si*, Czech uses a nominal anaphor *sebe* ('self') and an intensifier *sam* ('alone'). As can be seen in sentence (126) below, *sam* matches the antecedent's case and agrees in number and gender, while *sebe* carries argumental case.

(126) Obdivuj-i sám sebe.

admire-1SG alone.NOM.SG.M self.ACC

"I admire myself."

Sentence (127) below shows that the *sebe* element can be omitted with two-place predicates.

(127) Sam-i u-vid-íte.

alone-NOM.PL.M.AN PFV-see-PST.2PL

"You see yourselves." / "You yourselves have seen."

Conversely, the *sam* intensifier can occur with the clitic, ruling out non-reflexive alternatives.

(128) Student-i se sam-i po-chválili.

student-PL.NOM *SE$_{CL}$.ACC* *alone-NOM.PL.M.AN* *DL-praise.3PL*

"The students praised themselves."

In sentence (128) above, the verb carries delimitative aspect, and the accusative case has been absorbed by the clitic *se*. The *sam* anaphor rules out other delimitations of the group of students, such as praising some of them or praising each other. Instead, the meaning conveyed in sentence (128) is that "the students praised some aspect of themselves."

Cliticization is not possible out of prepositional phrases, so the preposition assigns case to the *sebe* anaphor instead of the clitic *se/si*, as shown in sentence (129) below.

(129) Peter mluvil o sobě.

Peter talking about self.LOC

"Peter spoke about himself."

When the subject is a quantifier phrase, as in sentence (130) below, the adjective *sam* modifies the *sebe* anaphor rather than the antecedent. This may be because the quantifier phrase does not create a discourse antecedent to enable number and gender agreement.

(130) Nikdo neviní sebe sam-a.

nobody blamed self.ACC *alone-ACC.SG.M.AN*

"Nobody blamed himself."

Finally, the *sam* intensifier can use strong declension with the accusative case, as shown in sentence (131) below.

(131) Maria popsal-a Bill-ovi jeho sam-ého.

Maria described-SG.F *Bill-LOC* *3SG.M.ACC* *alone-ACC.SG.M*

"Maria described Bill to himself."

The pronoun *jeho* is followed by a *sam* element that matches it in case.

Now that a full characterization of Czech reflexive AGT-THM predicates has been provided, we can consider other verb-types. Sentences (132) through (134) below show three available reflexivisation strategies for EXP-subject verbs.

(132) Etta se nenávidí.

Etta *SE$_{CL}$.ACC* *hates*

"Etta hates herself."

(133) Etta se děsí sam-a sebe.

Etta *SE$_{CL}$.ACC* *frightens* *alone-NOM.SG.F* *self.ACC*

"Etta frightens herself."

(134) Etta se o sebe bojí.

Etta *SE$_{CL}$.ACC* *about* *self.LOC* *fears*

"Etta worries about herself." (lit: "Etta fears about herself.")

The above sentences demonstrate that the clitic *se/si* is mandatory for reflexivised EXP-subject verbs. Additional *(sam) sebe* constructions can occur.

For grooming-type verbs, the *se/si* clitic is also mandatory, while *sam* and *sebe* can be absent, as shown in sentence (135) below. In addition, an unaccusative auxiliary allows pro-drop, as in sentence (136).

(135) Paul se u-myl.

Paul *SE$_{CL}$.ACC* *PFV-wash.PAST.SG*

"Paul washed [himself]."

(136) U-myl-i jsme se.

PFV-wash.PAST-PL *be.1PL* *SE$_{CL}$.ACC*

"We washed [ourselves]."

To summarise, Czech has a complex system of reflexivisation strategies for agentive verbs, involving an argument clitic and two *self* anaphors. The intensifier *sam* most often matches

the antecedent's case, while the anaphor *sebe* and clitic *se* can carry argument case. Reflexivisation involving a direct or indirect object requires the clitic *se* for all verb classes, so these data cannot provide evidence for grooming-type verbs as a potential verb class.

4.1.3. Polish

Polish is a Slavic language with approximately 36 million native speakers in Poland (Trevilla 2009). This Indo-European languages shares the same reflexive strategies as seen in other Slavic languages.

In simple transitive sentences, as sentence (137) below, a reflexive interpretation is elicited with the clitic *się*, as in sentence (138).

(137) Jan widzi-ał go

John.NOM see-PST.3SG.M 3SG.M.ACC

"John saw him."

(138) Jan widzi-ał się.

John.NOM see-PST.3SG.M SE_{CL}*.ACC*

"John saw himself."

In sentences with prepositional phrases, the non-clitic anaphor *siebie* is used, as shown in sentence (139) below. In addition, the absence of the anaphor in sentence (140) shows that the anaphor is subject-oriented.

(139) Piotr opowiedzi-ał nam o sobie

Peter.NOM tell-PST.3SG.M 3PL.DAT about SE.LOC

"Peter told us about himself."

(140) Piotr opowiedzi-ał nam o nas.

Peter.NOM tell-PST.3SG.M 3PL.DAT about 3PL.LOC

"Peter told us about ourselves."

With EXP-subject verbs like in sentence (141) below, the full form *siebie* is preferred over the clitic *się*, and the reflexive interpretation can be emphasized with the intensifier *sam*.

(141) Etta nienawidzi siebie (sam-ej)

Etta hate.PRS.3SG SE.ACC alone.ADJ-GEN

"Etta hates herself."

Conversely, with grooming-type verbs like in sentence (142) below the clitic *się* can be used to emphasise the reflexive interpretation, but this interpretation is equally accessible without any reflexive marking.

(142) Paweł umy-ł (się)

Paul.NOM wash-PST.3SG.M SE_{CL}*.ACC*

"Paul washed himself."

To summarise, the Polish language uses a nominal reflexive *siebie*, which has a clitic form *się* in accusative, to elicit reflexive interpretations. This reflexive is subject-oriented. In addition, Polish uses the adjective *sam* as an intensifier. With EXP-subject verbs, the full reflexive *siebie* is preferred over the clitic *się*. Conversely, the clitic elicits a contrastive interpretation with grooming-type verbs, and as such it can be absent from such predicates.

4.1.4. Slovene

Slovene is a Slavic tone language with over two million speakers (Trevilla 2009), and uses reflexive strategies similar to Czech, described boven in Section 4.1.2. Slovene uses a reflexive anaphor *sebe*, and its clitic counterpart *se/si*, in combination with the (often optional) intensifier *sam* meaning 'alone'. Hladnik (personal correspondence) describes the clitic as the non-tonal counterpart of the anaphor *sebe*.

Below in sentence (143) is a non-reflexive transitive predicate, and sentence (144) is its reflexive counterpart. As shown in sentence (145), Slovene also allows pro-drop, which alters the word order.

(143) Janez je vide-l Marij-o.

John[NOM.M] be.AUX.PRS.3SG see-PTCP[M.SG] Mary-ACC.F

"John saw Mary."

(144) Janez se je vide-l.

John[NOM.M] SE_{CL}.ACC be.AUX.PRS.3SG see-PTCP[SG.M]

"John saw himself."

(145) Vidi-š se.

see-PRS.2SG SE_{CL}.ACC

"You saw yourself."

Sentence (144) and (145) above both use the *se/si* clitic. As shown below in sentence (146), the clitic can also receive dative case.

(146) Janez si je kupi-l knjig-o.

John SE_{CL}.DAT be.AUX.PRS.3SG buy-PTCP[SG.M] book-ACC.F

"John bought the book for himself."

In addition, the clitic *se/si* can merge with certain prepositions, demonstrated below in sentence (147).

(147) Janez misli, da je Bill glasova-l za=se.

John think[PRS.3SG] that be.AUX.PRS.3SG Bill vote-PTCP[SG.M] for=SE_{CL}.ACC

"John thinks that Bill voted for himself." [i.e., voted for Bill]

Other prepositions require the anaphor *sebe*, whose reflexive interpretation can be strengthened by the intensifier *sam*, as shown below in (148).

(148) Peter je govori-l (sam) s sabo.

Peter be.AUX.PRS.3SG talk-PTCP[SG.M] (alone.NOM.SG.M) with self.INS

"Peter spoke to himself.

Both the anaphor *sebe* and the clitic *se* are subject-oriented, as demonstrated by sentences (149) through (151) below.

(149) Peter nam je govori-l o sebi.

Peter 1PL.DAT be.3SG talk-PTCP[SG.M] about self.LOC

"Peter told us about himself."

(150) Peter nam je govori-l o nas (samih).

Peter 1PL.DAT be.3SG talk-PTCP[SG.M] about 1PL.LOC (alone.LOC.PL)

"Peter told us about ourselves."

(151) Marija je opisa-l-a Bill-a samemu sebi.

Mary be describe-PTCP-SG.F Bill-ACC[M] alone.DAT.SG.M self.DAT

"Maria described Bill to himself."

In sentence (149), the antecedent of the anaphor *sebi* must be the subject. As shown in sentence (150), a pronoun is needed to co-refer with the indirect object. In the absence of prepositional phrases, the clitic *se* also cannot license non-subject oriented reflexivity, as shown in sentence (151). To elicit the intended interpretation, sentence (151) features the reflexive anaphor *sebe* as well as the intensifier *sam*.

The following examples show that EXP-subject verbs (152) and grooming-type verbs (153) are reflexivised in the same way as agentive verbs.

(152) Etta se sovraži.

Etta[NOM.F] SE_{CL}.ACC hate[PRS.3SG]

"Etta hates herself."

(153) Pavel se je umi-l.

Paul[NOM.M] *SE$_{CL}$.ACC* *be.AUX.PRS.3SG* *wash-PTCP[SG.M]*

"Paul washed himself."

In summary, Slovene uses a tonal anaphor *sebe* and a clitic variant *se/si*, at times augmented by the intensifier *sam* 'alone'. Both the anaphor and the clitic are subject-oriented. The data, comprised of finite clauses, contained no evidence that Slovene syntax distinguishes between grooming-type verbs, non-grooming agentive verbs and EXP-subject verbs. The questionnaire revealed no signs of *samo-* prefixation as seen in Serbo-Croatian (Section 2.11).

4.2. Duplication strategies

The languages included in this category use reduplication as part of one or several reflexivisation strategies. The duplicated element occurs in different environments than the single alternate, and elicits different interpretations. The languages in this category often use a wide variety of strategies, which sometimes includes verbal markers. Among others, this category includes Dravidian, Indo-Iranian and Sino-Tibetan languages. In addition, the Dravidian language Telugu in Section 2.8 and the Slavic language Bulgarian in Section 4.1.1. fit this category.

4.2.1. Hindi

Hindi is an Indo-Iranian language with more than 250 million native speakers in India (Trevilla 2009). Hindi has two strategies for reflexivisation, as demonstrated below. Sentence (154) contains a non-reflexive predicate, and sentences (155) and (156) are two reflexive counterparts.

(154) John ne us-ko dekh-a.

John ERG 3SG-ABS see-PST

"John saw him."

(155) John ne khud ko dekh-a

John ERG SELF ABS see-PST

"John saw himself."

(156) John ne apn-e -aap ko dekh-a

John ERG SE-M.OBL -2.HON / SE ABS see-PST

"John saw himself."

Sentence (155) above contains the nominal reflexive *khud*. Meanwhile, sentence (156) contains the *apnā-āp* construction, which merits further explanation. In Hindi, the word *āp* is used as an honorific second person pronoun, with the genitive form *āp kā* ('2.HON GEN'), yet it is also the oblique (non-genitive) form of *apnā*, a reflexive possessive pronoun. The declension of *apnā* patterns with adjectives, and agrees with the head of the noun phrase. For sentence (156) above, that is the masculine oblique *ap*. As shown below, the *apnā* reflexive possessive can also be used without the oblique *āp* in a noun phrase (157) or a postpositional phrase (158).

(157) Cchatr-on ne ap-ni prashansa ki.

student-PL ERG SE-F praise do.PST

"The students praised themselves."

(158) Peter aapn-e bare mein bol-a

Peter SE-M.OBL about in speak-PST

"Peter spoke about himself."

As shown in sentence (159) below, the reflexive possessive *apnā* cannot occur with a non-subject antecedent.

(159) Peter ne ham-e ham-are bare mein bata-ya

Peter ERG 1PL-DAT 1PL-GEN about in speak-PST.M

"Peter told us about ourselves."

With EXP-subject verbs, such as in sentence (160) below, the nominal reflexive *khud* is used to elicit a reflexive interpretation.

(160) Etta khud dar jaa-ti hai

Etta SELF afraid go-PST.CONT.F be.3SG

"Etta scares herself."

The subject-oriented *apnā* is not allowed, because (as the lack of ergative marker reveals) Etta does not qualify as a subject for the purpose of reflexivisation.

Conversely, the subject-oriented *apnā* is superfluous with grooming-type verbs.

(161) Paul ne snan ki-ya

Paul ERG bath do.PFV-PST.M

"Paul washed [himself]."

(162) John ne apn-i dadhi bana-yi

John ERG SE-F beard make-PST.F

"John shaved his own beard."

Sentence (161) above contains no markers of reflexivity, yet the sentence elicits a reflexive interpretation. Note that the subject is marked as ergative, which shows that the verb cannot be analysed as unergative. Sentence (162) shows that the subject-oriented *apnā* can be introduced as a possessive, in this case in combination with a relevant body-part noun.

The data of Hindi above have revealed two reflexive strategies: the nominal anaphor *khud* and the adjectival possessive *apnā*. The adjective can be reduplicated to form a complete noun phrase, as seen in sentence (146), which leads to a *self.POSS+self* construction. The adjective *apnā* is subject-oriented, and cannot be used with EXP-subject verbs. Meanwhile, grooming-

type verbs do allow *apnā*, and even allow a reflexive interpretation when neither *khud* nor *apnā* are present.

4.2.2. Mazandarani

Mazandarani is an Iranian language with approximately 3 million speakers (Trevilla 2009). The following sentences show the difference between a non-reflexive predicate (163) and a reflexive predicate (164).

(163) John ve rɛ bæ-di-yɛ

John 3SG ACC see-PST-3SG

"John saw him."

(164) John xɑd-eš rɛ bæ-di-yɛ

John self-GEN.3SG ACC see-PST-3SG

"John saw himself."

In sentence (163) above, the pronoun is followed by an accusative marker to identify it as the direct object. The same accusative marker follows the *self+POSS* construction in sentence (164), proving that this construction occupies the direct object position. The possessive matches the antecedent's phi-features, as further shown by sentence (165) below.

(165) tɛ xɑd-et rɛ bæ-di

2SG self-GEN.2SG ACC see-PST.2SG

"You saw yourself."

As shown below, the *self+POSS* construction can also occur in postpositional phrases (166), but for non-subject-oriented relations a pronoun is used instead (167).

(166) Peter xɑš-e xæver hærf bæ-zu-ɛ

Peter self-GEN news/about speech do-PST-3SG

"Peter spoke about himself."

(167) Peter ʔæme xæver ʔæmɑ rɛ bæ-(h)o-tɛ

Peter 1PL.GEN news/about 1PL.ACC ACC tell-PST-3SG

"Peter told us about ourselves."

In sentence (166) above, a *self-GEN* construction is used as a possessive rather than an independent noun phrase. Also note that in sentence (167) above, the pronoun *ʔæme* does not require a possessive marker, because the pronoun itself is in genitive form, yet the accusative pronoun *ʔæma* does get marked with an accusative marker. As such, *rɛ* is a case marker reduplication, which the informant notes must be interpreted as an emphasis marker.

Sentences (168) and (169) below show how reflexive interpretations are elicited with EXP-subject verbs.

(168) Etta rɛ xɑd-eš-tɛn je bæd-(ʔ)en-ɛ

Etta ACC self-GEN.3SG-EMPH with[8] *hate-PRS-3SG*

"Etta hates herself."

(169) Etta xɑd-eš-tɛn dɛ rɛ tærs denɛ

Etta self-GEN.3SG-EMPH ACC ACC fright give.PRS.3SG

"Etta scares herself."

In both sentences above, the *self+POSS* construction carries an emphasis marker, and in sentence (169) its accusative marker is also reduplicated for added emphasis. While it is unclear from the questionnaire whether these emphasis markers are mandatory, these sentences do reflect the most natural translations of the target sentences.

[8] Fakhr-Róhani (personal correspondence) notes that this postposition has a wide range of meanings and uses. This particular case is an instance of impersonal structures. He further states that some philologists hold that *je* in Mazandarani is derived from *hæčæ* in old Persian and shares its meaning and uses with the Persian preposition *ʔæz*.

As shown below in sentences (170) and (171), grooming-type verbs in reflexive predicates do not (need to) use emphasis markers.

(170) Paul xɑš-e / xɑd-eš rɛ bæ-šešt-ɛ

Paul self-GEN / self-3SG.GEN ACC wash-PST-3SG

"Paul washed himself."

(171) John xɑš-e dim rɛ bɛ-tɑš-iyɛ

John self-GEN face ACC shave-PST-3SG

"John shaved himself."

In sentence (170) above, both the possessive *self-GEN* and the nominal *self+POSS* are grammatically acceptable, and in sentence (171) the possessive *self-GEN* modifies a body-part noun. As it is unknown whether the possessive *self-GEN* can modify the accusative marker with non-grooming-type verbs, no difference in available strategies can be concluded.

In summary, Mazandarani uses the nominal *self+POSS* and possessive *self-GEN* constructions to elicit reflexive interpretations. In postpositional phrases, the subject-oriented possessive is needed, while the nominal is preferred in direct object position. The data only show a direct object possessive with grooming-type verbs, but it is unclear from the data whether this strategy is unavailable for non-grooming-type verbs. With EXP-subject verbs, various emphasis markers are used to strengthen the reflexive interpretation.

4.2.3. Tamil

The Dravidian language Tamil exhibits an abundance of variability in its reflexive strategies. Below in sentences (172) through (174) are three possible ways to form a simple reflexive predicate.

(172) John tann-ai paarttu-ko-ɳɖ-aan

John[NOM] *SE-ACC* *see-MID-PST-3SG.M*

"John saw himself."

(173) (?)John avan-ai paarttu-ko-ɳɖ-aan

John[NOM] *3SG.M-ACC* *see-MID-PST-3SG.M*

"John saw himself."

(174) John tann-ai paar-tt-aan

John[NOM] *SE-ACC* *see-PST-3SG.M*

"John saw himself (by accident)."

As the above examples show, there are two elements in reflexive predicates that occur in various configurations: the reflexive anaphor *ta(a)n* and the verbal marker *koɭ*. According to Sundaresan (personal correspondence), *koɭ* is best treated as a middle marker, because it also occurs in antipassives, intransitives, and can indicate agency in non-reflexive transitives. This suggests that *koɭ* can license a variety of arity operations, similar to the Romance *se/si* clitic (cf Reinhart & Reuland 2005).

Both *ta(a)n* and *koɭ* are subject-oriented, as demonstrated by the contrast between the following sentences (175) and (176).

(175) Peter en-gaɭ-kiʈʈe tann-ai patti so-nn-aan / solli-kko-ɳɖ-aan

Peter[NOM] *1SG-PL-to* *SE-ACC* *about* *speak-PST-3SG.M* / *speak-MID-PST-3SG.M*

"Peter told us about himself."

(176) Peter en-gaɭ-kiʈʈe en-gaɭ-ai patti(-yee) so-nn-aan

Peter[NOM] *1SG-PL-to* *me-PL-ACC* *about(-FOC)* *speak-PST-3SG.M*

"Peter told us about ourselves."

When the antecedent is the subject, as in (175), it can bind the *ta(a)n* anaphor and the verbal marker *koḷ* is optional. However, in sentence (176) the antecedent is the indirect object. Here, neither *ta(a)n* nor *koḷ* can occur.

The informant notes that the verbal marker *koḷ* cannot occur with certain verbs like 'hate', as shown below in sentence (177).

(177) Etta tann-ai / avaḷ-ai veru-tt-aaḷ

etta[NOM] SE-ACC / 3SG.F-ACC hate-PST-3SG.F

"Etta hated herself."

From present data, it is not clear whether the set of verbs that disallow *koḷ* is equivalent to the set of EXP-subject verbs. If so, it would suggest that the verbal marker *koḷ* licenses arity reductions such as bundling.

