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The Acquisition of Constructions with Reflexive Clitics in Polish*

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Of course the data of performance have long ago been pronounced (Chomsky 1964) an inadequate base for a grammar that attempts to represent competence or knowledge. I agree that it always is but I venture to say that not many people know how much can be milked from mere performance in the case of small children.

(Roger Brown, *A first language: The early stages*, page 56)

1. Introduction

This paper has two aims; one is empirical and the other theoretical. The empirical aim is a description of the acquisition stages in Polish of constructions with reflexive clitics, and with modal **wolno** ‘allow’. The theoretical aim is to argue that acquisition data on reflexive clitics and modal **wolno** provide new support for the Maturation Hypothesis (Babyonyshev et al. 2001, Borer and Wexler 1987, 1992). That is, UG is not available in its adult form in all stages of acquisition, but matures into the adult grammar. The set of representations allowed in proto-UG is a subset of representations allowed by UG. During grammatical development, UG principles are gradually reformulated, remaining a subset of adult grammar at all developmental stages.

Opponents of the Maturation Hypothesis most often present the argument known as the “poverty of stimulus”: children master the grammar of the ambient language despite highly fragmented input and lack of explicit instruction (Pinker 1984, 1989; Hyams 1987, among others). The argument we set out to support is

the opposite, and following Babyonyshev et al. (2001), it may be termed to arise from the observation of “abundance of the stimulus.” More specifically, the Maturation Hypothesis receives support from the apparent delay in children’s linguistic performance in the face of ample positive input. “The explanation,” Babyonyshev et al. claim, “lies in the hypothesis that the biology that supports the relevant knowledge is not available until a comparatively late stage in child development.” This hypothesis is the hereafter supported Maturation, whose main postulate states that “specific details of linguistic knowledge are biologically determined” (Babyonyshev et al. 2001).

Our proposals are based on the naturalistic output in the CHILDES database (MacWhinney 2000, Weist et al. 1984, 1986) of five children (**Inka**, **Wawrzon**, **Kubuś**, **Bartosz**, and **Marta**) and input from their caretakers. We did an exhaustive study of two sets of constructions: those with the reflexive clitic **się**, and those with modal **wolno** ‘allow’. Using CLAN software, a word search was conducted on the corpora of transcribed conversations between the children and their caretakers. All the constructions with **się** and **wolno**, and with obligatory **się** and **wolno** omitted were included in the analysis. **W**, **K**, **B**, and **M**’s utterances were morphemically glossed and translated into colloquial English in the original transcriptions. **I**’s files did not contain any glosses; therefore, morphemic glosses and translations made by Magdalena Gołędzinowska, a native speaker of Polish, are used.

The first group of investigated constructions is with the reflexive clitic **się** in functions listed in section 2, including unaccusatives, (1), and impersonals, (2).

- (1) a. Przewróciłem się. **B** (1;8)
 fall_{PAST.1SG} REFL
 ‘I fell.’
- b. Przewróciła się. **M** (1;8)
 fall_{PST.3SG.FEM} REFL
 ‘(The doll) fell.’
- c. Zmeczyłem się. **B** (1;11)

tire_{PST.1SG.MASC} REFL

‘I got tired.’

d. Okno _____ się _____ otworzyło. **K** (2;2)

window_{NOM.NEU} REFL open_{PAST.NEU}

‘The window opened.’

(2) Do prądu _____ się _____ podłącza _____ prostownik. **W** (2;9)

to current REFL plug+in_{PRES.3SG} rectifier_{ACC.SG}

‘One plugs the rectifier into the current.’

Wolno is an invariable modal with two syntactic arguments in adult grammar in brackets in (3a) – infinitive as theme of (non)-permission, and Dative as goal. The “impersonal” pattern without expressed goal is as in (3b).

(3) a. [**Mnie**] nie _____ **wolno** [tak _____ daleko _____ iść], _____ prawda? **I** (3;2)

[I_{DAT}] Neg allow [such far_{ADV} walk_{INF}] right_{TAG}

‘I am not allowed to walk that far, right?’

b. Tatusiu, _____ nie _____ **wolno** [bić _____ mamusi]. **I** (1;9)

daddy_{VOC} Neg allow hit_{INF} mommy_{GEN}

‘Daddy, {it, one} is not allowed to hit mommy.’

We propose that the acquisition of the two construction types supports Maturation, proceeding in three stages. Table 1 indicates the three stages for each child in clitic (**się**) constructions. In the case of **I**, the stages of **się** development chronologically coincide with those of **wolno**.

Child	Age	Stages
Inka (I)	0;10 - 3;6 (...)	I, II, III
Wawrzon (W)	2;2 - 3;2	I, II, III
Kubuś (K)	2;1 - 2;6	II, III
Bartosz (B)	1;7 - 1;11	II
Marta (M)	1;7 - 1;10	II

Table 1 Developmental stages in reflexive clitic constructions

Stage I is marked by systematic omission. The child utters *Okno otworzyło instead of the adult (1b) Okno **się** otworzyło, and lacks **wolno**. In Stage II, the required **się** emerges most prominently in unaccusatives. Some adult uses including impersonals of type (2) are absent, omissions continue, and overgeneralizations based on the early uses appear. In Stage III, a variety of clitic constructions appear, including impersonals, and **wolno** with an expressed goal matures as well.