When it comes to grooming-type verbs, the *koḷ* marker is mandatory, and the *ta(a)n* argument can be omitted entirely, as shown in sentence (178) below.

(178) Paul (tann-ai) alambi-kko-ṇḍ-aan

Paul[NOM] SE-ACC wash-MID-PST-3SG.M

"Paul washed [himself]."

In short, Tamil uses a reflexive anaphor *ta(a)n* and middle marker *koḷ* to create reflexive predicates, which can occur in a wide variety of configurations for AGT-THM verbs. The option of argument omission and mandatory *koḷ* in reflexive grooming-type predicates shows that Tamil syntax can distinguish grooming-type verbs from other AGT-THM verbs. In addition, the unavailability of the *koḷ* verbal marker for the EXP-subject verb 'hate' is indicative of a bundling operation (Reinhart & Siloni 2005), which would also build on the analysis of *koḷ* as a licenser for various arity operations (Sundaresan, personal communication).

4.2.4. Malayalam

The Dravidian language Malayalam has approximately 33 million native speakers in southern India (Trevilla 2009). The following sentences demonstrate the difference between simple predicates with and without reflexive interpretations.

(179) jōṇ avaṉ-e kaṇ-ṭu
John 3SG.M-ACC see-PST
"John saw him."

(180) jōṇ taṉṉ-e taṉṉ-e kaṇṇāṭi-(y)il kaṇ-ṭu
John SE-ACC SE-ACC mirror-LOC see-PST
"John saw himself in the mirror."

(181) jōṇ avaṉ-e taṉṉ-e kaṇṇāṭi-(y)il kaṇ-ṭu
John 3SG.M-ACC SE-ACC mirror-LOC see-PST
"John saw himself in the mirror."

The sentences above demonstrate three of the anaphoric strategies of Malayalam. Sentence (179) uses a pronoun, which does not allow a reflexive interpretation. In sentence (180) the *self+self* construction elicits a reflexive interpretation, as does the *PRN+self* construction in sentence (181).

As shown below, the first element of the *self+self* construction matches the antecedent's number (182) and carries the construction's case (183).

(182) vidyārtthi-kaḷ taṉṉaḷ-e taṉṉ-e prašamsi-ccu
student-PL SE.PL-ACC SE-ACC praise-PST
"The students praised themselves."

(183) mantṛi taṉi-kkə taṉṉ-e ā puraskāram nalk-i
minister SE-DAT SE-ACC that award give-PST
"The minister gave the award to himself."

In the *PRN+self* construction, the *self* anaphor also appears in its singular accusative form, as demonstrated in sentences (184) and (185) below.

(184) ňŋŋaḷ ňŋŋaḷ-e taṉṉe pukaz-tti

1PL.INCL.NOM *1PL.INCL-ACC* *SE-ACC* *praise-PST*

"We admire ourselves."

(185) ñāṉ eṉ-ṯe taṉṉ-e uṭuppə dhari-ccu

1sg.NOM *1SG-GEN* *SE-ACC* *shirt* *wear-PST*

"I wore my shirt."

In addition to the constructions above, the *self* anaphor can also appear unduplicated, in which case it carries the relevant case and number features, as shown below in sentence (186).

(186) jōṇ ā pustakam taṉi-kkə vāŋŋ-i

John *that* *book* *SE-DAT* *buy-PST*

" John bought the book for himself"

The *self+self* construction does not occur in postpositional phrases within the questionnaire data, though the construction does occur in the role of a possessive, as demonstrated below in sentence (187).

(187) kuṭṭi taṉ-ṯe taṉṉ-e uṭuppu dhari-ccu

child *SE-GEN* *SE-ACC* *shirt* *wear- PST*

"The child wore his shirt."

Postpositional phrases involved in reflexive interpretations often contain a singular *self* anaphor, which is not subject-oriented (188). In addition, sentence (189) shows that postpositions can occur with the *PRN+self* construction.

(188) mēri billi-(ṉ)ōṭə taṉṉ-e kuṛiccə višdīkari-ccu

Mary *Bill-SOC* *SE-ACC* *about* *describe-PST*

"Mary described Bill to himself/herself."

(189) mēri avaḷ-e kuṛiccə taṉṉ-e billi-(ṉ)ōṭə paṛa-ññu

Mary *3SG.F-ACC* *about* *SE-ACC* *bill-SOC* *say-PST*

"Mary described herself to Bill."

Note that in sentence (189) above, the immutable *taṉṉe* occurs outside of the postpositional phrase, like a modifier. In fact, the immutable *taṉṉe* that occurs in the *PRN+self* and *self+self* constructions may need to be classified as an intensifier rather than a reflexive anaphor, as evidenced by its emphatic use in sentence (190) below.

(190) avṛ taṉṉ-e jōli cey-tu

3PL.NOM *SE-ACC* *work* *do-PST*

"They themselves did the work"

The inflected singular *self* anaphor allows long-distance reflexive interpretations, as shown below in sentence (191), but cannot occur as a locally bound direct object (see also Lust et al. 2000).

(191) taṉṉ-e mēri veṛu-kunnu ennə jōṇ ciṉtikk-unnu

SE-ACC *Mary* *hate-PRS* *QP* *John* *think-PRS*

"John$_i$ thinks that Mary hates him$_i$."

With regards to EXP-subject verbs, the subject is marked as dative, but as exemplified by sentence (192) below the reflexive construction is unaffected.

(192) etta-kkə taṉṉ-ōṭə taṉṉ-e dēṡyam āṇə

Etta-DAT *SE-SOC* *SE-ACC* *angry* *be*

"Etta is angry with herself."

However, a different pattern emerges with grooming-type verbs, as shown in sentence (193) below.

(193) pōḷ taṉṉ-e tāṉ kazhuk-i

Paul *SE-ACC* *SE.NOM* *wash-PST*

"Paul washed himself."

In sentence (193) above, the reduplicated *self* agrees in case with the antecedent, similar to the *self+self* construction in fellow Dravidian language Telugu (see Section 2.8 above). This may be evidence of a distinction between a reduplicated *self+self*[9] and an intensified *self+'taṉṉe'*, in which the immutable *taṉṉe* is the intensifier.

4.2.5. Korean

This Koreanic language has more than 70 million speakers in North and South Korea, where it is the de facto national language (Trevilla 2009). The following sentences (194) and (195) will show that the Korean anaphor *caki* allows non-local binding.

(194) John-i_i Mary-ka_j caki-$lul_{i/*j}$ silheha-n-da-ko sayngkakha-n-da.

John-NOM *Mary-NOM* *SE-ACC* *hate-PRS-DECL-CON* *think-PRS-DECL*

"John thinks that Mary hates him."

(195) John-i ku-uy / caki-uy cha-lul chako-ey neh-ess-da.

John-NOM *3SG.M-GEN* / *SE-GEN* *car-ACC* *garage-LOC* *put-PST-DECL*

"John pushed his car to the garage." [i.e., John's car.]

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[9] A distinction must be made between the reduplicated *self+self* witnessed in sentence (193) and the seemingly identical structure in the following sentence.

V. mēri taṉṉe tāṉ pāṭ-i ya pāṭə kē-ṭṭu

Mary *SE-ACC* *SE.NOM* *sing-PST* *ADV* *song* *hear-PST*

"Mary heard herself sing."

In the above sentence, the nominative *tāṉ* is the subject of the embedded clause, and not a reduplicated element.

In sentence (194) above, the anaphor *caki* is part of an embedded clause, and is bound by the matrix subject. It cannot be bound in the local domain by the embedded subject. Similarly, sentence (195) shows that the anaphor can be bound by the subject in the non-locally governed possessive position, which also permits pronominal co-reference.

Sentences (196) and (197) below demonstrate the two available strategies for reflexivity within the clausal domain.

(196) John-i caki-casin-ul bo-ass-da.

John-NOM SE-SE-ACC see-PST-DECL

"John saw himself."

(197) John-i ku-casin-ul bo-ass-da.

John-NOM 3SG.M-SE-ACC see-PST-DECL

"John saw himself."

In sentence (196) above, the anti-local anaphor *caki* has been reduplicated to elicit a locally bound interpretation. In sentence (197), the first duplicate is replaced with a pronoun.

The following sentences reveal a difference between the *SE+SE* and *PRN+SE* strategies.

(198) Peter-ka wuri-eykey caki-casin-ey dayhay iyakiha-yess-da.

Peter-NOM 1PL-DAT SE-SE-LOC about tell-PST-DECL

"Peter told us about himself."

(199) Peter-ka wuri-eykey wuri-casin-ey dayhay iyakiha-yess-da.

Peter-NOM 1PL-DAT 1PL-SE-LOC about tell-PST-DECL

"Peter told us about ourselves."

The reduplicated anaphor in sentence (198) is subject-oriented and cannot be used to co-refer with the indirect object. Sentence (199) shows that the *PRN+SE* strategy can elicit this interpretation by matching the indirect object's phi-features. However, if the target antecedent

does not generate a discourse referent, as in sentence (200) below, only the reduplication strategy is available.

(200) Amudo caki-casin-ul binanha-ci anh-nun-da.
anyone *REFL-REFL-ACC* *blame-CON* *NEG-PRS-DECL*
"Nobody blamed himself."

Like the agentive verb in sentences (196) and (197) above, EXP-subject verbs allow the *SE+SE* and *PRN+SE* strategies alike, as sentence (201) below demonstrates.

(201) Etta-ka kunye-casin-ul / caki-casin-ul silheha-n-da.
Etta-NOM *3SG.F-SE-ACC* / *SE-SE-ACC* *hate-PRS-DECL*
"Etta hates herself."

However, with grooming-type verbs Korean allows a reflexive interpretation with argument drop, shown below in sentence (202).

(202) Paul-i ssis-ess-da.
Paul-NOM *wash-PST-DECL*
"Paul washed [himself]."

The Korean data has shown that this language uses an anti-local anaphor *caki*, which can be reduplicated to create a subject-oriented reflexive, or appended to a pronoun to create a non-subject-oriented anaphor that requires its antecedent to generate a discourse referent. There is no difference in available strategies between agentive verbs and EXP-subject verbs, but grooming-type verbs allow reflexive interpretations with argument omission.

4.2.6. Meitei[10]

The Sino-Tibetan language Meitei, or Manipuri, has nearly 1.5 million speakers in and around the Manipur province of north-eastern India (Trevilla 2009). Sentence (203) below is an example of a transitive predicate, while its reflexive counterpart is given in (204).

(203) ɟən-nə meri-bu u-i

John-ERG Mary-BEN see-REA

"John saw Mary."

(204) ɟən-nə məsa-bu u-ɟə-i

John-ERG self-BEN see-REFL-REA

"John saw himself."

As seen above, Meitei uses a nominal *self* element as well as a reflexive verbal affix *-ɟə* or *-jə* to form a reflexive predicate. A reflexive direct object cannot be omitted, but a reflexive indirect object can be omitted, as shown in sentence (205) below, in which case the antecedent can be interpreted as either the subject or the direct object. Similarly, in sentence (206) the omitted locative can be interpreted as either antecedent when paired with the reciprocal verbal affix *-nə*.

(205) əy-nə tombə-bu sel khərə pi-jə-həlli

I-ERG Tomba-BEN money some give-REFL-CAUS

"I_i made $Tomba_j$ give some money to me_i/$himself_j$."

[10] The Meitei questionnaire's gloss has been supplemented and corrected with information from Poudel (2008).

(206) məkhoy-nə huy thəwjən-nə-y

they-ERG *dog* *set-RECP-ASP*

"They$_i$ set the dogs$_j$ at one another$_{i/j}$."

(Bhat 2002:138-9)

Experiencer-subject verbs require a more complex structure, as demonstrated below in sentence (207).

(207) Etta məsa-nə məsa-bu nungsi-ɟə-de

Etta *self-ERG* *self-BEN* *love-REFL-NEG*

"Etta hates herself." (lit: "Etta does not love herself.")

The *self* element is duplicated, and receives both ergative and benefactive case. From the data, it is unclear whether 'Etta' and the two *self* elements receive three separate theta-roles, or if any constituents are formed among these three nominal elements. Irrespective of the details, however, sentence (207) above shows that EXP-subject verbs are subjected to a different reflexivisation strategy than agentive verbs, which is consistent with the theory that syntax is sensitive to different thematic structures (cf Reinhart and Siloni 2005).

Unfortunately, the data on grooming-verbs is inconclusive, as shown in sentence (208) below.

(208) John məsa-bu shave təu-jə-i

John *self-BEN* *shave* *do-REFL-ASP*

"John shaves himself."

The grooming-type verb in sentence (208) requires an auxiliary verb, which may affect the available reflexive strategies. Nevertheless, the absence of ergative case-marking on 'John' may indicate an arity reduction.

In conclusion, the questionnaire data from Meitei (supplemented with data from Bhat (2002)) is consistent with Reinhart and Siloni's (2005) bundling theory, but inconclusive with regards to the status of grooming verbs.

4.2.7. Taiwanese Southern Min

The Sino-Tibetan tone language Southern Min, or Min Nan, is the dominant language in the most densely populated areas of Taiwan (Trevilla 2009). The following sentences (209) and (210) show the difference between a transitive predicate and a reflexive predicate.

(209) John khuann tioh Mary.

John see PM[11] *Mary*

'John saw Mary.'

(210) John khuann tioh (i) ka-ti

John see PM 3SG self

'John saw himself.'

In (210) above, the object position is occupied by the *self* anaphor 'ka-ti', optionally preceded by a pronoun that agrees with the antecedent. When there are multiple possible antecedents, the pronoun is mandatory to disambiguate the antecedent, as demonstrated by the following sentences (211) and (212).

(211) Peter ka guan kong i ka-ti e tai-chi

Peter to 1PL.EXCL speak 3SG self POSS thing

"Peter told us about himself." (lit: Peter to us speak himself's thing)

(212) Peter ka guan kong guan ka-ti e tai-chi.

Peter to 1PL.EXCL speak 1PL.EXCL self POSS thing

"Peter told us about ourselves." (lit: Peter to us speak ourselves' thing)

[11] The lexeme *tioh* is glossed as a phase marker for present purposes. For a full discussion of the semantic and syntactic properties of *tioh*, see Lien (2001).

Conversely, the pronoun cannot occur when the antecedent is a quantifier phrase, as in sentence (213) below.

(213) bo lang kuai ka-ti

NEG people blame self

"Nobody blamed himself."

Moving on to prepositional phrases, sentences (214) through (216) show how complements and adjuncts are reflexivised.

(214) Peter kah Thomas kong oe

Peter with Thomas speak words

"Peter spoke to Thomas."

(215) Peter ka-ti kah ka-ti kong oe

Peter self with self speak words

"Peter spoke to himself."

(216) Maria ti ka-ti au-piah chhoe tioh chit pun chheh

Maria LOC self back find PM one CLF book

"Maria found a book behind her."

Sentence (214) shows a non-reflexive predicate with a complement phrase. In sentence (215), the prepositional phrase contains the *self* anaphor 'ka-ti', and is preceded by another *self* anaphor. In the following sentence (216), this duplicate *self* is absent for the adjunct phrase, so it is possible that the purpose of (206)'s first 'ka-ti' is to absorb a theta-role.

As demonstrated in sentence (215) below, EXP-subject verbs are reflexivised with the same *(PRN)+self* construction.

(217) Etta hoan-lo (i) ka-ti

Etta worry 3SG self

"Etta worries herself."

However, Taiwanese Southern Min does treat grooming-type verbs differently, as is revealed in sentences (218) through (220) below.

(218) John ka-ti khau chhui-chhiu

John self shave beard

"John shaved himself." (It's not someone else who shaved John. John himself did it.)

(219) Paul washed [himself].

Paul ka-ti se seng-khu

Paul self wash body

"Paul washed himself." (It's not someone else who washed Paul. Paul himself did it.)

(220) goa ka-ti chheng sann

1SG self wear clothes

"I dressed [myself]." (It's not someone else who dressed me. I myself did it.)

Above in sentences (218) through (220), 'ka-ti' precedes the verb, and does not occupy the object position. Instead, it modifies the subject pronoun to emphasize it. As such, it would seem that 'ka-ti' is not an anaphor in (220), but an intensifier. In the object position, Taiwanese cannot realize grooming-type verbs with a reflexive object.

The data presents one last puzzle about the behaviour of the *self* anaphor, presented in (221).

(221) hia-e hak-seng ka-ti o-lo ka-ti

those student self praise self

"The students praised themselves."

In sentence (221) above, the 'ka-ti' element occurs both before and after the verb. I posit that the first occurrence is an intensifier modifying the subject, while the second occurrence

occupies the object position. Its purpose would be to disambiguate between the collective and distributive interpretations.[12]

In summary, Taiwanese Southern Min uses the *self* anaphor 'ka-ti' to receive theta-roles and form reflexive predicates. The *self* anaphor can be preceded by a pronoun, which can agree with the antecedent to avoid ambiguity. Taiwanese reflexivisation works the same for agentive verbs and EXP-subject verbs, but grooming-type verbs cannot be reflexivised. Instead, a relevant proxy occupies the object position, and the reflexive reading can be strengthened by intensifying the subject with 'ka-ti'. The data from Taiwanese show no evidence of bundling, but do strengthen the observation that grooming-type verbs do not pattern with other agentive verbs.

4.2.8. Mongolian

The next language under consideration is the Altaic language Mongolian, also known as Khalkha, which is spoken by more than 2 million native speakers. The minimal pair of sentences (222) and (223) below shows the difference between a non-reflexive transitive predicate (222) and its reflexive counterpart (223).

(222) John Mary-g har-san.
John Mary-ACC see-PST
"John saw Mary."

[12] For a discussion of collective vs. distributive interpretations, see footnote 24 on page 107.

(223) John öör-iig-öö har-san.

John self-ACC-REFL.POSS see-PST

"John saw himself."

As can be seen in sentence (223) above, Mongolian uses a *self+POSS* anaphor to form a reflexive predicate, and the element receives case. In addition, there is a dedicated reflexive possessive that is absent when the antecedent is not the predicate's subject, as demonstrated below in sentences (224) and (225).

(224) Maria Bill-ig öör-t n' dürsle-n todorhoil-son.

Maria Bill-ACC self-DAT 3.POSS depict-CVB determine-PST

"Maria described Bill to himself."

(225) John Mary(-g) öör-iig n' üzen_yad-dag gej bod-dog.

John Mary-ACC self-ACC 3.POSS hate-HAB that think-HAB

"John thinks that Mary hates him."

In sentence (224), the antecedent is the direct object rather than the subject. In sentence (225), the antecedent is the matrix subject rather than the embedded subject. In both cases, the possessive is marked as third person rather than reflexive. Nevertheless, the reflexive possessive does allow non-subject-oriented interpretations, as evidenced by (226) below.

(226) Bill Ellen-ig öör-iig-öö hamgaala-h-ig har-san.

Bill Ellen-ACC self-ACC-REFL.POSS defend-INF-ACC see-PST

"Bill$_i$ saw Ellen$_j$ defending him$_i$ / herself$_j$."

Experiencer-subject verbs optionally feature a reduplicated *self* anaphor, as can be seen in sentence (227) below.

(227) Etta (öör-öö) öör-iig-öö ailga-san.

Etta self-REFL self-ACC-REFL.POSS scare-PST

"Etta scares herself."

The optional *self.POSS* duplicate is not assigned case, which suggests that the two anaphors form one constituent. This optional reduplication appears with EXP-subject verbs, but not with agentive verbs, which suggests that Mongolian syntax distinguishes between these verb classes.

Now that the character of reflexive strategies in agentive verbs and EXP-subject verbs has been established, it is time to explore the reflexive strategies associated with grooming-type verbs.

(228) Paul öör-iig-öö ugaa-san.
Paul self-ACC-REFL.POSS wash-PST
"Paul washed *himself*."

(229) Bi öör-iig-öö huvtsasla-san.
I self-ACC-REFL.POSS dress-PST
"I dressed *myself*."

As shown by sentences (228) and (229) above, the *self+POSS* anaphor can be used with grooming-type verbs. However, the construction invokes a strong emphasis that is not present in any of the former examples. Below in sentences (230) and (231) are the unmarked counterparts of sentences (228) and (229).

(230) Paul biye-ee ugaa-san.
Paul body-REFL.POSS wash-PST
"Paul washed [himself]."

(231) Bi huvts(a)s-aa öms-sön.
I clothing-REFL.POSS dress-PST
"I dressed [myself]."

In sentence (230) above, the *self* anaphor is replaced by inalienable possession marked with a reflexive possessive. The 'clothing' in sentence (231), which also has a reflexive possessive, might also be inalienable possession[13]. No accusative case is assigned in these examples, which is a potential example of noun incorporation. Alternatively, the reflexive possessive-marked element might be related to the optional case-less *self* anaphor in EXP-subject predicates.

Summarizing, the data from Mongolian show a difference in available reflexive strategies between AGT-THM verbs and EXP-subject verbs, as well as between non-grooming verbs and grooming-type verbs.

4.3. Body (part) strategies

In these languages, speakers refer to the body or parts of the body in order to elicit a reflexive interpretation. The languages in this category often use a variety of body (part) constructions in different environments. This category includes languages from the Niger-Congo and Sino-Tibetan families, and most of the Malayo-Polynesian languages above in Section 2.5 also fit this category.

4.3.1. Burmese[14]

The Sino-Tibetan language Burmese is widely used in Burma, or Myanmar, where it has more than 32 million native speakers (Trevilla 2009). Provided below in sentences (232) and through (234) is the difference between a non-reflexive and a reflexive predicate.

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[13] See footnote 5 on page 30 above.

[14] Unfortunately, some of the symbols in the Burmese questionnaire file were corrupted, and depicted below as squares (□).

(232) John=(gá) Mary=go mjiN =dɛ

John=(SBJ) Mary=OBJ see =PVF.REA.DECL

"John saw Mary."

(233) John=gá θú= ko =θu mjiN =dɛ

John=SBJ 3SG.POSS= body =3SG see =PVF.REA.DECL

"John saw himself."

(234) John=gá kó= ko =ko mjiN =dɛ

John=SBJ 1SG.POSS= body =1SG see =PVF.REA.DECL

"John saw himself."

As can be seen above, to change the non-reflexive predicate in (232) into the reflexive predicate in (233), the verb remains transitive, and the direct object is replaced by the anaphoric *POSS+body+PRN* construction. In sentence (233), the anaphoric construction agrees with the antecedent, but the 1st person singular in (234) is also acceptable. The informant notes that this variant elicits a shifted interpretation of "self's body" rather than "my body", and it can be used regardless of the antecedent's phi-features.

The following sentences (235) and (236) demonstrate that the pronominal clitics can also occur with a preposition rather than a *body* noun.

(235) Peter=gá θú ətɛəN θu pjɔ =dɛ

Peter=SBJ 3SG.POSS about 3SG speak =PVF.REA.DECL

"Peter spoke about himself."

(236) John=gá θú= ətwɛʔ θu sa-oʔ tə-oʔ wɛ =dɛ

John=SBJ 3SG.POSS= for 3SG book 1-CLF buy =PVF.REA.DECL

"John bought the book for himself."

However, the clitics do not always both occur. For instance, in sentence (238) below only one clitic is used.

(237) Peter=gá tɕənɔ-dó=go θú ətɕəN pjɔ-pjá =dɛ

Peter=SBJ 1SG.M-PL=OBJ 3SG.POSS about speak-show =PVF.REA.DECL

"Peter told us about himself."

It is possible that the verb compound 'speak-show' is indicative of embedded predicates. Example (238) below provides a possible structure of sentence (237).

(238) Peter=gá tɕənɔ-dó=go [Ø θú ətɕəN pjɔ] -pjá =dɛ

Peter=SBJ 1SG.M-PL=OBJ PRO 3SG.POSS about speak -show =PVF.REA.DECL

"Peter told us about himself."

Under this analysis, the possessive clitic is not locally bound. Sure enough, other embedded clauses also lack a reduplicated pronoun clitic, as shown in sentence (239) below.

(239) Bill=gá John=go θú=go tɕʰìmN =kʰàiN =dɛ

Bill=SBJ John=OBJ 3SG=OBJ praise =order =PVF.REA.DECL

"Bill asked John to praise him." [i.e., to praise Bill]

Interestingly enough, when the antecedent is quantified, negative, or a wh-element, the preferred anaphoric structure is "kó=ko=ko", which does not (need to) agree in phi-features with the antecedent. This is demonstrated below in sentence (240).

(240) Sʰəja -dàiN=gá kó= ko =ko θəjouʔpʰɔ =dɛ

teacher.M -each=SBJ 1SG.POSS= body =1SG describe =PVF.REA.DECL

"Every teacher described himself."

When it comes to EXP-subject verbs, Burmese can use the double pronominal clitics with a *body* noun (241) as well as a preposition (242).

(241) Etta=gá θú= ko =θu mòN =dɛ

Etta=SBJ 3SG.POSS= body =3SG hate =PVF.REA.DECL

"Etta hates herself."

(242) Etta=gá θú= ətwɛʔ θu sei?-pu =dɛ

Etta=SBJ 3SG.POSS= for 3SG mind-hot =PVF.REA.DECL

"Etta worries about herself."

These data show no difference in reflexive strategies between AGT-THM verbs and EXP-subject verbs. However, with grooming-type verbs the *PRN+body+PRN* strategy is judged as unnatural or excessively formal (243), and there is a preference to apply the double clitics to inalienable possession (244) or omit the direct object entirely (245).

(243) ?Paul=gá θú= ko =θu sʰè.tɕɔ-θáNsiN =dɛ

Paul=SBJ 3SG.POSS= body =3SG wash-clean =PVF.REA.DECL

"Paul washed himself."

(244) John=gá θú= mouʔsʰeiʔ θu jeiʔ =dɛ

John=SBJ 3SG.POSS= beard 3SG shave =PVF.REA.DECL

"John shaved his beard."

(245) tɕəmá=gá *əw□ʔ-lɛ* *=dɛ*

1SG=SBJ clothes-change =PVF.REA.DECL

"I dressed [myself]."

In summary, in Burmese a locally bound interpretation is elicited by using a *body* noun as a recipient for double pronominal clitics, or applying these clitics to a corresponding preposition. In addition, the first person singular clitics can be used with any antecedent, including quantifier phrases, without agreeing in phi-features. There is no difference in strategies between AGT-THM verbs and EXP-subject verbs, yet with grooming-type verbs there is a preference for either a relevant body part noun (rather than the standard *body* noun), or argument omission.

4.3.2. Khmer

This Austro-Asiatic language is the national language of Cambodia, where it has approximately 13 million native speakers (Trevilla 2009). Nevertheless, 35% of the population cannot read or write Khmer (ibid).

As shown below, transitive predicates in Khmer (246) can be reflexivised with a *body+PRN* construction that agrees with the subject (247). In sentence (248) the pronoun does not agree with the subject, yet it can still elicit a reflexive interpretation.

(246) sɑmʔaːt kɜːɲ nuɜn

Samat see Nuon

"Samat saw Nuon."

(247) sɑmʔaːt kɜːɲ kʰluɜn wiɜ / koat

Samat see body 3SG / 3SG.HON

"Samat saw himself."/"Samat saw it by himself." / "Samat$_i$ saw his$_{i/j}$ body."

(248) sɑmʔaːt kɜːɲ kʰluɜn ʔaɛŋ

Samat see body 1/2.SG

"Samat saw my/your body." / "Samat saw himself." / "Samat saw it by himself." /

"Samat saw you."

The pronoun *ʔaɛŋ*, which agrees with first and second person singular, can be used in the *body+prn* strategy regardless of the antecedent's phi-features, as sentence (249) below further demonstrates.

(249) puɜk koat sŋaɜc kʰluɜn ʔaɛŋ

group 3SG.HON admire body 1/2.SG

"They admire themselves."/"They admire it by themselves."/'They admire you."

When used in a prepositional phrase, the *body+prn* construction also allows a reflexive interpretation, as shown by sentence (250) below.

(250) det prap jɜːŋ piː kʰluɜn wiɜ / koat

Deth tell 1PL about body 3SG / 3SG.HON

"Deth told us about himself." / "Deth$_i$ told us about his$_{i/j}$ body."

In the literal interpretation of 'his body' above, the pronoun can co-refer with Deth or with someone else.

In embedded clauses, Khmer can refer to the matrix subject with either a bare *body* anaphor or a pronoun, as shown below in sentences (251) and (252).

(251) sɑmʔaːt liː sɑŋhaː sɔsaɜ kʰluɜn

Samat hear Sangha praise body

"Samat$_i$ heard Sangha$_j$ praising him$_{i/*j/*k}$."

(252) sɑmʔaːt liː sɑŋhaː sɔsaɜ koat

Samat hear Sangha praise 3SG.HON

"Samat$_i$ heard Sangha$_j$ praising him$_{i/*j/k}$."

Sentence (253) below shows that the *body+PRN* strategy can also reflexivise EXP-subject verbs.

(253) niɜriː sʔɑp kʰluɜn niɜŋ

Neary hate body 3SG.F

"Neary hates herself." / "Neary$_i$ hates her$_{i/j}$ body."

The EXP-subject verb above uses the same reflexive strategy as agentive verbs. However, as sentence (254) below demonstrates, the *body+PRN* strategy does not receive an unmarked reflexive interpretation with grooming-type verbs.

(254) sithaː sɑmʔaːt kʰluɜn wiɜ

Sitha clean body 3SG

"Sitha$_i$ cleaned his$_{i/j}$ body." / "Sitha cleaned it by himself."

The *body+PRN* construction above elicits a literal interpretation and an intensifier interpretation, but no reflexive interpretation. Instead, the means to elicit a reflexive

interpretation with grooming-type verbs seems to differ for each verb, as shown by the following sentences.

(255) kʰɲɔm sliɜkpɛak

1SG *dress*

"I dressed (myself)."

(256) sɑmʔaːt kaɔ pokmoat

Samat *shave* *moustache*

"Samat shaved himself." / "Samat shaved his moustache."

(257) sitha: sɑmʔaːt kʰluɜn

Sitha *clean* *body*

"Sitha cleaned himself." / "Sitha cleaned his body."

In sentence (255), the direct object is omitted entirely. The same may be true for sentence (256), if *kaɔ pokmoat* ('to shave a moustache') can be considered a complex verb. If not, then the direct object position is occupied by a body-part noun. Most intriguing is sentence (257), in which the verb *samʔaːt* ('to clean') is reflexivised with a bare *body* noun, because sentence (251) above showed that the *body* noun functions as an anti-local reflexive with an embedded agentive verb. The data from the questionnaire revealed one more verb that allows a locally bound bare *body* noun, showcased in sentence (258) below.

(258) sɑŋha: kɜːɲ piʔsɛj kapiɜ kʰluɜn

Sangha *see* *Pisey* *defend* *body*

"Sangha$_i$ saw Pisey$_j$ defend *him$_i$ / herself$_j$."

The locally bound bare *body* noun in (258) above suggests that, in Khmer, the verb *kapiɜ* ('to defend') is a grooming-type verb.

Summarising, Khmer uses a *body+PRN* construction to elicit reflexive interpretations, though the literal reading is also available. A bare *body* noun can be used as an anti-local reflexive,

but functions as a local reflexive with grooming-type verbs. Khmer uses no divergent strategy for EXP-subject verbs.

4.3.3. Limbum

Like Kinande treated below in Section 4.4.1, the Niger-Congo language Limbum is part of the Bantoid language family. Limbum is a developing language with approximately 130 thousand speakers in Cameroon. As the reflexive strategies of this language have been treated in far greater detail by Wepngong (to appear), this analysis shall be relatively brief.

The various translations of "John saw himself" provided in sentences (259)-(260) and (262)-(263) below demonstrate that Limbum incorporates a relatively large number of reflexive strategies.

(259) Jôn à m yɛ zhìi nyor

John 3SG.SM PST.3 see C1[15].3SG.POSS.ADJ body.

"John saw himself." (physical)

(260) Jôn à m yɛ zhii tu

John 3SG.SM PST.3 see C1A.3SG.POSS.ADJ head

"John saw himself." (psychological)

In sentence (259) above, a reflexive interpretation is elicited with the *POSS+body* construction. Wepngong (to appear) notes that this is Limbum's most productive reflexive strategy. The *POSS+head* construction in sentence (260) primarily occurs with psych verbs such as the EXP-subject verb in sentence (261) below.

[15] Singular person.

(261) Età bàa zhii tu

Etta hate C1A.3SG.POSS.ADJ head

"Etta hates herself."

Furthermore, sentence (261) shows that the *POSS+body* and *POSS+head* strategies can be combined to describe more complex situation. Finally, sentence (262) demonstrates the instrumental adverbial phrase *INS+POSS+body part*.

(262) Jôn à m yɛ zhii tu-nyor

John 3SG.SM PST.3 see C1A.3SG.POSS.ADJ head-body.

"John saw himself." (psychological as a result personal action.)

(263) Jôn à m yɛ nè li r-lir

John 3SG.SM PST.3 see INS C5[16].3SG.POSS.ADJ C5-eye

"John saw himself." (personally without the help of another.)

As Wepngong (to appear) points out, the default body part in the *INS+POSS+body part* construction is *bo* ('hand'), which can also be used to describe situations that do not involve any body parts, as shown below in sentence (264).

(264) Rkìŋ rli ce lùu nè zhii bo

Pot 3SG.SM ASP.CONT hot INS C1A-3SG.POSS C1A-hand

"The pot is getting hot by itself."

(Wepngong (to appear):8)

Grooming-type verbs can use a bare body (part) noun in object position, as in sentence (265) below, which elicits a literal reading. The possessive is needed to elicit the reflexive

[16] Singular inanimate (includes fruit, but also vehicles).

interpretation, as in sentence (266). Furthermore, the possessive can be postposed for a contrastive reading, which is shown below in sentence (267).

(265) Jôn à m sù'si nyor

John 3SG.SM PST.3 wash C1-body

"John bathed." / "John washed (his) body."

(266) Jôn à m sù'si zhìi nyor

John 3SG.SM PST.3 wash C1-3SG.POSS C1-body

John washed himself.

(267) Jôn à m sù'si nyor zhìi

John 3SG.SM PST.3 wash body C1-3SG.POSS.FOC

"John washed himself (not another)."

(Wepngong (to appear):3-4)

The *INS+POSS+hand* intensifier phrase can be appended to the bare body (part) noun to add on a reflexive interpretation, as shown in sentence (268) below.

(268) Jôn à kooshi tu nè zhii bo.

John 3SG.SM shave-PLU head INS C1A.3SG.POSS.AGJ hand

"John shaved himself."

In summary, Limbum uses a *POSS+head/body* strategy to elicit reflexive interpretations. The *INS+POSS+body part* construction behaves like an intensifier phrase, and in both cases the possessive marker can be postposed for a contrastive reading. For a more detailed analysis of the various reflexive strategies of Limbum, I refer the reader to Wepngong (to appear).

4.3.4. Amharic

This next language is a member of the Semitic languages, which are part of the Afro-Asiatic language family. Amharic, or Abyssinian, is the official language of Ethiopia, and has more

than 21 million native speakers (Trevilla 2009). Sentence (269) below contains a standard transitive predicate.

(269) John Mari-n ayy-ä-at

John mari-ACC see.PFV-3SG.M.S-3SG.F.O

"John saw Mary."

As shown above, Amharic's word order is SOV, and the verb agrees with both subject and object in person and number. In the case of second and third person singular, there is also gender agreement in both agreement affixes. Sentence (270) below demonstrates what happens when the predicate is reflexivised.

(270) (anta) ras-hi-n ayyä-h-(äw)

you head-2SG.GEN-ACC see.PFV-2SG.M.S-3SG.M.O

"You see yourself."

This sentence reveals several properties of Amharic. Firstly, the second person pronoun is optional, which demonstrates Amharic to be a pro-drop language. Secondly, the body-part noun 'head' is used as a reflexive anaphor, marked with a genitive that matches the subject in phi-features. Thirdly, the verb's object-agreement affix matches the 'head' noun in phi-features (rather than its owner), but also becomes optional[17]. Sentences (271) and (272) below show that the *head-AGR* strategy, paired with object-agreement drop, is also available for grooming verbs (271) and experiencer-subject verbs (272).

[17] After the first few sentences, the informant ceases to mention any optional object-agreement affix. However, this may have been to avoid redundancy rather than ill-formedness. Further research is required to definitively establish whether these contexts do or do not allow object-agreement.

(271) John ras-u-n laČ’Č’-ä

John head-3SG.M.GEN-ACC shave.PFV-3SG.M.S

“John shaved himself.”

(272) Etta ras-wa-n t’ällä-ČČ

Etta head-3SG.F.GEN-ACC hate.PFV-3SG.F.S

“Etta hates herself.”

The *head-AGR* anaphor can also occur in prepositional phrases, in which case the object-agreement affix cannot be omitted. As shown in sentences (273) and (274) below, the anaphor’s genitive marker can agree with the direct object as well as the subject, and its antecedent need not be overtly present.

(273) Peter sɨlä-ras-u näggär-a-n

Peter about-head-3SG.M.GEN tell.PFV-3SG.M.S-1PL.O

“Peter told us about himself.”

(274) Peter silä-ras-aČČɨn näggär-a-n

Peter about-head-1PL.GEN tell-3SG.M.S-1PL.O

“Peter told us about ourselves.”

In summary, Amharic uses a nominal phrase *head-AGR* as a reflexive anaphor, which occurs in verbs with a wide variety of theta-grids. When the anaphor is assigned accusative case, the corresponding verbal agreement affix is optional. These data on reflexivity with finite verbs show no evidence of bundling, and no difference in strategies between grooming-type verbs and other AGT-THM verbs.

4.3.5. Yoruba

The Niger-Congo language Yoruba has approximately 19 million speakers in Nigeria, and is mainly spoken in the south-western region (Trevilla 2009). The Benue-Congo language has

three tone levels, represented in diacritics for high [´] and low [`], and a lack of diacritic for the mid tone. In Yoruba, reflexive and reciprocal interpretations are elicited with *body+POSS* constructions, as shown below in sentence (275).

(275) a kórìíra ara-a wa

1PL.S$_i$ hate body-POSS 1PL.POSS$_i$

"We hate ourselves$_i$." / "We hate one another$_i$." / "We hate each other$_i$."

(Atoyebi (to appear):5)

The *body+POSS* construction in (275) above allows a reflexive interpretation and reciprocal interpretations with dual or multiple referents. For present purposes, only the reflexive interpretation shall be investigated. Sentence (275) also reveals that the *body+POSS* construction is available for EXP-subject verbs. As shown below, the construction also occurs with grooming-type[18] verbs (276) and non-grooming agentive verbs (277).

(276) Pọ́ọ̀lù wẹ ara-a rẹ̀

Paul bathe body-POSS 3SG.POSS

"Paul bathed himself." (lit: "Paul bathed his body.")

(277) Gbogbo olùkọ́ni júwèé ara-a wọn

all teacher describe body-POSS 3PL.POSS

"All teachers described themselves." (lit. "All teachers described their bodies.")

Additionally, the construction can occur with non-subject antecedents, as demonstrated below in sentence (278).

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[18] Some grooming-type verbs use a benefactive preposition with the *body+POSS* construction, as shown below in sentence VI, which suggests that these verbs assign a [-c] theta-role instead of a [-c-m] one.

VI. Mo wọ aṣọ fún araà mi

1SG.S wear cloth for body.POSS 1SG.POSS

"I dressed myself (unaided)." (lit: "I wear cloth for myself.")

(278) Pétérù sọ́ nípa ara-a wa fún wa

Peter tell about body-POSS 1PL.POSS for us

"Peter told us about ourselves."

The *body+POSS* construction in (278) above precedes its co-referent, which suggests that no binding relation takes place between the two and the construction is valued by discourse instead.

In short, Yoruba uses the *body+POSS* construction with any type of (transitive) verb, and can also use it in non-subject-oriented contexts. The language provides no evidence of a difference between EXP-subject verbs and agentive verbs, nor of grooming-type verbs as a distinct verb class.

4.4. Complex: other

The language described below uses a mix of reflexive strategies that does not pattern with any of the other languages included in this paper. Therefore, Kinande is the sole member of this category.