We interpret the stages as follows. The first illustrates omission of functional categories (clitic **się** and modal **wolno**) in early grammar. The second shows the fitting of the clitic and of **wolno** into two distinct areas of the grammar guided by the principle Borer and Wexler dub the U(nique) E(xternal) A(rgument) P(ROTO)-P(inciple) (1992:31). Under this proto-principle, every predicate associates with a unique external argument regardless of verb type, and every external argument associates with a unique predicate. We argue that in Polish, the UEAPP forces the clitic to be a predicate modifier, as it requires that each predicate establish a predicative relation with a unique sister argument. In other words, the V denotes a property applied to a unique argument, and the clitic is like a syntactic adverb that specifies this property, or is a function from a property into a property:

[**się** (P (opened))] (window).

During this stage (and likely into adulthood), unaccusativity and unergativity are partially similar properties applying to a unique syntactic argument. This parallelism is empirically supported by the unaccusative and unergative constructions with reflexive clitics in section 2. On this view, unaccusatives of type (1) fit the UEAPP, so it does not come as a surprise that they can be found with an adult-like clitic as early as 1;7, and count among the first patterns with an emerging **się** in all five children. Similarly, the argument structure of unergative verbs, which appears in the proto-principle stage with a reflexive clitic, is compatible with the UEAPP.

Interestingly, not all clitic constructions develop as early. Impersonal **się** constructions, ordinary in the speech of the children's caretakers, are absent in **B** and **M**, and appear in adult form in **I**, **K** and **W** only after the age of 2;4. Why

should they be delayed? In the Polish literature, impersonals are “active” sentences, and a recent version of this idea is that they have two syntactic arguments (Rivero 1999). On this view, the Acc(usative) NP in (2) is the internal argument, and the clitic signals the external argument. If this analysis is correct, Polish **się**-impersonals mature late because they are incompatible with the UEAPP, which rules them out in Stage II.

In Stage III the UEAPP is modified, allowing for the development of the late clitic constructions such as impersonals as well as **wolno**-personals with goal expressed as in (3a).

In sum, Polish unaccusatives with clitics develop very early, and impersonals with clitics develop later, and in this paper this disparity is assigned to syntax, the UEAPP, and Maturation.

As to **wolno**, this modal emerges in Stage II in the one-argument “impersonal” version without Dative goal, so our proposal is that it is also regulated by the UEAPP.

Inka, the child recorded in all clitic stages who also offers very rich data on **wolno**, proves particularly interesting for Maturation. During Stage II, **I** lacks **się**-impersonals and displays **wolno**-impersonals of type (3b). These two types of impersonals denote indeterminate humans, so the contrast is not due to semantic difficulties with impersonality, and here we derive it from the UEAPP, which blocks clitic impersonals but not **wolno**-impersonals. This is because clitic impersonal constructions require two arguments in the syntax, forbidden by the UEAPP, whereas **wolno**-impersonals are well formed with only one argument. As the principle matures in Stage III, **I**'s knowledge of the two areas of grammar changes, and two seemingly different constructions that display a richer syntactic argument structure mature: **się**-impersonals for indeterminate humans, and **wolno**-personals for determinate animates expressed as goal.

In their study of Russian unaccusatives, Babyonyshev et al. (2001) propose the A-C(hain) D(eficit) H(ypothesis), which states that A-chain formation is not available in the early stages of grammatical development. Although children do utter constructions analyzed to contain A-chains in the adult grammar,

Babyonyshev et al. suggest that they assign representations without A-chains. The ACDH does not play a major role in our discussion for two reasons. One, we do not assume ordinary NP movement for Polish clitic constructions (some contain clitic chains). Two, development restrictions on **wolno** derive from the UEAPP, a precondition to the ACDH, not from movement or A-chains. However, A-chains could delay some constructions that develop after the period considered here, including unaccusative impersonals as in fn 4. Table 2 lists the ages corresponding to the three stages of grammatical development in Inka.

Stage	Age
Stage I	0;10 - 1;9 / 1;10
Stage II	1;10 - 2;5
Stage III	2;5 - 3;6 (and later)

Table 2 Stages of grammatical development in Inka

Section 2 lists the functions of the Polish clitic (Kubiński 1987, Dziwirek 1994, Rivero 1999 for earlier references and discussion). Section 3 examines the acquisition stages for clitic constructions, and section 4 - for constructions with **wolno**.

2. Functions of the Polish reflexive clitic

This section lists the adult grammar functions of the reflexive clitic in their order of development in the CHILDES database, and sketches analyses for them. As stated, major classes that mature early in all children are unaccusatives including inchoatives, (1) and (4), and inchoatives as in (6). Word order is not relevant.