4.4.1. Kinande

The Niger-Congo language Kinande, or Nande, is part of the Narrow Bantu language family. The Bantu languages have a rich system of noun class markers, with markers for people, plants, animals, mass nouns, etc. Where they occur in the following examples, they will be glossed with their class number, and a brief definition of the relevant noun class will be given in a footnote. In addition, this agglutinative language uses a rich morphological system with a wide variety of tense and aspect markers. While the data in this section comes from an Anaphora Typology Project [AnaTyp] questionnaire unless marked otherwise, the

disambiguation of the various verb forms has greatly benefited from the Afranaph project documentation (Mutaka 2007).

Sentence (279) below shows a transitive predicate in Kinande.

(279) Yohani mwamulangire.

Yohani	mo-	a-	mu-	langir	-e
John	*PST-*	*3SG.S-*	*3SG.O-*	*see*	*-SBJV*[19]

"John saw him."

As shown above, in Kinande pronouns are incorporated into the verb structure. The subject morpheme is mandatory, while the object morpheme is omitted when the direct object is overtly realised, as shown below in sentence (280).

(280) Yohani mwalangira Marya.

Yohani	mo-	a-	langir	-a	Marya
John	*PST-*	*3SG.S-*	*see*	*-IND*	*Mary*

"John saw Mary."

Sentences (281) and (282) demonstrate reflexive variations on the above sentences.

(281) Yohani mwayilangire.

Yohani	mo-	a-	yi-	langir	-ir[20]	-e
John	*PST-*	*3SG.S-*	*SE-*	*see*	*-APPL*	*-SBJV*

"John saw himself."

[19] The questionnaire's informants provided many of the sentences in subjunctive mood rather than indicative mood. This may have been due to the fictive nature of the elicited sentences.

[20] When the morpheme *-ir-* is appended to the verb stem *langir*, the structure *langir+ir* surfaces as 'langir'. The informant indicated that the *-ir-* morpheme was present in the subjunctive clauses, but not in the indicative clauses.

(282) Yohani mwayilangira.

Yohani mo- a- yi- langir -a

John PST- 3SG.S- SE- see -IND

"John saw himself."

In sentences (281) and (282) above, the object marker seen in (279) is replaced by a reflexive object marker *-yi-*. These two sentences differ from one another in mood.[21]

(283) Yohani mwalangire iyuwenewene.

Yohani mo- a- langir -ir -e iyu -wene -wene

John PST- 3SG.S see -APPL -SBJV 3SG -alone -alone

"John saw himself."

In sentence (283) above, the object marker is absent. Instead, a free pronoun occurs with the reduplicated *wene* ('alone'). Reduplication is used in Kinande to reinforce and strengthen meanings (Mutaka 2007), so the interpretation of *iyuwenewene* would be "he all on his own". Therefore, it is likely that this *PRN+alone*2* construction functions as an intensifier, and elicits a co-referent interpretation rather than a locally bound (i.e. reflexive) interpretation.

As shown below in sentence (284), Kinande can use the *-yi-* strategy with indirect objects by appending a preposition-like morpheme at the end of the verb.

(284) Pierre ayibugako.

Pierre a- yi- bug -a -ko

[21] The subjunctive mood in sentence (281) co-occurs with the applicative verbal marker *-ir-*. Mutaka (2007) demonstrates the transitivising function of the applicative *-ir-* with the minimal pair *ku-a* ('die) and *ku-ir-a* ('die for'). Its presence in sentence (281) above may indicate that the verb realizes a covert indirect object while the verb in (282) does not. Further research is needed to determine whether an indirect object is covertly realized, and if so, how it affects the sentence meaning. For example, such a covert argument may add a self-benefactive or intentional interpretation.

Peter 3SG.S SE speak -IND -on

"Peter spoke to himself." (lit: "Peter spoke on himself.")

Since *-yi-* is a verbal marker, it cannot be used in prepositional phrases. As shown below in sentence (285), pronouns are used in those contexts.

(285) Maria mwasungire ekitabu kyenyuma okwiye.

Maria mo- a- sung -ir -e e- ki- tabu ky- enyuma okw- iye

Mary PST- 3SG.S- find -APPL -SBJV IV- C7[22]- book LINK- behind on- 3SG

"Mary found a book behind her."

As the following two examples show, grooming-type verbs in Kinande can realise one syntactic argument, to which a causative morpheme must be added to allow the reflexive object marker.

(286) Paul mwayinabya.

Paul mo- a- yi- nab -i -a

Paul PST- 3SG.S- SE- wash -CAUS -IND

"Paul washed himself."

(287) Monayambalirye.

mo- ni- a- yi- ambal -ir -i -e

PST- 1SG.S- PFV- SE- dress -APPL -CAUS -SBJV

"I dressed myself."

The above examples demonstrate that the applicative morpheme *-ir-* co-occurs with the subjunctive morpheme *-e*, and is not required by the reflexive object marker *-yi-*. Furthermore,

[22] Singular object or animal.

these data suggest that the primary difference between grooming-type verb and other agentive verbs is that grooming-type verbs have an intransitive verb root.

The object reflexive can be omitted in favour of the *PRN+alone*2* construction, as shown below in sentence (288).

(288) Paul mwanabire iyuwenewene.

Paul	mo-	a-	nab	-ir	-e	iyu	-wene	-wene
Paul	*PST-*	*3SG.S-*	*wash*	*-APPL*	*-SBJV*	*3SG*	*-alone*	*-alone*

"Paul washed himself."

Sentence (288) elicits a contrastive interpretation such as: "Paul himself washed; no other person washed him." The lack of a causative marker in sentence (199) further supports the analysis of the *PRN+alone*2* construction as an intensifier, as it suggests that the construction does not occupy an argument position. In addition, the syntactically intransitive grooming-type verb can elicit a reflexive interpretation without the *PRN+alone*2* construction, which can be seen in sentence (289).

(289) Yohani akánabâ.

Yohani	a-	ka-	nab	-a
John	*3SG.S-*	*IPFV-*	*wash*	*-IND*

"John is washing (himself)."

(Mutaka & Kavutirwaki 2006:ID 28)

Another pattern of reflexivisation occurs with EXP-subject verbs, as shown below.

(290) Etta ayitsukirwe.

Etta	a-	yi-	tsukir	-ir	-u	-e
Etta	*3SG.S-*	*SE-*	*hate*	*-APPL*	*-PASS*	*-SBJV*

"Etta hates herself." (lit: "Etta is hated by herself.")

(291) Etta ayibehirwe.

Etta a- yi- beh -ir -u -e

Etta 3SG.S- SE- stink -APPL -PASS -SBJV

“Etta strongly dislikes herself.” (lit: “Etta is smelly to herself.”)

(292) Etta syayanzire.

Etta si- a- yi- anz -ir -e

Etta NEG- 3SG.S- SE- like -APPL -SBJV

“Etta dislikes herself.” (lit: “Etta does not like herself.”)

The EXP-subject verbs in sentences (290) and (291) above contain both a passive marker and a reflexive marker, although sentence (292) shows that this does not apply to all psych verbs. The passive markers may be an overt indication of the lack of agent in EXP-subject verbs.

In summary, the Bantu language Kinande explicitly marks all matters of tense, aspect, and valency operations in its verbal structure. The verb also contains a subject marker, and a pronominal object can also be incorporated as an object marker. The subject and object markers are not equivalent to any specific combination of theta-roles, and there is no (overt) case. Kinande has a reflexive object marker that only occurs within the verb, and an intensifier with a *PRN+alone*2* structure. Grooming-type verbs are different from other agentive verbs in that they are causativized intransitives. Similarly, EXP-subject verbs occur in passive form, which sets them apart from agentive verbs. The data collected from Kinande may prove vital to establishing the unique nature of grooming-type verbs.

4.5. Bivariant strategies

Included in this category are languages with two distinct strategies that surface in different environments. The alternation may exist between agentive verbs and EXP-subject verbs, between grooming-type verbs and non-grooming-type verbs, or there may be a separate

strategy with prepositional phrases. This category includes languages from a variety of families, including Indo-European, Afro-Asiatic and Turkic.

4.5.1. Albanian

Next up is the Indo-European language Albanian, which uses a nominal reflexive. Below in sentence (293) is a non-reflexive transitive predicate, and sentence (294) presents its reflexivised counterpart.

(293) Xhon-i e pa Mari-n.
John-DEF.M.NOM CL.ACC.3SG see-3SG.PST Mary-DEF.F.ACC
"John saw Mary."

(294) Xhon-i e pa vete-n (e tij).
John-DEF.M.NOM CL.ACC.3SG see-3SG.PST self-ACC CL.ADJ 3SG.M.GEN
"John saw himself.

As can be seen above, the *self* anaphor carries accusative case, and can optionally be marked by a genitive pronoun. The *self* anaphor receives a subject-oriented interpretation (295), but a non-subject-oriented interpretation can be elicited with a possessive construction (296).

(295) Pjetr-i na trego-i ne per vete.
Peter-DEF.M.NOM CL.ACC.1PL tell-3SG-PST 1PL.ACC about self.NOM
"Peter told us about himself."

(296) Pjetr-i na trego-i ne per vete-n tonë.
Peter-DEF.M.NOM CL.ACC.1PL tell-3SG-PST 1PL.ACC about self-ACC 1PL.GEN
"Peter told us about ourselves."

Verbs with experiencer subjects also use the *self* anaphor with optional adjective or genitive pronoun, as demonstrated below in sentence (297).

(297) Eta e frikeso-n vete-n (e saj).

Eta-DEF.F.NOM CL.ACC scare-3SG.PRS self.ACC CL.ADJ 3SG.F.GEN

"Etta scares herself."

However, grooming-type verbs can be reflexivised without the *self* anaphor. As demonstrated by sentence (298) below, grooming-type verbs with passive morphology receive a reflexive interpretation in Albanian.

(298) Paul-i u la.

Paul-DEF.M.NOM CL.PASS wash-3SG.PST

"Paul washed [himself]."

It appears that Albanian grooming-type verbs allow the bundling operation (Reinhart & Siloni 2005), and this arity operation is licensed by the clitic *u*. As evidenced by the informant's gloss, the clitic *u* can also license passive derivations. In short, the data from Albanian show that grooming-type verbs differ from other agentive verbs in reflexivisation strategies.

4.5.2. Greek

In Greek, standard transitive verbs are reflexivised with a *self+POSS* construction, as demonstrated in sentences (299) and (300) below.

(299) O Jani-s idh-e ti Mari-a.

DEF.NOM.SG.M John-NOM.M saw-3SG.PST DEF.ACC.SG.F Mary-ACC.F

"John saw Mary."

(300) O Jani-s idh-e ton eaft-o =tu.

DEF.NOM.SG.M John-NOM.M saw-3SG.PST DEF.ACC.SG.M self-ACC.SG.M =3SG.POSS.M

"John saw himself." (lit: "The John saw the self=his")

As can be seen above, the direct object of the transitive in (299) is replaced with an anaphoric phrase in (300) to elicit a reflexive interpretation. The determiner 'ton' agrees in phi-features

with the *self* element ‘eafto’, while the possessive clitic ‘tu’ agrees in phi-features with the subject, as demonstrated by sentence (301) below.

(301) I fitit-es peneps-an ton eaft-o =tus

the.AGR student-NOM.PL.M praise-3PL.PST DEF.ACC.SG.M self-ACC.SG.M =3PL.POSS

“The students praised themselves.”

While the possessive clitic in (301) is plural like the subject, the determiner ‘ton’ is singular like the *self* anaphor.

The nominal *self+POSS* construction is not strictly subject-oriented, as sentence (302) will show. In addition, a pronominal clitic can be used in such predicates, as in (303). Furthermore, (304) shows that the *self+POSS* construction cannot occur in adjuncts.

(302) O Petros mas=milise ja ton eaft-o =mas.

the Peter us=told about the.ACC self-ACC =ours.POSS

“Peter told us about ourselves.”

(303) O Petros mas=milise ja=mas.

the Peter us=told about=us.ACC

“Peter told us about ourselves.”

(304) *I Maria vrike ena vivlio piso apo ton eafto =tis.

the Mary found a.ACC book.ACC behind from the.ACC self.ACC =hers.POSS

intended: “Maria found a book behind her.” [i.e., behind Maria]

When an EXP-subject verb is reflexivised, the *self+POSS* phrase can occur in subject position (cf Anagnostopoulou & Everaert 1999, summary in Reuland 2011), in which case the verb agrees with ‘eafto’, as shown in sentences (305) and (306) below. This shows that Greek syntax distinguishes between EXP-subject verbs and agentive verbs.

(305) I Etta misi ton eaft-o =tis.

the.NOM Etta.NOM hates the.ACC self-ACC =hers.POSS

"Etta hates herself."

(306) O eaftos =tis tin= misi tin Etta.

the.NOM self.NOM =hers.POSS her.ACC= hates the.ACC Etta.ACC

"Etta hates herself."

Furthermore, grooming-type verbs are interpreted differently in Greek than other AGT-THM verbs. Sentence (307) below receives a contrastive interpretation. The unmarked counterpart is given in sentence (308), in which the verb is marked with the verbal marker *-te* and the *self+POSS* construction is omitted.

(307) (?)O Janis ksiri-se ton eaft-o =tu.

the.NOM John shave-3SG.PST DEF.ACC.SG.M self-ACC.SG(M) =3SG.POSS.M

"John shaved *himself*."

(308) O Jani-s ksiristi-ke.

the.NOM John-NOM(M) shave-TE-3SG.PST

"John shaved [himself]."

The *-te* affix also occurs with reciprocal verbs, as shown in sentence (309) below.

(309) O Yanis ke i Maria agkalias-tikan

the.NOM Yanis.NOM and the.NOM Maria.NOM hugged-TE-3PL

"Yanis and Maria hugged (each other)."

(Papangeli 2004:43)

However, Papangeli (2004) shows that *-te* suffix, which is used for passive, unaccusative, reciprocal and reflexive predicates, can cause a fair amount of ambiguity. For example, in sentence (310) below contains a non-grooming agentive verb with a dominant passive interpretation. Yet in sentence (311) only the reflexive reading is available, because any

alternative interpretations have been excluded by the instrumental phrase and the adverbial intensifier.

(310) ?O Yanis katastraf-ike

the.NOM.M Yanis.NOM destroyed-TE-3SG

"Yanis was destroyed." / "Yanis destroyed (himself)."

(Papangeli 2004:47)

(311) I jineka ka-ike apo moni tis me ta spirta

the.NOM.F woman.NOM burnt-TE.3SG by own.ACC her.GEN with the.ACC matches.ACC

"The woman burnt herself on her own with the matches."

(ibid:50)

As such, the availability of the *–te* clitic in reflexive predicates is not restricted to grooming-type verbs. However, Papangeli (2004) also shows that Greek has access to a lexical *self* prefix *afto-* similar to Romance *auto-* (see Sections 2.9 and 2.10) and Slavic *samo-* (see Section 2.11). As shown below, the prefix *afto-* can co-occur with the affix *-te* with non-grooming verbs (312), but cannot do so with grooming-type verbs (313).

(312) O Yanis afto-katastra-fike.

the.NOM Yanis.NOM self-destroyed-TE.3SG

"Yanis destroyed himself.

(313) *O Yanis afto-plith-ike.

the.NOM Yanis.NOM self-washed-TE.3SG

"Yanis washed (himself)."

(ibid:44)

The *afto-* strategy shows that Greek syntax does distinguish grooming-type verbs from other verbs.

In summary, Greek uses a *self+POSS* construction in object position to form reflexive predicates, and a reflexive interpretation can also be elicited with the multi-functional *-te* affix. With EXP-subject verbs, the *self+POSS* construction can also occur in subject position. When used with grooming-type verbs, the *self+POSS* construction (in object position) elicits a contrastive reading, while grooming-type verbs with the *-te* affix elicit an unmarked reflexive interpretation. Although the *-te* affix is not exclusive to grooming-type verbs (Papangeli 2004), the lexical prefix *afto-* ('self') is specifically unavailable to grooming-type verbs. This difference between grooming-type verbs and other agentive verbs supports the theory that these are distinct verb classes.

4.5.3. Cypriot Greek

The Greek dialect spoken in Cyprus varies from Modern Greek in both vocabulary and grammar (Trevilla 2009). The available reflexivisation strategies, and the context of their occurrences, also vary from those observed in Modern Greek (see Section 4.5.2 above).

The first strategy, *self+POSS*, seems to obey different rules than it does in Modern Greek.

(314) O Petros ip-en mas ja ton eaft-on tu
the Peter say-PST.3.SG 1PL.GEN for the.ACC.M.SG self-ACC.M.SG 3SG.M.GEN
"Peter told us about himself."

(315) O Petros ip-en mas ja tus eaft-us mas
the Peter say-PST.3.SG 1PL.GEN for the.ACC.M.PL self-ACC.M.PL 1PL.GEN
"Peter told us about ourselves."

Unlike in Modern Greek, the *self+POSS* construction is available for non-subject-oriented reflexivisation, as the lack of contrast between sentences (314) and (315) above demonstrates. In this regard, the construction is more productive in Cypriot Greek, yet the construction does not occur in the subject position of EXP-subject verbs as it might in Modern Greek.

Even more so than in Modern Greek above, the verbal affix *-te* can be used in Cypriot Greek to elicit a reflexive interpretation, as demonstrated below.

(316) O Pavl-os epli-thik-en

the.NOM.M.SG *Paul-NOM.M.SG* *wash-PST.TE-3SG*

"Paul washed [himself]."

(317) I mathit-es efum-izunt-an

the.NOM.M.PL *student-NOM.M.PL* *brag-PST.TE-3PL*

"The students bragged about themselves."

Sentence (316) shows that the passive construction can elicit a reflexive interpretation with grooming-type verbs, and sentence (317) shows a non-grooming-type verb that also elicits a reflexive interpretation. In addition, the *-te* affix is used in a construction that does not exist in Standard Greek, demonstrated in sentence (318) below.

(318) Po-thavma-z-ete

PO-admire-PRS.PASS-3SG

"She admires herself." / "She self-admires."

The informant suggested that the 'po' element might be a shortened form of the preposition *apo* ('from'), but could not be sure of its individual meaning or etymology. In combination with the *-te* affix, the predicate is reflexivised. This 'self-V' interpretation can also be created with the lexical prefix *afto-*, as shown in sentences (319) and (320) below.

(319) I Maria afto-eksipiret-ithike

the.NOM *Maria.NOM* *self-serviced-PASS.3SG*

"Maria served herself."

(320) Afto-kton-ise

self-kill.PST-3SG

"S/he killed herself/himself." / "S/he committed suicide"

The prefix *afto-* is derived from *eaftos* ('self'), and can occur with the *-te* affix (319) but also without it (320). Unfortunately, the available data did not reveal whether the prefix *afto-* is available to grooming-type verbs.

In summary, Cypriot Greek uses a wider variety of reflexive strategies than (Standard) Modern Greek. The two strategies that seem to be unique to Cypriot, namely *afto-* prefixation and the *PO+TE* strategy, both of which change the meaning of the verb to only allow a reflexive interpretation. The different distribution of reflexive strategies with regards to verb types, however, does not show a clear distinction between the three verb classes under investigation.

4.5.4. Turkish

Turkish has over 70 million speakers, which makes it the most widely spoken Turkic language (Trevilla 2009). Sentences (321) and (322) below show the difference between a non-reflexive transitive predicate (321) and a reflexive predicate (322).

(321) John Mary-yi gör-dü.
John.NOM Mary-ACC see-PST.3SG
"John saw Mary."

(322) John kendi-ni gör-dü.
John.NOM self-ACC see-PST.3SG
"John saw himself."

The nominal anaphor *kendi*, meaning 'self', is locally bound by 'John'. No special marking on the verb is required to elicit a reflexive interpretation. This reflexivization strategy is distinct from that of the grooming verb in sentence (323) below.

(323) Tara-n-dı-m

comb-REFL-PST-1SG

"I combed myself."

Sentence (323) above shows two Turkish syntactic strategies. Firstly, Turkish is a pro-drop language. The subject-agreement in the verb renders the subject pronoun optional. Secondly, Turkish has a verbal affix *-n* that allows argument-omission with a reflexive interpretation.

In summary, Turkish uses a verbal reflexive affix *-n* with the grooming verb 'to comb', and a nominal *self* anaphor with the non-grooming verb 'to see'. Data on EXP-verbs is not present in the dataset.

4.5.5. Uyghur

The Eastern Turkic language Uyghur has approximately 10 million speakers, mainly situated in the Chinese province Xinjiang Uyghur. As demonstrated below in sentences (324) and (325), agentive verbs are reflexivised with a reflexive anaphor in direct object position.

(324) John Mary-ni kör-di

John Mary-ACC see-PST.3SG

"John saw Mary."

(325) John öz-i-ni kör-di

John REFL-3SG-ACC see-PST.3SG

"John saw himself."

The anaphor in sentence (325) above is marked for person and number, and can be assigned case. As demonstrated below, the *öz* anaphor can also receive dative case (326), or be in a postpositional phrase without case marking (327). In addition, sentence (328) shows that the *öz* anaphor must be preceded by a case-less pronoun in order to elicit a non-subject-oriented interpretation.

(326) Peter öz-i-gä sözlä-di

Peter REFL-3SG-DAT speak-PST.3SG

"Peter spoke to himself."

(327) Peter biz-gä öz-i toγruluq sözlä-di

Peter us-DAT REFL-3SG about speak-PST.3SG

"Peter told us about himself."

(328) Peter biz-gä biz öz-imiz toγruluq sözlä-di

Peter us-DAT we REFL-1PL about speak-PST.3SG

"Peter told us about ourselves."

Sentence (329) below shows that EXP-subject verbs also use the *öz* anaphor to elicit a reflexive reading. The data reveals no difference between AGT-THM verbs and EXP-subject verbs.

(329) Etta öz-i-gä öč

Etta REFL-3SG-DAT hate

"Etta hates herself."

However, Uyghur does have another reflexive strategy, as shown below in sentence (330). Grooming-type verbs make use of verbal reduplication, paired with direct object omission.

(330) Paul yu-yun-di

Paul wash~wash-PST.3SG

"Paul washed."

In summary, the data from Uyghur reveal a subject-oriented reflexive anaphor *öz*, which can occur with AGT-THM verbs as well as EXP-subject verbs. In addition, Uyghur has a verbal reduplication that can occur with grooming-type verbs. These data support the theory that grooming-type verbs are a separate verb class.

4.5.6. Hebrew

The Afro-Asiatic language Hebrew is spoken by roughly 5 million speakers. Sentence (331) below is an example of a non-reflexive transitive predicate, while sentence (332) shows its reflexive counterpart.

(331) jon ra'a et meri

John see.PST.3SG.M ACC Mary

"John saw Mary."

(332) jon ra'a et acmo

John see.PST.3SG.M ACC REFL.3SG.M

"John saw himself."

As can be seen above in sentence (332), Hebrew has a reflexive anaphor that agrees with its antecedent in person, number and gender. Furthermore, sentences (333) and (334) below demonstrate that the *acmo* anaphor is not subject-oriented, because the only difference between (333), in which the subject is the antecedent, and (334), in which the antecedent is the direct object, is in the phi-features of *acmo.*

(333) piter siper lanu al acmo

Peter told to.us about REFL.3SG.M

"Peter told us about himself."

(334) piter siper lanu al acmenu

Peter told to.us about REFL.1PL

"Peter told us about ourselves."

Furthermore, sentence (335) below shows that EXP-subject predicates use the same reflexivization strategy as the AGT-THM verbs above.

(335) eta mafxida et acma

Etta scares ACC REFL.3SG.F

"Etta scares herself."

However, Hebrew has a different strategy for a class of verbs that includes grooming-type verbs, as demonstrated by (336) below.

(336) pol hitraxec

Paul washed.REFL.3SG.M

"Paul washed [himself]."

The root verb in (336) above has been encased by the *hitpa'el* verbal template, which is available to a limited set of root verbs to form various verb types including reflexives, reciprocals, and unaccusatives (see Siloni 2002). Crucially, most agentive verbs cannot be reflexivised with the *hitpa'el* template.

To summarize, Hebrew displays no difference between AGT-THM verbs and EXP-subject verbs; both can be reflexivised with a reflexive anaphor. However, grooming-type verbs are among a small subset of verbs that allow arity reduction by the *hitpa'el* template (cf Siloni 2002).

4.5.7. Zhuang

The final language of this section is Zhuang, a Tai-Kadai tone language. The variant under investigation is Yongnan Zhuang, spoken by approximately 1.8 million speakers in Southern China (Trevilla 2009). Specifically, the informant used the variety of Zhuang spoken in the Qinzhou county of the Guangxi province.

Speakers of Qinzhou Zhuang form a reflexive predicate with a *self* anaphor, as shown below.

(337) A:^{44}-miŋ^{33} lan^{44} te:^{33}.

PN-Ming see 3SG

"Ming sees him/her."

(338) A:^{44}-miŋ^{33} lan^{44} ɕa:^{53}-ka:^{44}.

PN-Ming *see* *self*

"Ming sees himself."

The pronoun in sentence (337) above cannot be locally bound, while the *self* anaphor in (338) elicits a reflexive interpretation. As shown below, the *self* anaphor is also used for grooming-type verbs (339) and EXP-subject verbs (340).

(339) A:^{44}-miŋ^{33} ma:t^{11} ɕa:^{53}-ka:^{44}.

PN-Ming *wipe* *self*

"Ming wiped himself."

(340) A:^{44}-tʰiŋ^{33} nau^{44} ɕa:^{53}-ka:^{44}.

PN-Ting *hate* *self*

"Ting hates herself."

No other strategies are listed for any of the simple transitive verbs[23]. Therefore, Qinzhou Zhuang does not provide evidence for a difference between agentive verbs, EXP-subject verbs and grooming-type verbs.

[23] Things get more complicated with complex verbs, as sentences VII. and VIII. show below.

VII. A:^{44}-miŋ^{33} ka:ŋ^{24} te:^{33} ɕa:^{53}-ka:^{44} hai^{11} tʰo:i^{53}-ku:^{33} tʰiŋ^{44}.
PN-Ming *speak* *3SG* *self* *give* *PL-1SG* *listen*
"Ming told us about himself."

VIII. A:^{44}-miŋ^{33} ka:ŋ^{24} tʰo:i^{53}-ku:^{33} te:^{44} ho:ŋ^{44} hai^{11} tʰo:i^{53}-ku:^{33} tʰiŋ^{44}.
PN-Ming *speak* *PL-1SG* *POSS* *thing* *give* *PL-1SG* *listen*
"Ming told us about ourselves."

In sentence VII, the *self* anaphor is preceded by a pronoun, while in VIII. the *self* anaphor is replaced by a *PRN+POSS+thing* construction. The implications of these data are unclear.

4.6. Invariant strategies

The languages within this category use one reflexive strategy and one strategy only. As such, these strategies are insensitive to verb class alternations. It varies per language whether the available strategy is subject-oriented or not. This category includes languages from a wide variety of families, such as Indo-European, Niger-Congo, and Malayo-Polynesian. In addition, the Amharic and Yoruba languages treated above in Sections 4.3.4 and 4.3.5 should be considered a part of this category.

4.6.1. Akan

The first language to be featured in this section is Akan, a Niger-Congo language used in wider communication in Ghana. The examples are from the Fante dialect of Akan, which is spoken around the south-western region of the country, mainly along the coast. Sentences (341) and (342) below show the difference between a non-reflexive and a reflexivised predicate.

(341) John hu-u no
John see-PST 3SG.OBJ
"John saw him."

(342) John hu-u ne ho
John see-PST 3SG.POSS self
"John saw him/himself."

In sentence (341), the pronoun elicits a non-reflexive interpretation. The *POSS+self* construction in sentence (342), conversely, is ambiguous between a reflexive and non-reflexive interpretation. As such, the *self* element allows the reflexive interpretation without enforcing it.

Sentence (343) below further shows that the *POSS+self* construction is not subject-oriented.

(343) Peter ka-a (biribi) fa yɛn ho kyerɛ hɛn

Peter say-PST (something) PASS 1PL.POSS self show 1PL.OBJ

"Peter told us about ourselves."

In sentence (343) above, the *POSS+self* construction precedes the intended 'antecedent' or co-referent. In addition, this reflexive strategy is also used with EXP-subject verbs (344) and grooming-type verbs (345).

(344) Etta kyir ne ho

Etta hate[HAB] 3SG.POSS self

"Etta hates herself."

(345) Paul ho~hor-r ne ho

Paul wash[HAB]~wash-PST 3SG.POSS self

"Paul washed [himself]."

Both examples above receive habitual interpretations, which is attained through reduplication in sentence (345). It is unclear whether this is related to the reflexivisation process.

The data above reveal a single reflexivisation strategy, the *POSS+self* construction, which is ambiguous between a reflexive and an emphasis marker. Akan shows no markedly different reflexivisation strategies with any of the three verb types under investigation.

4.6.2. Bih

Bih is a Malayo-Chamic language spoken in Vietnam. This Austronesian language has approximately 1000 native speakers, and may also be classified as a dialect of Rade (Trevilla 2009). Bih allows one reflexive strategy for any verb type, as shown below in sentences (346) through (348).

(346) ñu prni kĭn ñu ačô.

3 praise DAT 3 REFL

"She/He praises herself/himself."

(347) Paul mrao ñu ačô.

Paul wash 3 REFL

"Paul washed himself."

(348) Tam krčao ñu ačô.

Tam scare 3 REFL

"Tam scares herself."

The *PRN+REFL* strategy is used with agentive verbs (346), grooming-type verbs (347) and EXP-subject verbs (348) alike. It also appears with non-subject antecedents, as in sentence (349) below.

(349) Tam paƀlĕ kĭn kamei hăng kamei ačô.

Tam tell DAT 1PL.EXCL with 1PL.EXCL REFL

"Tam told us about ourselves." (lit: "Tam told about us with ourselves.")

In non-locally governed positions, as demonstrated in sentence (350) below, the reflexive particle can be omitted without changing the interpretation.

(350) Peter paƀlĕ tanao ñu (ačô) hăng kamei.

Peter tell story 3 REFL with 1PL.EXCL

"Peter told us about himself."

These data show that Bih does not show effects of bundling and provides no evidence for any distinction between grooming-type verbs and other agentive verbs.

4.6.3. Estonian

The Uralic language Estonian is spoken in Estonia, Latvia and Lithuania, and has over 1 million speakers (Trevilla 2009). Estonian has a complex case system with as many as fourteen separate cases, including (at least) six locative cases. Sentence (351) below features a non-reflexive transitive verb, and its reflexive counterpart follows in sentence (352).

(351) John nägi Mary-t.
John.NOM *see.PST.3SG* *Mary-PTV.SG*
"John saw (a part of) Mary."

(352) John nägi ennas-t.
John.NOM *see.PST.3SG* *self-PTV.SG*
"John saw (a part of) himself."

In sentence (352) above, the 'self' anaphor *ennast* matches its antecedent *John* in phi-features.[24] As sentences (353) and (354) below will show, Estonian uses the same *self+AGR* strategy for grooming-type verbs (353) and EXP-subject verbs (354) as it does for non-grooming AGT-THM verbs (see above).

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[24] The anaphor *ennast* does not always match its antecedent's phi-features, as shown by the examples below.

IX. Üliõpilase-d kiit-si-d endid.
university.student-NOM.PL *praise-PST-3PL* *self.PL.PTV*
"The students praised themselves."

X. Üliõpilase-d kiit-si-d ennas-t.
university.student-NOM.PL *praise-PST-3PL* *self-PTV.SG*
"The students praised themselves."

The anaphor in IX. above matches the subject in phi-features, yet the anaphor in X. is singular instead of plural. Both sentences are grammatical in Estonian. It is likely that these two variations reflect two possible interpretations of the source sentence. In English, the sentence "The students praised themselves" is ambiguous between a collective and a distributive interpretation (cf Scha 1984). Either each single student praised himself (distributive), or every student praised the collection of students (collective). The singular anaphor in X. is consistent with the distributive reading, while the plural anaphor in IX. is consistent with a collective interpretation.

(353) Paul pesi ennas-t.

Paul.NOM wash.PST.3SG self-PTV.SG

"Paul washed himself."

(354) Etta hirmuta-b ennas-t.

Etta scare-3SG self.PTV.SG

"Etta scares herself."

However, the *self+AGR* strategy does not apply when the antecedent is not the verb's subject, as the sentences (355) and (356) show.

(355) Peter jutusta-s mei-le enda-st.

Peter.NOM tell-PST.3SG we-ALL self-ELA.SG

"Peter told us (a story) about himself."

(356) Peter rääki-s mei-le mei-st endi-st

Peter.NOM tell-PST.3SG we-ALL we-ELA self.PL-ELA

"Peter told us about ourselves."

The *self+AGR* anaphor in (355) cannot take the direct object as its antecedent, but must be bound by the subject. In (356), the addition of a pronoun that matches the anaphor in case and phi-features allows the direct object antecedent.

In summary, Estonian uses a 'self' anaphor to induce a reflexive interpretation. This anaphor is subject-oriented, as is consistent with bundling theory, and it must be preceded by a pronoun that matches in case and phi-features to elicit a non-subject-oriented interpretation. Nevertheless, the *self+AGR* anaphor is available to all verb classes. As such, Estonian finite clauses provide no evidence to support the theory that grooming-type verbs are a separate verb class.

4.6.4. Irish

Modern Irish is a Celtic language with relatively few native speakers, but recent efforts to encourage the use of the language as part of Irish cultural identity have caused a resurgence of the language in wider communication (Trevilla 2009). Sentence (357) below shows a non-reflexive transitive sentence in Irish, which has been reflexivised in sentence (358).

(357) Chonaic Seán Máire
see.PST Seán Máire
"Seán saw Máire."

(358) Chonaic Seán é féin
see.PST Seán 3SG.M.ACC self
"Seán saw himself."

As can be seen above, Irish uses a *PRN+self* strategy to elicit a reflexive interpretation. This strategy is not subject-oriented, as sentence (359) below demonstrates.

(359) D'inis Peadar duinn umainn féin
tell.PST Peadar to.1PL about.1PL self
"Peter told (to) us about ourselves."

Sentence (359) above also shows that the *self* particle can be combined with Irish preposition pronouns. Furthermore, the *PRN+self* strategy is also used for EXP-subject verbs (360) and grooming-type verbs (361).

(360) Scanraíonn Áine í féin
scare.PRS Áine 3SG.F.ACC self
"Áine scares herself."

(361) Nígh Pól é féin
wash.PST Pól 3SG.M.ACC self
"Paul washed himself."

The *self* particle can also be used in non-reflexive constructions as an intensifier, as demonstrated below in sentence (362).

(362) Bhí an gleann féin uaigneach.
be.AUX.PST the glen self lonely
"The glen itself was lonely."

In summary, Irish uses a *PRN+self* strategy to elicit reflexive interpretations. This strategy is not affected by the three types of verb under investigation, and is not subject-oriented. The *self* particle also occurs in Irish as an intensifier.

4.6.5. Nepali

Nepali is an Indo-Aryan language with more than twelve million native speakers (Trevilla 2009). Nepali's case system can provide valuable clues as to the nature of reflexive anaphors, because Nepali case marking is sensitive to animacy and specificity in monotransitive predicates (Li 2007:1481). In those predicates, the *-lai* object marker can only occur if the object is definite and animate (Li 2007:1471), as demonstrated by (363) through (365) below.

(363) hidzo Ram-le tjo sikka-(*lai) dek^{h}-jo.
yesterday Ram-A that coin-OBJ see-PST.3SG.M
"Yesterday, Ram saw that coin."

(364) hidzo Ram-le tsɒra-(*lai) dek^{h}-nɒ tsah-jo.
yesterday Ram-A bird-OBJ see-INF want-PST.3SG.M
"Yesterday, Ram wanted to see a bird." (Non-specific in the context)

(365) hidzo Ram-le tsɒra-(lai) dek^{h}-nɒ tsah-jo.
yesterday Ram-A bird-OBJ see-INF want-PST.3SG.M
"Yesterday, Ram wanted to see the bird." (Specific in the context)

(Li 2007: 1471)

In sentence (363), the definiteness-condition is met, but the object is not animate, so the *-lai* affix cannot be applied. Similarly, in (364) only the animacy condition is met. Only if the bird in question has a definite reference in the discourse context, can the *-lai* affix (optionally) mark the object as in (365). Li further notes that for pronouns and proper nouns in direct object position, the *-lai* affix is mandatory (ibid: 1472).

However, Li (2007) makes no mention of anaphors, so we must turn to the data from the AnaTyp database our first clue.

(366) jon-le mari-lai dekh-yo

John-A Mary-OBJ see-PST.3SG.M

"John saw Mary."

(367) jon-le aphai-lai dekh-yo

John-A REFL-OBJ see-PST.3SG.M

"John saw himself."

In sentence (366) above, the object affix for 'Mary' is mandatory. In addition, the anaphor 'aphai' in sentence (367) is also modified by the object affix *-lai*. As a result, we can conclude that the anaphor meets the requirements of animacy and specificity.

However, in the domain of EXP-subject verbs a different pattern emerges. Consider the following sentences (368) and (369).

(368) etta maria-lai manparaud-i-na

Etta Maria-OBJ like-PRS.3SG-NEG

"Etta dislikes Maria."

(369) etta aphai darau-che

Etta REFL scare-PRS.3SG.F

"Etta scares herself."

In sentence (368), the proper noun ‘Maria’ is mandatorily marked with the object affix *–lai*, yet the anaphor ‘aphai’ in sentence (369) does not receive this marking. In this regard, anaphors differ from pronouns and proper nouns.

The following two sentences will show that the Nepali anaphor is subject-oriented.

(370) pitar-le aph-no barema hami-lai bhan-yo

Peter-A REFL-GEN about 1PL-OBJ/DAT[25] *tell-PST.3SG*

“Peter told us about himself.”

(371) pitar-le ham-ro barema hami-lai bhan-yo

Peter-A 1PL-GEN about 1PL-OBJ/DAT tell-PST.3SG

“Peter told us about ourselves.”

As can be seen above, the anaphor *aphai* can be used to refer to the subject in (370), but for the non-subject antecedent in (371) a pronoun is used.

Unfortunately, the questionnaire did not elicit any clear transitive grooming-type verbs.[26] As shown in the following sentence (372), actions of grooming were described with more complex constructions using the unmarked ‘aphai’.

(372) jon-le aphai dari kat-yo

John-A REFL beard cut-PST.3SG

“John shaved [himself].”

[25] It is unclear from present data whether the *-lai* affix occurs here as an object marker or as dative case. In monotransitive verbs, object pronouns are mandatorily marked with the object marker, while in more complex verbs the affix is used for dative case regardless of specificity or animacy. Further research may reveal whether the *-lai* affix would occur to an inanimate NP in this position. See Li (2007) for more discussion of *-le* and *-lai*.

[26] Li (2007) lists the verb *nuhaunu* ‘bathe’ among unergative verbs, which suggests that Nepali grooming-type verbs pattern with unergatives (ibid:1468).

The ‘aphai’ in sentence (372) above cannot be a possessive, as the genitive form would be ‘aphno’. Yet if both ‘aphai’ and the ‘dari’ were independent noun phrases, the predicate would be ditransitive and the indirect object would have to be marked with *-lai* as a dative affix. Furthermore, sentence (373) below shows that ‘aphai’ is optional in this construction.

(373) paul-le (aphai) sapha garyo

Paul-A (REFL) clean do-PST.3SG

“Paul washed [himself].”

As sentence (373) above shows, the absence or presence of ‘aphai’ does not impact the Nepali case system, which shows that ‘aphai’ is not present on the theta-grid. Instead, I posit that in descriptions of grooming-type events, ‘aphai’ is an optional intensifier rather than a reflexive anaphor.

In summary, Nepali reflexive predicates are constructed with an anaphor ‘aphai’ that can bear case and theta. This anaphor meets the specificity and animacy requirements of Nepali’s case system in monotransitive clauses by allowing the *-lai* affix (Li 2007), but does not pattern with pronouns and proper nouns in requiring its presence. In grooming-type predicates, ‘aphai’ appears as an optional intensifier rather than a nominal anaphor.

4.6.6. Persian

Persian is an Indo-Iranian language with over 47 million speakers, and is the statutory national language of Iran (Trevilla 2009). The examples below are shown for Standard

Persian.[27]As shown in sentences (374) and (375) below, Standard Persian elicits reflexive interpretations with a *self-GEN.AGR* strategy.

(374) John ʔu ra did.

John 3SG ACC see.PST.3SG

"John saw him."

(375) John xod-æš ra did.

John self-GEN.3SG ACC see.PST.3SG

"John saw himself."

The above contrast shows that the pronoun in sentence (374) does not elicit a reflexive interpretation, while the *self-GEN.AGR* strategy in sentence (375) does. This strategy can also be used with prepositional phrases, as shown in sentences (376) below.

(376) Peter dær-bare-ye xod-æš ba ma sohbæt kærd.

Peter in-about-EZ[28] self-GEN.3SG with 1PL.ACC speech do.PST.3SG

"Peter told us about himself."

In sentence (376), the intended antecedent is the subject 'Peter', and the *self-GEN.AGR* strategy is used to elicit the reflexive interpretation. Additionally, the *self-GEN.AGR* strategy can be applied to grooming-type verbs (377) and EXP-subject verbs (378).

(377) Paul xod-æš rā tærašid.

Paul self-GEN.3SG ACC shave.PST.3SG

"Paul washed himself."

[27] The AnaTyp database also contains the colloquial Tehrani dialect of Persian, which revealed mostly morphological differences. The reflexive strategies are too similar to merit an individual section.

[28] The *ezafe* morpheme in Persian occurs with nouns, adjectives and prepositions, and can be analysed as a dummy case assigner (Samiian 1994).

(378) Etta xod-æš ra mi-tærs-anæd.

Etta self-GEN.3SG ACC PRS-scare-3SG

"Etta scares herself."

In short, Persian has access to a single strategy to form reflexive predicates, the *self-GEN.AGR* strategy, which can be used with any type of verb. As such, Persian finite clauses show no evidence for verb class boundaries.

5. Analysis

Fifteen out of 31 languages included in Section 4 above exhibited a reflexivisation strategy with grooming-type verbs that had not been used elsewhere in the questionnaire.[29] With two exceptions (Malayalam's *self+self* and Kinande's *self+CAUS*), the reflexive strategies involved the realisation of a single argument with multiple theta-roles, a.k.a. bundling (see Reinhart & Siloni 2005). This can be achieved with passive morphology (e.g. Greek, Albanian), a verbal marker associated with reflexivity (e.g. Turkish, Tamil, Hebrew), or without special marking (e.g. Hindi, Polish, Kinande).

The various bundling-licensing strategies reserved for grooming-type verbs provide valuable clues as to the nature of these verbs. For completion's sake, the first two sections deal with the non-bundling strategies of Malayalam (Section 5.1) and Kinande (Section 5.2). In the following sections, the various bundling-licensing strategies unique to grooming-type verbs in their respective languages will be examined one by one, and Section 5.6 contains a brief summary and review of the reflexive strategies.

5.1. Malayalam's duplication

The data from Malayalam provide a curious contrast with the bundling-based reflexivisation strategies discussed below in Sections 5.3 and beyond, as no theta-role bundling takes place. On the contrary: the *self+self* construction observed with grooming-type verbs appears more complex than the reflexivisation strategies that Malayalam utilises with other agentive verbs. Below in sentence (379) is the *self+self* strategy that occurs with non-grooming-type verbs.

[29] In addition, some languages avoided forming a reflexive predicate with grooming-type verbs by referring to a body part relevant to the grooming event, which is distinct from the grammaticalized body (part) strategies featured in Section 4.3 above. These non-reflexive predicates are not included in further discussion.

(379) mantṛi taṉi-kkə taṉṉ-e ā puraskāram nalk-i

minister *SE-DAT* *SE-ACC* *that* *award* *give-PST*

"The minister gave the award to himself."

The 'taṉikkə taṉṉe' construction above occupies the indirect object position. The first element carries the relevant case, and matches the subject's number, but the duplicate 'taṉṉe' is impervious to differences in phi-features and case. Instead, it patterns with the intensifier featured below in sentence (380), which always occurs in singular accusative form.

(380) avṛ taṉṉ-e jōli cey-tu

3PL.NOM *SE-ACC* *work* *do-PST*

"They themselves did the work."

However, the following sentence (381) shows that with grooming-type verbs, the duplicated element matches the case of the antecedent.

(381) pōḷ taṉṉ-e tāṉ kazhuk-i

Paul *SE-ACC* *SE.NOM* *wash-PST*

"Paul washed himself."

In the fellow Dravidian language Telugu, this strategy is not exclusive to grooming-type verbs, as shown below in sentence (382).

(382) vanaja (tana-ni (tanu)) poguDu-kon-di.

Vanaja *self-ACC* *self.NOM* *praise-KON-AGR*

"Vanaja praised herself."

(Subbārāo & Lalitha Murthy 2000: 226)

Note that the verbal marker *kon* in (383) above is similar to Tamil's *koḷ*, treated onder in Section 5.4.

Further research is needed to establish the significance of Malayalam's distinction between the intensifier in sentence (379) and the duplicated anaphor associated with grooming-type verbs as in sentence (381).

5.2. Kinande's causative morphology

With non-grooming-type verbs, Kinande uses an anaphoric object marker *-yi-* to elicit a reflexive interpretation, as shown below in sentence (383).

(383) Yohani mwayilangira.

Yohani	mo-	a-	yi-	langir	-a
John	*PST-*	*3SG.S-*	*SE-*	*see*	*-IND*

"John saw himself."

As seen onder in Section 5.5, Kinande allows a reflexive interpretation of grooming-type verbs in absence of the reflexive marker *-yi-*. Curiously enough, Kinande only allows the object marker to be realized if the verb also carries a causative marker, as demonstrated below in sentence (384).

(384) Paul mwayinabya.

Paul	mo-	a-	yi-	nab	-i	-a
Paul	*PST-*	*3SG.S-*	*SE-*	*wash*	*-CAUS*	*-IND*

"Paul washed himself."

Mutaka (2007) shows the transitivising effect of the causative *-i-* with the minimal pair *hakab-a* ('smear') and *hakab-i-a* ('to smear'), the latter of which is a transitive verb. To causativize a transitive verb, the causative *-is-* is also added, as evidenced by the minimal pair *it-a* ('kill') and *it-is-i-a* ('cause to kill'). Despite the causative marker in sentence (384) above, which might suggest a lack of /+c theta-role in the base verb, Kinande's syntactically

intransitive grooming-type verbs are able to project both Agent [+c+m] and Theme [-c-m] theta-roles (see Section 5.5 onder).

5.3. Passive morphology

In Albanian, Greek and Cypriot Greek, grooming verbs with passive morphology can elicit a reflexive interpretation, as demonstrated below in sentences (385) through (387).

Albanian

(385) Paul-i u la.

Paul-DEF.M.NOM CL.PASS wash-3SG.PST

"Paul washed [himself]."

Greek

(386) O Jani-s ksiristi-ke.

the.NOM John-NOM.M shave-PASS.3SG.PST

"John shaved [himself]."

Cypriot Greek

(387) O Pavl-os epli-thik-en

the.NOM.M.SG Paul-NOM.M.SG wash-PST.PASS-3SG

"Paul washed [himself]."

In the case of Cypriot Greek, the passive marker can also be used for reflexive predicates with non-grooming-type verbs when combined with an unidentified *po-* verbal prefix, shown below in sentence (388).

(388) Po-thavma-z-ete

PO-admire-PRS.PASS-3SG

"She admires herself." / "She self-admires."

Conventionally, the passivization of a transitive verb consists of the saturation of the external theta-role. When applied to a grooming-type verb, which projects an Agent [+c+m] and a

Theme [-c-m], this would entail that the direct object of the passivized grooming-verb receives the Theme role, and is then raised to the subject position where it receives nominative case. In this scenario, i) movement has taken place and ii) the Agent role is not realised syntactically. On a semantic level, the Agent role is still available and hence can license an Instrument.

Yet in the examples given above in (385) through (387), the available reflexive interpretation indicates that the Agent role is not only present in a saturated form, but directly associated with the subject. This seems to indicate that bundling has taken place, and the subject has received a complex [Agent-Theme] role rather than only the Theme.

The passive morphology by itself cannot license the bundling operation. If it could, one would expect this operation to licence bundling with any AGT-THM verb, rather than the subset of grooming-type verbs. Instead, there must be some property of grooming-type verbs that allows the bundling arity operation, which is then in turn licensed by the passive morphology.

5.4. Verbal marker

In four of the investigated languages, theta-role bundling in grooming-type verbs is licensed by the presence of a verbal marker distinct from passive morphology. The exact nature of these verbal markers varies from language to language, as demonstrated below in sentences (389) through (392).

Turkish

(389) Tara-n-dı-m

comb-REFL-PST-1SG

"I combed myself."

Tamil

(390) Paul (tann-ai) alambi-kko-ɳḍ-aan

Paul.NOM SE-ACC wash-MID-PST-3SG.M

"Paul washed [himself]."

Hebrew

(391) pol hitraxec

Paul washed.REFL.3SG.M

"Paul washed [himself]."

Uyghur

(392) Män kiy-in-dim.

1SG dress~dress-PST.1SG

"I dressed [myself]."

The Turkish verbal marker *-n-* is referred to as a reflexive marker by the informant, and does not occur with reflexivizations with non-grooming-type verbs, though it is unclear whether this verbal marker also occurs in non-reflexive predicates. In contrast, the verbal marker *koɭ* in Tamil and the *hitpa'el* template in Hebrew are known to occur with a wide variety of verbs, such as unergatives, decausatives and middle constructions. In Uyghur the verbal marker in question is a reduplication of the verb stem.

What all of these verbal markers have in common, is that they can licence one or more arity reduction operations to take place, whether they be deletion, saturation or reflexivisation. As such, these verbal markers may also licence theta-role bundling, yet this still does not resolve the question why only grooming-type verbs are subject to this reflexivisation strategy.

5.5. Unmarked bundling

The majority of the languages with a grammatical reflexivisation strategy unique to grooming-type verbs allow the intransitive form of the verb to elicit a reflexive interpretation.

These verbs showed no special marking, as exemplified by the Polish example below in sentence (393).

(393) Paweł umy-ł (się)

Paul.NOM wash-PST.3SG.M SE_{CL}*.ACC*

"Paul washed himself."

The Polish example in (393) has an optional reflexive object clitic, which shows that the verb can realise a single syntactic argument with the complex [Agent-Theme] theta-role.

The nominative case on the subject is covert in the Polish sentence (393), but it is overtly present in the Korean example below in sentence (394).

(394) Paul-i ssis-ess-da.

Paul-NOM wash-PST-DECL

"Paul washed [himself]."

The following example is taken from Kinande. Transitive verbs in Kinande can be realized with a verbal object marker, or with a separate noun phrase. In addition, Kinande can use a reflexive verbal marker in the object marker position. Below in sentence (395), no (reflexive) object marker or object noun phrase are present, yet the reflexive interpretation is available.

(395) Yohani akánabâ.

Yohani a- ka- nab -a

John 3SG.S- IPFV- wash -IND

"John is washing (himself)."

(Mutaka & Kavutirwaki 2006: ID 28)

In short, the grooming-type verbs in this section contain a single syntactic argument, yet on a semantic level both the Agent and Theme roles are assigned to the subject.

5.6. Properties of grooming-type verbs

In the previous sections, the reflexivisation strategies unique to grooming-type verbs within their respective languages have been shown to include various morphological markers of detransitivization and one marker of transitivisation. Yet it is important to bear in mind that while syntactically only one argument is realised, the availability of reflexive interpretations proves that semantically these 'intransitive' grooming-type verbs still project two theta-roles. The role of transitivisation and detransitivisation in these contexts is to licence the *syntactic* structure observed, but the *semantic* theta-role bundling seems to be invariably available to grooming-type verbs. Nevertheless, further research is required to establish why half of the languages investigated in Section 4 did not reveal a reflexive strategy unique to grooming-type verbs.

6. Conclusion

The initial purpose of this paper was to discover why English allows reflexive interpretations of grooming-type verbs without reflexive marking, but of other agentive verbs. With a cross-linguistic typological review of literature, augmented by elicitations from native speakers of various Indo-European languages (the results of which are listed in Appendices A through D), the concept of 'grooming-type verbs' was expanded. The potential verb class now also includes verbs of posture and body-movement, as well as kiss-type verbs that allow reciprocal interpretations without reciprocal marking.

In the next stage of the investigation, the Anaphora Typology Project's [AnaTyp] database of questionnaires was utilised to analyse and classify 31 languages with widely diverse genealogical origins. In the culmination of these analyses, five distinct reflexivisation strategies were identified that were unique to grooming-type verbs in their respective languages. These strategies include various verbal markers associated with passivization, detransitivisation and causitivisation. The combination of these strategies leads to the observation that grooming-type verbs can elicit a reflexive interpretation regardless of how a syntactically intransitive predicate is achieved. While these sentences may seem like passives, unergatives or unaccusatives, they appear to be a different type of intransitive that allows the projection of two theta-roles despite the fact that there is but a single syntactic argument. Further research is required to fully characterise *how* grooming-type verbs can be semantically transitive and syntactically intransitive at the same time, but I am hopeful that this research can be a stepping stone towards a full understanding of the unique status of grooming-type verbs.

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Appendix A: Danish

(1) "John saw himself."

a. John ser ham selv
John sees 3SG.M.ACC self

b. John ser sig selv
John sees SE self

c. *John ser sig
John sees SE

d. John$_{i}$ ser ham$_{*i,j}$
John sees 3SG.M.ACC

For sentence (1), *ham selv* is preferred over *sig selv*.

(2) "John washes himself."

a. John vasker ham selv
John washes him self

b. *John vasker
John washes

c. John vasker sig selv
John washes SE self

d. John vasker sig
John washes SE

(3) "Peter spoke to himself."

a. Peter snakkede med sig selv.
Peter spoke with SE self

b. Peter snakkede med ham selv.
Peter spoke with him self

c. *Peter snakkede med sig.
Peter spoke with SE

For sentence (3) above, *sig selv* is preferred over *ham selv*.

(4) "Peter told us about himself."

a. Peter fortalte os om sig selv.
Peter told us about SE self

b. *Peter fortalte os om sig.
Peter told us about SE

c. Peter fortalte os om ham selv.
Peter told us about him self

For sentence (4) above, *sig selv* is preferred over *ham selv*.

(5) “Peter told us about ourselves.”

a.	Peter	fortalte	os	omkring	os	selv
	Peter	*told*	*us*	*about*	*us*	*self*

(6) “Maria told Bill about himself.”

a.	Maria	fortalte	Bill_j	om(kring)	ham	selv_j
	Maria	*told*	*Bill*	*about*	*3SG.M.ACC*	*self*
b.	*Maria	fortalte	Bill_j	omkring	sig	selv_j
	Maria	*told*	*Bill*	*about*	*SE*	*self*

(7) “Maria told Bill about herself.”

a.	Maria_i	fortalte	Bill	omkring	sig	selv_i
	Maria	*told*	*Bill*	*about*	*SE*	*self*
b.	Maria_i	fortalte	Bill	omkring	hende	selv_i
	Maria	*told*	*Bill*	*about*	*3SG.F.ACC*	*self*

(8) “I hate myself.”

a.	Jeg	hader	mig	selv
	I	*hate*	*1SG.ACC*	*self*
b.	*Jeg	hader	mig	
	I	*hate*	*1SG.ACC*	

(9) “Every teacher described himself.”

a.	Hver	lærer	beskrev	ham	selv
	every	*teacher*	*described*	*him*	*self*
b.	Hver	lærer	beskrev	sig	selv
	every	*teacher*	*described*	*SE*	*self*
c.	*Hver	lærer	beskrev	sig	
	every	*teacher*	*described*	*SE*	

Sentence (9a) seems strange to native speakers. Not only does it imply that all teachers are male, it sounds like they are talking about themselves in third person.

(10) “Mary thought that Bill saw himself.”

a.	Mary	troede	at	Bill	så	ham	selv
	Mary	*thought*	*that*	*Bill*	*saw*	*him*	*self*
b.	Mary	troede	at	Bill	så	sig	selv
	Mary	*thought*	*that*	*Bill*	*saw*	*SE*	*self*
c.	*Mary_i	troede	at	Bill_j	så	ham_j	
	Mary	*thought*	*that*	*Bill*	*saw*	*him*	
d.	*Mary	troede	at	Bill	så	sig	
	Mary	*thought*	*that*	*Bill*	*saw*	*SE*	

(11) "Bill told Mary to describe herself."

a. Bill spurgte Mary at beskrive hende selv
Bill told Mary to describe her self

b. Bill spurgte Mary at beskrive sig selv
Bill told Mary to describe SE self

c. ??Bill spurgte Mary at beskrive sig
Bill told Mary to describe SE

As with sentence (9a) above, sentence (11a) seems like Mary is describing herself in third person.

(12) "Bill told John to describe himself." [i.e., describe John]

a. Bill spurgte John at beskrive ham selv
Bill told John to describe him self

b. Bill spurgte John at beskrive sig selv
Bill told John to describe SE self

There is a preference for *sig selv* as in (12b).

(13) "Bill told John to praise him." [i.e., to praise Bill]

a. Bill_i spurgte John_j at komplimentere ham_i
Bill told John to compliment him

b. Bill_i spurgte John_j at komplimentere ham selv_j
Bill told John to compliment him self

(14) "It is important to defend yourself."

a. Det er vigtigt at forsvar ham selv
EXPL is important to defend him self

b. #Det er vigtigt at forsvar
EXPL is important to defend

c. *Det er vigtigt at forsvar ham
EXPL is important to defend him

Sentence (14b) elicits a more generic interpretation of "Defence is important", and sentence (14c) is best translated as "It is important to defend him", which cannot receive a reflexive interpretation either.

(15) "It is important to shave yourself."

a. Det er vigtgit at barber sig selv
EXPL is important to shave SE self

b. *Det er vigtgit at barber sig
EXPL is important to shave SE

(16) "It is important to think before acting."

a. Det er vigtigt at tænke sig om
EXPL is important to think SE around

(17) “I want to defend myself.”

a. Jeg vil forsvar mig selv
I want defend me self

b. Jeg vil forsvar mig
I want defend me

(18) “I want to shave myself.”

a. Jeg vil barber mig selv
I want shave me self

b. Jeg vil barber mig
I want shave me

(19) “The children raise the hand.”

a. Børne rejser hånd-en
children raise hand-the

The Danish sentence in (19) can be interpreted as “The children raised their hands.”

(20) “The children raise the hat.”

a. Børne løfter hatt-en
children raise hat-the

Unlike sentence (19) above, sentence (20) invokes an image of a group of children raising a single hat.

(21) “John found a bag behind himself.”

a. John fandt en bog bag sig
John found a book behind SE

b. John fandt en bog bag ham
John found a book behind him

(22) “His constant shaving is admirable.”

a. Hans konstante barbering er beundringsværdigt
his constant shaving is admirable

Sentence (22) above receives a reflexive interpretation.

(23) “His clients think that his shaving is admirable.”

a. Hans kunder tror at hans barbering er beundringsværdigt
his clients think that his shaving is admirable

In sentence (23) above, the reflexive interpretation is no longer prominent. Instead, the salient interpretation is that “He shaves his clients”.

(24) “Her constant pinching is annoying.”

a. Hendes konstante klemmen er irriterende
her constant pinching is irritating

Sentence (23) above does not receive a reflexive interpretation, though after considering the sentences the participants did consider self-pinching a possible interpretation.

(25) “I think that she needs help. Her constant pinching is worrying.”

a. Jeg tror hun har brug for hjælp.
I think she has need for help
Hendes konstante klemmen er bekymrende.
her constant pinching is worrying

Sentence (25a) implies that the ‘she’ who needs help is pinching herself.

(26) “I washed the dog.”

Jeg vaskede hund-en
I washed dog-the

(27) “I washed a dog.”

Jeg vaskede en hund
I washed a dog

(28) “A dog washed me.”

En hund vaskede mig
a dog washed me

(29) “The dog-washing was difficult.”

Hund-vaskning-en var sværdt
dog-washing-the was difficult

(30) “The washing was difficult.”

Vaskning-en var svært
washing-the was difficult

Sentence (30) above does not receive a reciprocal interpretation.

(31) “To wash yourself was difficult.”

At vaske sig (selv) var svært
to wash.INF SE self was difficult

(32) “Washing myself was difficult.”

*Vaskning mig var svært
washing 1SG.ACC was difficult

(33) “His/her washing was difficult.”

Hans	/	Hendes	vaskning	var	svært
3SG.M.GEN	*/*	*3SG.F.GEN*	*washing*	*was*	*difficult*

(34) “Washing oneself was difficult.”

a. *Sin vaskning var svært
SE.GEN *washing* *was* *difficult*

b. *Sit vaskning var svært
SE.NEUT.GEN *washing* *was* *difficult*

c. *Vaskning sig var svært
washing *SE.ACC* *was* *hard*

(35) “Its washing was difficult.”

Dens	vaskning	var	svært
3SG.IMP.GEN	*washing*	*was*	*difficult*

Appendix B: Swedish

(1) "John saw himself."

a. John såg sig själv
John saw SE self

b. *John såg sig
John saw SE

(2) "John was looking around."

a. John såg sig omkring
John saw SE around

b. John såg sig själv omkring
John saw SE self around

In sentence (2b), there is emphasis on *John* being the one who was looking around.

(3) "John shaved." [i.e., John shaved himself]

a. John rakade sig
John shaved SE

b. John rakade sig själv
John shaved SE self

c. John rakade sitt skägg
John shaved his beard

(4) "John shaves him." [i.e., not himself]

a. John rakar honom
John shaves him

(5) "Peter spoke with himself."

a. Peter pratade med sig själv
Peter spoke with SE self

b. *Peter pratade med sig
Peter spoke with SE

(6) "Peter spoke about himself."

a. Peter pratade om sig själv
Peter spoke with SE self

(7) "Peter told us about himself."

a. Peter berättade till oss om sig själv
Peter explained to us about SE self

(8) "Peter told us about ourselves."

a. Peter pratade till oss om oss själva
Peter spoke to us about SE self

(9) “Maria found a book behind her.” [i.e., behind Maria]

a.	Maria	hittade	en	book	bakom	sig	
	Maria	*found*	*a*	*book*	*behind*	*SE*	
b.	Maria	hittade	en	book	bakom	sig	själv
	Maria	*found*	*a*	*book*	*behind*	*SE*	*self*
c.	Maria	hittade	en	book	bakom	henne	
	Maria	*found*	*a*	*book*	*behind*	*her*	

Sentences (9a) and (9b) were tested for proxy-readings. Sentence (9b) was judged to allow a proxy reading, while sentence (9b) was judged to disallow it. Further research may be necessary to determine whether this single data point is an anomaly among native speakers of Swedish or whether the theory will need to be revisited.

(10) “Etta hates herself.”

a.	Etta	hatar	sig	själv
	Etta	*hates*	*SE*	*self*
b.	*Etta	hatar	sig	
	Etta	*hates*	*SE*	

(11) “Every teacher described himself.”

a.	Varje	lärare	beskrev	sig	själv
	every	*teacher*	*described*	*SE*	*self*
b.	Alla	lärarna	beskrev	sig	själva
	all	*teachers*	*described*	*SE*	*selves*

(12) “Mary thought that Bill saw himself.”

a.	Mary	trodde	att	Bill	såg	sig	själv	
	Mary	*thought*	*that*	*Bill*	*saw*	*SE*	*self*	
b.	Bill	såg	sig	själv,	trodde	Mary		
	Bill	*saw*	*SE*	*self*	*thought*	*Mary*		

(13) “Bill told Mary to describe herself.”

a.	Bill	sa	till	Mary	att	beskriva	sig	själv
	Bill	*said*	*to*	*Mary*	*that*	*describe*	*SE*	*self*
b.	Bill	sa	till	Mary	att	beskriva	sig	
	Bill	*said*	*to*	*Mary*	*that*	*describe*	*SE*	

(14) “John thinks that Mary hates him.” [i.e., hates John]

a.	$John_i$	tror	att	$Mary_j$	hatar	honom
	John	*thinks*	*that*	*Mary*	*hates*	*him*

(15) “John thinks that Mary hates herself.”[i.e., hates Mary]

a.	John$_i$	tror	att	Mary$_j$	hatar	sig	själv$_j$
	John	*thinks*	*that*	*Mary*	*hates*	*SE*	*self*
b.	*John	tror	att	Mary	hatar	sig	
	John	*thinks*	*that*	*Mary*	*hates*	*SE*	

(16) “Bill wants to describe himself.”

a.	Bill	vill	beskriva	sig	själv
	Bill	*wants*	*describe*	*SE*	*self*
b.	Bill	vill	beskriva	sig	
	Bill	*wants*	*describe*	*SE*	

(17) “John wants Bill to describe himself.”

a.	Jon	vill	att	Bill	skall	beskriva	sig	själv
	Jon	*wants*	*that*	*Bill*	*shall*	*describe*	*SE*	*self*
b.	Jon	vill	att	Bill	skall	beskriva	sig	
	Jon	*wants*	*that*	*Bill*	*shall*	*describe*	*SE*	

(18) “John wants Bill to hate himself (for murdering Mary).”

a.	Jon	vill	att	Bill	skall	hata	sig	själv	(för	att	ha	mördat Mary)
	Jon	*wants*	*that*	*Bill*	*shall*	*hate*	*SE*	*self*	*for*	*that*	*he*	*murdered Mary*
b.	*Jon	vill	att	Bill	skall	hata	sig	(för	att	ha	mördat	Mary)
	Jon	*wants*	*that*	*Bill*	*shall*	*hate*	*SE*	*(for*	*that*	*he*	*murdered*	*Mary)*

(19) “Jon shaved his beard.”

a.	Jon	rakade	sitt	skägg
	Jon	*shaved*	*his*	*beard*
b.	Jon	rakade	skägg-et	
	Jon	*shaved*	*beard-the*	

(20) “Jon shaved his head.”

a.	Jon	rakade	sitt	huvud
	Jon	*shaved*	*his*	*head*
b.	Jon	rakade	huvudet	
	Jon	*shaved*	*head-the*	

(21) “John is washing his hands.”

a.	Jon	tvättar	händer-na	
	Jon	*washing*	*hands-indef.pl*	
b.	Jon	tvätta	sina	hander
	Jon	*washing*	*his*	*hands*

(22) “John raised the head.”

a. Jon höjde huvudet
Jon raised head-the

Depending on the context, sentence (22a) can also be interpreted to mean that John raised someone else’s head.

(23) “John raised Mary’s head.”

a. Jon höjde merys huvud
Jon raised Mary’s head

(24) “John defends his head.”

a. Jon försvarar sit huvud
Jon defends his head

b. Jon försvarar huvudet
Jon defends head-the

(25) “They defended the area.”

a. Dom försvarade området
they defended area-the

(26) “The area was defended.”

a. Området var försvarat
area-the was defended

(27) “To shave is professional.”

a. Att raka är professionellt
to shave is professional

(28) “To shave oneself is professional.”

a. Att raka sig är professionellt
to shave SE is professional

(29) “To defend is healthy.”

a. Att försvara är hälsosamt
to defend is healthy

Sentence (29a) above relates to defense in general.

(30) “To defend oneself is healthy.”

a. Att försvara sig själv är hälsosamt
to defend SE self is healthy

b. Att försvara sig är hälsosamt
to defend SE is healthy

(31) “To wash is healthy.”

a. Att tvätta är hälsosamt
to wash is healthy

Sentence (29a) above relates to the act of washing in general.

(32) “To wash oneself is healthy.”

a. Att tvätta sig själv är hälsosamt
to wash se self is healthy

b. Att tvätta sig är hälsosamt
to wash se is healthy

(33) “To hate is dangerous.”

a. Att hata är farligt
to hate is dangerous

Sentence (33a) above relates to hating in general.

(34) “To hate oneself is dangerous.”

a. Att hata sig själv är farligt
to hate se self is dangerous

b. *Att hata sig är farligt
to hate se is dangerous

(35) “John accuses himself of murder.”

a. Jon anklagar sig själv för mord
Jon accuses se self for murder

b. Jon anklagar sig för mord
Jon accuses se for murder

(36) “His shaving is admirable.”

a. Hans rakning är beundransvärd
his shaving is admirable

The predicate in sentence (36a) above receives a reflexive interpretation.

(37) “Her pinching is annoying.”

a. Hennes nypning är irriterande
her pinching is irritating

The predicate in sentence (37a) above does not receive a reflexive interpretation, although upon reflection native speakers do allow that interpretation.

(38) “Her constant defending is effective.”

a. Hennes fortsatta försvarande är effektivt.
her continuous defending is effective

The predicate in sentence (38a) above does not receive a reflexive interpretation, although upon reflection native speakers do allow that interpretation.

(39) “His customers think that his shaving is admirable.”

a. Hans kunder tror att hans rakning är beundransvärd
his customers think that his shaving is admirable

In sentence (39a), the reflexive interpretation is less salient than that the customers undergo the act.

(40) “I think that she needs help. Her constant pinching is worrying.”

a. Jag tror att hon behöver hjälp.
I think that she needs help
Hennes fortsatta nypning är oroande.
her continuous pinching is worrying.

The discourse fragment in (40a) does not elicit a reflexive interpretation. Instead, the speaker is implied to be the one getting pinched.

(41) “The defending of dogs is difficult.”

Hund försvarand-et är svårt.
dog defending-the is difficult

In sentence (41) above, the theme argument seems to have been merged with the verb to form a complex intransitive verb.

(42) “The defending is difficult.”

Försvarand-et är svårt.
defending-the is difficult

Sentence (42) does not elicit a reflexive interpretation.

(43) “Washing us is difficult.”

a. *Os tvättning är svår
1PL.ACC washing.N is difficult
b. *Tvättning os är svår
washing.N 1PL.ACC is difficult
c. Tvättning av os är svår
washing.N of 1PL.ACC is difficult
d. #Vår tvättning är svår
1PL.GEN washing.N is difficult

The infinitive cannot assign accusative case; it must come from a preposition as in (43c). In sentence (43d), the possessive ‘vår’ is interpreted as an agent rather than as a patient.

(44) “Defending her is difficult.”

a. *Försvarand-et henne är svårt
defending-the 3SG.F.ACC is difficult
b. Försvarand-et av henne är svårt
defending-the of 3SG.F.ACC is difficult

(45) “Defending with a spoon is difficult.”

Försvarand-et	med	en	sked	är	svårt
defending-the	*with*	*a*	*spoon*	*is*	*difficult*

(46) (The) defending yourself is difficult.”

a.

Försvarand-et	av	sig	(själv)	är	svårt
defending-the	*of*	*SE.ACC*	*self*	*is*	*difficult*

b.

*Sig	försvarand-et	är	svårt
SE.ACC	*defending-the*	*is*	*difficult*

c.

*Dig	försvarand-et	är	svårt
2SG.ACC	*defending-the*	*is*	*difficult*

(47) “Defending one is difficult.”

a.

Försvara	en	är	svårt.
defend.inf	*3SG.INDF*	*is*	*difficult*

b.

Försvarand-et	av	en		är	svårt.
defending-the	*of*	*3SG.INDF*		*is*	*difficult*

Sentences (46a-b) above do not elicit a reflexive interpretation, though they can do so in context.

(48) “Our washing is difficult.”

a.

Vårat	tvättande	är	svår
1PL.AGR	*washing*	*is*	*difficult*

b.

Våran	tvättning	är	svår
1PL.AGR	*washing*	*is*	*difficult*

(49) “The dog washing is difficult.”

Hund-tvättand-et	är	svår-t
dog-washing-the	*is*	*difficult-agr*

(50) “The washing is difficult.”

Tvättand-et	är	svår-t
washing-the	*is*	*difficult-agr*

Sentence (50) above does not elicit a reflexive interpretation.

(51) “Washing oneself is difficult.”

a. Tvättand-et av sig (själv) är svårt
washing-the of SE self is difficult

b. *Sig tvättand-et är svårt
SE washing-the is hard

(52) “Her washing is difficult.”

Hennes tvättande är svårt
3SG.F.GEN washing is difficult

(53) “Our laundry is dirty.”

Våran tvätt är smutsig
3PL.GEN laundry is dirty

(54) “Shaving is difficult.”

a. Rakand-et är svårt
shaving-the is difficult

b. Rakand-et av sig (själv) är svårt
shaving-the of SE self is difficult

c. *Mig rakand-et är svårt
1SG.ACC shaving-the is difficult

d. *Tvättande henne är svårt
shaving 3SG.F.ACC is difficult

Sentence (54a) does not elicit a reflexive interpretation, while sentence (54b) does. Accusative case cannot be assigned a pronoun preceding (54c) or succeeding (54d) the nominalization.

Appendix C: Italian

(1) "Make Gianni and Maria kiss."

Fai	baciare	Gianni	e	Maria
make	*kiss*	*Gianni*	*and*	*Maria*

(2) "Gianni and Maria kiss each other."

a.

Gianni	e	Maria	si	baciano
Gianni	*and*	*Maria*	*SE$_{CL}$*	*kiss*

b.

Gianni	e	Maria	si	stanno	baciando
Gianni	*and*	*Maria*	*SE$_{CL}$*	*are*	*kissing*

(3) "Make Gianni and Maria kiss each other."

a.

Fai	baciare	Gianni	e	Maria
make	*kiss*	*Gianni*	*and*	*Maria*

b.

*Fai	si	baciare	Gianni	e	Maria
make	*SE$_{CL}$*	*kiss*	*Gianni*	*and*	*Maria*

Appendix D: German

(1) Hier wurde sich gewashen
here was SE washed
"People washed themselves here."

(2) Hier wurde SICH gewaschen
here was SE.EMPH washed
"People washed *themselves*here."

(3) Hier wurde sich verteidigt
here was SE defended
"People defended themselves here."

(4) *Hier wurde SICH verteidigt
here was SE.EMPH defended
"People defended *themselves* here."

Appendix E: Czech questionnaire

Anaphora Typology Survey
Part 1: Free translation

Language : Czech
Consultant name : Mirek

Part A
1. Basics of sentence structure

Please translate the following sentences in the most natural way. Provide **word for word subtitles** of the entire sentence, and a literal translation (if the translation is very different from the original sentence). If possible, separate word-parts with a '-' and subtitle them individually.
For example, here is a Dutch sentence with word-for-word subtitles:

"John goes to the baker to get bread."
Jan gaat naar de bakker om brood te halen.
Jan goes to the baker in.order.to bread to get.

Jan jde k pekaři pro chléb.
Jan goes to baker for bread

Jan jde k pekaři, aby koupil chléb.
Jan goes to baker, to buy bread

If a single word translates to a phrase in English, such as Dutch 'om', separate the phrase with dots (in.order.to) instead of spaces (in order to) to show that it's the same word.

A01) *Simple sentences to start with. If for any reason the verbs "run" and "see" are not good choices, please use different verbs.*

a. John runs.
   John běží.
   John runs
b. John saw Mary.
   John viděl Mary.
   John IPFV.see.PAST Mary
c. I saw Mary.
   Viděl jsem Mary.
   IPF-see-PAST AUX.1SG Mary
   (Já) jsem viděl Marii.
   1SG.NOM be.1SG see.AGR Mary.DAT

d. Mary saw me.
Mary mě viděl-a.
Mary 1SG.ACC IPFV.see.PAST-3SG.F

A02) *Please translate the following **in the most natural way.** For example, if your language does not need the word 'him' in the second sentence, you can leave it out.*

b. Bill crossed the street. John saw him. [i.e., saw Bill]
Bill přešel ulici. John ho viděl.
Billcross.SG street.LOC John 3SG.M.ACC see

c. John is very rude. Bill hates him. [i.e., hates John]
John je velmi hrubý. Bill ho nenávidí.
John is very rough. Bill 3SG.M.ACC hates.

d. John saw Mary. She greeted him.
John viděl Marii. Po-zdravil-a ho.
John saw Mary PF-greet-3SG.F 3SG.M.ACC
John viděl Mary, po-zdravil-a.
Note: would work as single sentence separated by dash.
John see Mary, PF-greet-3SG.F

e. Bill is here. Mary saw his car.
Bill je tady. Mary viděl-a jeho auto.
Billis here. Mary see-3SG.F his car.
Bill je tady, Mary viděl-a auto.
Billis here, Mary see-3SG.F car

A03) ***If** your language can leave out pronouns like 'he' or 'him', please give some examples.*

2. Inventory of reflexive meanings

2.1Please translate the following sentences **in the most natural way** (even if this means that you do not use a "reflexive" like 'himself' or 'themselves'). Provide word-for-word subtitles, and a literal translation if needed. If your sentence could have other meanings as well, please note this.

If there are several natural translations for a sentence (with different verbs or different grammatical constructions), please give them all.

A1) *Reflexives from simple verbs.*

a. John saw himself.
John se u-viděl.
John SE.ACC PFV-see.AGR(.SG)

b. You see yourself.
Sam-i uvidíte.
alone-PL.NOM.M see.AGR(.2PL)

c. The students praised themselves.

Student-i	se	sam-i	po-chválili.
student-PL.NOM	*SE.ACC*	*alone.PL.NOM.M*	*DL-praise.AGR(.3PL)*

A2) *Reflexives from verbs of "grooming" and bodily care. If these verbs don't work for any reason, feel free to use others (comb, etc.)*

a. John shaved [himself].

John	se	oholil.
John	*SE.ACC*	*shave*

b. Paul washed [himself].

Paul	se	umyl.
Paul	*SE.ACC*	*wash*

c. I dressed [myself].

Oblékl jsem	se.	
dress.PAST	*be.1SG*	*SE.ACC*

A3) *Reflexives of complex verbs. If any of these verbs do not work, feel free to use others.*

a. Peter spoke to himself.

Peter	mluvil	sám	k	sobě.
Peter	*talking*	*alone.NOM.SG.M*	*to*	*self.DAT*

b. Peter spoke about himself.

Peter	mluvil	o	sobě.
Peter	*talking*	*about*	*self.LOC*

c. Peter told us about himself.

Peter	nám	o	sobě	pověděl.
Peter	*3PL.DAT*	*about*	*self.LOC*	*told*

d. Peter told us about ourselves.

Peter	nám	o	sobě	povídal.
Peter	*3PL.DAT*	*about*	*self.LOC*	*said*

e. Maria described Bill to himself.

Maria	popsala	Bill-ovi	jeho	sam-ého.
Maria	*described*	*Bill-LOC*	*3SG.M.ACC*	*self.3SG.M. ADJECTIVE.GEN*

f. John pushed his car to the garage. [i.e., John's car.]

John	tlačil	své	auto	ke	garáži.
John	*pushed*	*SE.POSS.GEN.3SG.M*	*car*	*to*	*garage*

g. Maria found a book behind her. [i.e., behind Maria]

Marie	za	sebou	našla	knihu.
Maria	*LOC.P*	*behind*	*found.3SG.F*	*book*

"Behind Maria, [she$_{maria}$] found a book."

h. John bought the book for himself.

John	si	koupil	knihu.
John	*SE.DAT*	*bought*	*book*

i. Peter spoke to Thomas.

Peter	mluvil	s	Thomas-em.
Peter	*talking*	*with/and*	*Thomas-INSTR*

A4) *Reflexives of "feeling verbs". If these don't work in your language, feel free to use other similar verbs.*

a. Etta hates herself.

Etta	se	nenávidí.
Etta	*SE.ACC*	*hates*

b. Etta scares herself.

Etta	se	děsí	sam-a	sebe.
Etta	*SE.ACC*	*frightens*	*alone-NOM.SG.F*	*self.ACC*

c. Etta worries/has worries about herself.

Etta	se	o	sebe	bojí.
Etta	*SE.ACC*	*about*	*self.LOC*	*fears*

d. Etta dislikes Maria.

Etta	nemá	ráda	Marii.
Etta	*has*	*advice*	*Mary.DAT*

lit: "Etta has advice for Mary."

A5) *Reflexives with complex subjects. We prefer expressions in the singular (like "every teacher"). If this is not possible, use plural expressions ("all teachers")*

a. Every teacher described himself.

Každý	učitel	popsal	sebe	sam-a.
every	*teacher*	*described*	*self*	*alone-ACC.SG.M.ANIMATE*
Každý	učitel	se	popsal.	
every	*teacher*	*SE.ACC*	*described*	

b. Nobody blamed himself.

Nikdo	neviní	sebe	sam-a.
nobody	*blamed*	*self*	*alone-ACC.SG.M.ANIMATE*

c. Who hates himself?

Kdo	nenávidí	sebe	sam-a?
who	*hates*	*self*	*alone-ACC.SG.M.ANIMATE*

d. Every teacher described the visitor.

Každý	učitel	návštěvníka	popsal.
every	*teacher*	*visitor*	*described*

A6) *Sentences inside other sentences. Use the different kinds of putting a sentence inside another that your language has. For each different way of doing so (with appropriate verbs), give an example.*

a. Mary thought that Bill saw himself.

Mary	si	myslela,	že	Bill	se	spatřil.
Mary	*SE.DAT*	*thought*		*that*	*Bill*	*SE.ACC saw*

b. Bill told Mary to describe herself.

Bill	řekl	Mary,	aby	se	popsala.			
Bill	*told*	*Mary*	*to*	*SE.ACC*	*describe*			
Bill	řekl	Mary,	aby	popsala	sama			sebe.
Bill	*told*	*Mary*	*to*	*describe*	*alone-NOM.SG.F*			*self*

c. John thinks that Bill voted for himself. [i.e., voted for Bill]

John	si	myslí,	že	Bill	bude	volit	sebe	sam-a.
John	*SE.DAT*	*thinking*	*that*	*Bill*	*will*	*vote*	*self*	*alone-ACC.SG.M*

d. Bill saw Ellen defending herself.

Bill	viděl	Ellen,	jak	se	brání.		
Bill	*saw*	*Ellen*	*as$_{time}$*	*SE.ACC*	*defend.3SG*		
Bill	viděl	Ellen,	jak	brání	sam-u		sebe.
Bill	*saw*	*Ellen*	*as$_{time}$*	*defend.3SG*	*alone-ACC.SG.F*		*self*

e. Bill told Mary to describe Ellen.

Bill	řekl	Mary,	aby	popsala	Ellen.	
Bill	*told*	*Mary*	*to*	*describe*	*Ellen*	

A7) *More sentences inside sentences, this time about the subject of the top sentence.*

a. John thinks that Mary hates him. [i.e., hates John]

John	si	myslí,	že	ho	Mary	nenávidí.
John	*SE.DAT*	*thinking*	*that*	*3SG.M.ACC*	*Mary*	*hates*

b. Bill asked John to praise him. [i.e., to praise Bill]

Bill	požádal	John-a,	aby	ho	pochválil.
Bill	*asked*	*John-ACC*	*to*	*3SG.M.ACC*	*praised*

c. John heard Bill praising him [i.e., praising John]

John	slyšel,	jak	ho	Bill	chválí.	
John	*heard*	*how*	*3SG.M.ACC*	*Bill*	*praises*	

d. Mary thinks that everyone admires her.

Mary	si	myslí,	že	ji	každý	obdivuje.
Mary	*SE.DAT*	*thinking*	*that*	*3SG.F.ACC*	*everyone*	*admires*

2.2 Can you think of any other ways of expressing reflexive meaning, using an expression that did not come up in the above examples? If so, please provide some examples.

Alternatives above.

Part B

3. Person and number forms

Please translate the following sentences; if the translation of the verb "wash" is problematic in some way, use another "grooming" verb such as "shave" or "dress". If your language makes additional person/number distinctions (e.g., inclusive/exclusive, dual, politeness, etc.), please provide these forms as well.

B1) a. I washed [myself]

Umyl jsem se.

wash.SG be.1SG SE.ACC

b. You washed [yourself]

Umyl jsi se.

wash.SG be.2SG SE.ACC

c. (Paul washed [himself] = A2-b)

Paul se umyl.

Paul SE.ACC wash.SG

d. We washed [ourselves]

Umyl-i jsme se.

wash-PL be.1PL SE.ACC

e. You (plural) washed [yourselves]

Umyl-i jste se.

wash-PL be.2PL SE.ACC

f. They washed themselves.

Umyl-i se.

wash-PL SE.ACC

g. Paul washed Mary.

Paul umyl Mary.

Paul wash Mary

B2) a. I admire myself.

Obdivuj-i se.

admire-AGR SE.ACC

Obdivuj-i sám sebe.

admire-AGR alone.NOM.SG.M self.ACC

b. You admire yourself.

Obdivuj-eš se.

admire-AGR SE.ACC

Obdivuj-eš sam-a sebe.

admire-AGR alone-NOM.SG.M self.ACC

c. She admires herself.

Obdivuj-e se.

admire-3SG SE.ACC

Obdivuj-e sam-a sebe.

admire-3SG alone-NOM.SG.F self.ACC

d. We admire ourselves.

Obdivuj-eme se.

admire-1PL SE.ACC

Obdivuj-eme sam-i sebe.

admire-1PL alone-NOM.PL.M.ANI self.ACC

e. You admire yourselves.

Obdivuj-ete se.

	admire-2PL		*SE.ACC*	
	Obdivuj-ete		sam-i	sebe.
	admire-2PL		*alone-NOM.PL.M.ANIMATE*	*self.ACC*
f.	They admire themselves.			
	Obdivuj-í		se.	
	admire-3PL		*SE.ACC*	
	Obdivuj-í		sam-i	sebe.
	admire-3PL		*ALONE-NOM.PL.M.ANIMATE*	*self.ACC*
g.	Paul admires Mary.			
	Paul	obdivuj-e	Mary.	
	Paul	*admire-3SG*	*Mary*	

B3) a. Everyone washed himself.

Každý	se	umyl.	
everyone	*SE.ACC*	*wash*	

h. Everyone admires himself.

Každý	obdivuj-e	sebe	sam-a.
everyone	*admire-3SG*	*self*	*alone-ACC.SG.M.ANIMATE*

Appendix F: Polish questionnaire

Anaphora Typology Survey
Part 1: Free translation

Language : Polish
Consultant name : Dorota

Part A
1. Basics of sentence structure

Please translate the following sentences in the most natural way. Provide **word for word subtitles** of the entire sentence, and a literal translation (if the translation is very different from the original sentence). If possible, separate word-parts with a '-' and subtitle them individually.
For example, here is a Dutch sentence with word-for-word subtitles:

"John goes to the baker to get bread."
Jan gaat naar de bakker om brood te halen.
Jan goes to the baker in.order.to bread to get.

If a single word translates to a phrase in English, such as Dutch 'om', separate the phrase with dots (in.order.to) instead of spaces (in order to) to show that it's the same word.

A01) *Simple sentences to start with. If for any reason the verbs "run" and "see" are not good choices, please use different verbs.*

a. "John runs."
Jan biegnie.
Jan.NOM run.PRS.3SG.M

b. "John saw Mary."
Jan widzi-ał Mari-ę.
Jan see-PST.3SG.M Mary-ACC

c. "I saw Mary."
Ja widzi-ał -em / -am Mari-ę.
1sg.NOM see-PST -1SG.M / -1SG.F Mary-ACC

d. "Mary saw me."
Mari-a widzi-ał-a mnie.
Mary-NOM see-PST-3SG.F 1SG.ACC

A02) *Please translate the following in the most natural way. For example, if your language does not need the word 'him' in the second sentence, you can leave it out.*

a. "Bill crossed the street. John saw him." [i.e., saw Bill]
Wilhelm prze-szed-ł przez ulic-ę. Jan widzi-ał go.
Bill through-walk-PST through street-loc. Jan see-PST.3SG.M 3SG.M.ACC

b. “John is very rude. Bill hates him.” [i.e., hates John]

Jan	jest	bardzo	nieuprzejmy.	Willhelm	nienawidzi	go.
Jan	*be.3SG*	*very*	*rude*	*Bill*	*hate.PRS.3SG.M*	*3SG.M.ACC*

c. “John saw Mary. She greeted him.”

Jan	widzi-ał	Mari-ę.	Ona	przywit-ał-a	go.
Jan	*see-PST.3SG.M*	*Mary-ACC*	*3SG.F.NOM*	*greet-PST-3SG.F*	*3SG.M.ACC*

d. “Bill is here. Mary saw his car.”

Wilhelm	jest	tutaj.	Mari-a	widzi-ał-a	jego	samochód.
Bill	*be.3SG*	*here*	*Mary-NOM*	*see-PST-3SG.F*	*3SG.M.GEN*	*car.ACC*

A03) *If your language can leave out pronouns like ‘he’ or ‘him’, please give some examples.*
In Polish we don’t need to use pronouns such as I, you, he etc. We replace their meaning with conjugation (see A2.c)

2. Inventory of reflexive meanings

2.1 Please translate the following sentences in the most natural way (even if this means that you do not use a “reflexive” like ‘himself’ or ‘themselves’). Provide word-for-word subtitles, and a literal translation if needed. If your sentence could have other meanings as well, please note this.

If there are several natural translations for a sentence (with different verbs or different grammatical constructions), please give them all.

A1) *Reflexives from simple verbs.*

a. “John saw himself.”

Jan	widzi-ał	się.
John.NOM	*see-PST.3SG.M*	*SE_{CL}.ACC*

b. “You see yourself.”

Ty	widzi-sz	się.
2SG.NOM	*see-PRS.2SG*	*SE_{CL}.ACC*

c. “The students praised themselves.”

Studenci	pochwali-li	się.
student.PL	*praise-PST.3PL.M*	*SE_{CL}.ACC*

A2) *Reflexives from verbs of “grooming” and bodily care. If these verbs don’t work for any reason, feel free to use others (comb, etc.)*

a. “John shaved [himself].”

Jan	ogoli-ł	(się)
John.NOM	*shave-PST.3SG.M*	*SE_{CL}.ACC*

(you can use both forms, with or without the reflexive pronoun, but usual is without pronoun. Just like in English, you can use it to emphasize, but otherwise it looks a bit strange.)

b. “Paul washed [himself].”

Paweł	umy-ł	(się)
Paul.NOM	*wash-PST.3SG.M*	*SE$_{CL}$.ACC*

c. “I dressed [myself].”

Ubra-ł	-em / -am	(się)
wash-PST	*-1SG.M / -1SG.F*	*SE$_{CL}$.ACC*

A3) *Reflexives of complex verbs. If any of these verbs do not work, feel free to use others.*

a. “Peter spoke to himself.”

Piotr	mówi-ł	do	siebie
Peter.NOM	*speak-PST.3SG.M*	*to*	*SE.GEN*

b. “Peter spoke about himself.”

Piotr	mówi-ł	o	sobie.
Peter.NOM	*speak-PST.3SG.M*	*about*	*SE.LOC*

c. “Peter told us about himself.”

Piotr	opowiedzi-ał	nam	o	sobie
Peter.NOM	*tell-PST.3SG.M*	*3PL.DAT*	*about*	*SE.LOC*

d. “Peter told us about ourselves.”

Piotr	opowiedzi-ał	nam	o	nas.
Peter.NOM	*tell-PST.3SG.M*	*3PL.DAT*	*about*	*3PL.LOC*

e. “Maria described Bill to himself.”

Mari-a	opisa-ł-a	Wilhelm-a	jemu	sam-emu.
Mary-NOM	*describe-PST-3SG.F*	*Bill-GEN*	*3SG.M.DAT*	*alone.ADJ-DAT*

f. “John pushed his car to the garage.” [i.e., John’s car.]

Jan	wepchną-ł	swój	samochód	do	garaż-u.
John.NOM	*push-PST.3SG.M*	*REFL.POSS.3SG.M*	*car.ACC*	*to*	*garage-LOC*

g. “Maria found a book behind her.” [i.e., behind Maria]

Mari-a	znalazł-a	książk-ę	za	sobą.
Mary-NOM	*find.PST-3SG.F*	*book-ACC*	*behind*	*SE.INS*

h. “John bought the book for himself.”

Jan	kupi-ł	książk-ę	dla	siebie.
John.NOM	*buy-PST.3SG.M*	*book-ACC*	*for*	*SE.GEN*

i. “Peter spoke to Thomas.”

Piotr	mówi-ł	do	Tomasz-a.
Peter.NOM	*speak-PST.3SG.M*	*to*	*Thomas-GEN*

A4) *Reflexives of “feeling verbs”. If these don’t work in your language, feel free to use other similar verbs.*

a. “Etta hates herself.”

Etta	nienawidzi	siebie	(sam-ej)
Etta	*hate.PRS.3SG*	*SE.ACC*	*alone.ADJ-GEN*

b. “Etta scares herself.”

Etta	rani	siebie	(sam-ą)
Etta	*hurt.PRS.3SG*	*SE.ACC*	*alone.ADJ-ACC*

c. “Etta worries/has worries about herself.”

Etta	martwi	się	o	siebie.
Etta	*worry.PRS.3SG*	*SE$_{CL}$.ACC*	*about*	*SE.GEN*

In Polish the verb to worry is a reflexive verb and needs the pronoun “się”

d. “Etta dislikes Maria.”

Etta	nie	lubi	Mari-i.
Etta	*NEG*	*like.PRS.3SG*	*Mary-DAT*

In Polish the negation “nie” within the verb is used always separately. The “a” sentence contains an inseparable verb, that is: the “nie” is an integral part of it.

A5) *Reflexives with complex subjects. We prefer expressions in the singular (like “every teacher”). If this is not possible, use plural expressions (“all teachers”)*

a. “Every teacher described himself.”

Każdy	nauczyciel	opisa-ł	siebie.
Each	*teacher*	*describe-PST.3SG.M*	*SE.ACC*

b. “Nobody blamed himself.”

Nikt	nie	obwini-ał	siebie.
nobody	*NEG*	*blame-PST.3SG*	*SE.ACC*

In Polish the double negation “nikt” = nobody and “nie” within the verb.

c. “Who hates himself?”

Kto	nienawidzi	siebie?
who	*hate.PRS.3SG*	*SE.ACC*

d. “Every teacher described the visitor.”

Każdy	nauczyciel	opisa-ł	gośc-ia.
each	*teacher*	*describe-PST.3SG.M*	*visitor-ACC*

In Polish we don’t use articles.

A6) *Sentences inside other sentences. Use the different kinds of putting a sentence inside another that your language has. For each different way of doing so (with appropriate verbs), give an example.*

a. “Mary thought that Bill saw himself.”

Maria	pomyśl-ał-a,	że	Wilhelm	zobaczy-ł	(sam-ego)	siebie.
Mary	*think-PST-3SG.F*	*that*	*Bill*	*see-PST.3SG.M*	*alone.ADJ-GEN*	*SE.ACC*

(Here, samego is optional. Note: it is conjugated, as you will see in the „b” example.)

b. “Bill told Mary to describe herself.”

Jan	powiedzi-ał	Mari-i,	aby	opisa-ł-a	(sam-ą)	siebie
John	*tell-PST.3SG.M*	*Mary-DAT*	*to*	*describe-PST-3SG.F*	*alone.ADJ-ACC*	*SE.ACC*

c. “John thinks that Bill voted for himself.” [i.e., voted for Bill]

Jan	myśli,	że	Wilhelm	głosowa-ł	na	(sam-ego)	siebie.
Jan	*think.PRS.3SG*	*that*	*Bill*	*vote-PST.3SG.M*	*on*	*alone.ADJ-GEN*	*SE.ACC*

d. “Bill saw Ellen defending herself.”

Wilhelm	widzi-ał	Ellen	broni-ąc-ą	się.
Bill	*see-PST.3SG.M*	*Ellen*	*defend-GERUND-F*	*SE.ACC*

e. "Bill told Mary to describe Ellen."

Wilhelm	powiedzi-ał	Mari-i,	aby	opisa-ł-a	Ellen.
Bill	*tell-PST.3SG.M*	*Mary-DAT*	*to*	*describe-PST-3SG.F*	*Ellen*

A7) *More sentences inside sentences, this time about the subject of the top sentence.*

a. "John thinks that Mary hates him." [i.e., hates John]

Jan	myśli,	że	Mari-a	nienawidzi	go.
John.NOM	*think.PRS.3SG*	*that*	*Mary-NOM*	*hate.PRS.3SG*	*3SG.M.ACC*

b. "Bill asked John to praise him." [i.e., to praise Bill]

Wilhelm	poprosi-ł	Jan-a,	aby	pochwali-ł	go.
Bill	*ask-PST.3SG.M*	*John-GEN*	*to*	*praise-PST.3SG.M*	*3SG.M.ACC*

But would be better to say:

Wilhelm	poprosi-ł	Jan-a,	aby	go	pochwali-ł.
Bill	*ask-PST.3SG.M*	*John-GEN*	*to*	*3SG.M.ACC*	*praise-PST.3SG.M*

c. "John heard Bill praising him" [i.e., praising John]

Jan	słysz-ał	Wilhelm-a	chwal-ąc-ego	go.
John	*hear-PST.3SG.M*	*Bill-GEN*	*praise-GERUND-ACC.ANIMATE*	*3SG.M.ACC*

(Note: This is correct, but you would not find many people saying it this way. Better is:)

Jan	słyszał	jak	Wilhelm	chwalił	go
John	*hear-PST.3SG.M*	*AS*	*Bill-GEN*	*praise-PST.3SG.M*	*3SG.M.ACC*

(third person singular, past tense)

d. "Mary thinks that everyone admires her."

Mari-a	myśli,	że	każdy	podziwi-a	ją.
Mary-NOM	*think.PRS.3SG*	*that*	*each*	*admire-PRS.3SG.F*	*3SG.F.ACC*

But would be better to say:

Maria	myśli,	że	każdy	ją	podziwi-a.
Mary-NOM	*think.PRS.3SG*	*that*	*each*	*3SG.F.ACC*	*admire-PRS.3SG.F*

2.2 Can you think of any other ways of expressing reflexive meaning, using an expression that did not come up in the above examples? If so, please provide some examples.

Part B

Person and number forms

Please translate the following sentences; if the translation of the verb "wash" is problematic in some way, use another "grooming" verb such as "shave" or "dress". If your language makes additional person/number distinctions (e.g., inclusive/exclusive, dual, politeness, etc.), please provide these forms as well.

B1) a. "I washed [myself]"

Umy-ł	-em	/ -am	(się)
wash-PST	*-1SG.M / -1SG.F*		*SE_{CL}.ACC*

In Polish we don't need to use pronouns such as "I", "you", "we" etc. We replace their meaning with conjugation. Sometimes we need to use "he" or "she" when the form of the verb doesn't include information about the subject's gender (see B2-c).

"You washed [yourself]"

Umy-ł-eś/-aś	(się)
wash-PST-2SG/-2SG	*SE_{CL}.ACC*

A man would say: Umyłeś [się]

A woman would say: Umyłaś [się].

(Paul washed [himself] = A2-b)

Paweł	umy-ł	(się)
Paul	*wash-PST.3SG.M*	*SE_{CL}.ACC*

"We washed [ourselves]"

Umy-li-śmy	(się)
wash-PST.PL-1PL	*SE_{CL}.ACC*

"You (plural) washed [yourselves]"

Umy-li-ście	(się)
wash-PST.PL-1PL	*SE_{CL}.ACC*

"They washed themselves."

Umy-li	(się)
wash-PST.3PL	*SE_{CL}.ACC*

"Paul washed Mary."

Paweł	umy-ł	Mari-ę.
Paul	*wash-PST*	*Mary-ACC*

B2) a. "I admire myself."

Podziwia-m	siebie
admire-PRS.1SG	*SE.ACC*

"You admire yourself."

Podziwia-sz	siebie.
admire-PRS.2SG	*SE.ACC*

"She admires herself."

Ona	podziwia	siebie.
3SG.F.NOM	*admire.PRS.3SG*	*SE.ACC*

“We admire ourselves.”

Podziwia-my	się.
admire-PRS.1PL	*SE$_{CL}$.ACC*

“You admire yourselves.”

Podziwia-cie	się.
admire-PRS.2PL	*SE$_{CL}$.ACC*

“They admire themselves.”

Oni	podziwia-ją	się.
3PL.NOM	*admire-PRS.3PL*	*SE$_{CL}$.ACC*

“Paul admires Mary.”

Paweł	podziwia	Mari-ę.
Paul	*admire.PRS.3SG*	*Mary-ACC*

B3) a. “Everyone washed himself.”

Każdy	umy-ł	się.
Each	*wash-PST.3SG.M*	*SE$_{CL}$.ACC*

“Everyone admires himself.”

Każdy	podziwia	się.
Each	*wash.PRS.3SG*	*SE$_{CL}$.ACC*