- (4) a. Chowa się dzidziuś. **B** (1;7)
 hide_{PRES.3SG} REFL baby_{NOM}
 ‘The baby is hiding.’
- b. Czemu kręca się kółeczka? **M** (1;9)
 why turn_{PRES.3PL} REFL little+wheels_{NOM}
 ‘Why are the little wheels turning?’
- c. Gdzie zgubił się bucik? **M** (1;9)

where lose_{PAST.MASC.SG} REFL shoe_{NOM.MASC.SG}
 ‘Where did the shoe get lost?’

- d. Co zbił o się? W (2;5)
 what_{NOM.NEU} break_{PAST.NEU} REFL
 ‘What broke?’

The classical GB analysis for (4) is NP-movement of the internal argument, leaving a trace: The window opened t (Burzio (1986) based on Perlmutter (1978)). More recent approaches include Reinhart (1996) and Hale and Keyser (1993 and later). Reinhart (based on Chierchia 1989) proposes a transitive entry as basic, as in (5a), with a lexical process of argument suppression yielding intransitive verbs that project only one argument as subject, as in (5b).

- (5) a. *Basic verb entry* V (Θ_1, Θ_2), e.g. open (Θ_1, Θ_2)
 b. *Suppression* R(V (x)), e.g. R(open (door))

The door opened. → UNACCUSATIVE

Hale and Keyser take the intransitive entry as basic, with possible argument augmentation and transitivization (in the syntax). We remain agnostic about the adult grammar analysis, but the UEAPP renders Hale and Keyser's approach the most suitable for Polish child grammar. Our approach suggests that the early unique argument constructions with *się* are *augmented* as the grammar develops: the predicate projects (an) additional argument(s), establishing the internal-external argument distinction once the UEAPP is modified. The intransitive verbal entry can be analyzed as a more basic one, since it displays a one-to-one relation between verb and argument sister nodes.

Inherents are as in (6), with an obligatory clitic and possibly an oblique complement (bać się wilków ‘fear_{INF} REFL wolves_{GEN}’), and are often viewed as unaccusatives (nonagentive Nominative NP). In Polish, they also combine with agentive NPs, thereby they can also be unergative, including play in (5c), cough, and pray.¹ The traditional analysis of unergatives is with Nom NP as external argument, and no movement.

- (6) a. Boję _____ się. **M** (1;7)
 fear_{PRES.1SG} REFL
 ‘I am afraid. / I fear.’
- b. Pali _____ się. **B** (1;7)
 be+on_{PRES.3SG} REFL
 ‘It is on. / It shines.’
- c. Bawimy _____ się. **B** (1;11)
 play_{PRES.1PL} REFL
 ‘We play. / Let us play.’

A use with agentive NPs, common in Slavic, is the telic marker in (7).

- (7) a. Chcą _____ się na -pić? **W** (2;9)
 want _{PRES.3PL} REFL PPr -drink_{INF}
 ‘Do they want to drink?’
- b. Nie na- uczyłem _____ się pływać
 Neg PPr learn _{PAST.MASC.1SG} REFL swim_{INF}
bo _____ za mały _____ jestem. **W** (2;9)
 because too small_{NOM.MASC} be_{PRES.1SG}
 ‘I did not learn how to swim because I am too small.’
- c. Na- piję _____ się. **B** (1;7)
 PPr drink_{PRES.1SG} REFL
 ‘I’ll drink up.’

Clitic **się** combines with a P(erfective) Pr(efix) (**na-**) to indicate a delimited situation, and detransitivizes V.² The perfectivizing function is not frequent in our files, but can be found early ((7c) is Stage II), fitting the predicate modifier status of **się** in Stage II.³ Thus far, then, the Polish clitic can combine with unaccusatives (nonagentive Nom) and unergatives (agentive Nom) intransitives. This situation, then, a) challenges a common assumption in generative grammar, which is that reflexive clitic constructions always have unaccusative analyses (Marantz 1984

and later); b) suggests syntactic unification of unaccusatives and unergatives; and c) makes viable a predicate modifier view suitable for the UEAPP in early Polish.

The reflexivity function is exemplified in (8) and (9). For some, reflexive constructions are one-argument intransitives (Marantz 1984, Reinhart 1996 for different versions of this idea). The traditional view in GB (Chomsky 1981) is with two independent syntactic arguments.

- (8) a. Tata goli się. **B (1;7)**
 daddy_{NOM} shave_{PRES.3SG} REFL
 ‘Daddy shaves.’
- b. Kąpią się. **B (1;7)**
 bathe_{PRES.3PL} REFL
 ‘They are bathing.’
- (9) a. Ja się wycieram. **K (2;4)**
 I_{NOM} REFL wipe_{PRES.1SG}
 ‘I am wiping myself.’
- b. Ja zamknąłem się na klucz w domu. **W (2;8)**
 I_{NOM} lock_{PST.1SG.MASC} REFL on key_{ACC} in home_{PREP}
 ‘I locked myself in the house.’
- c. Ja te żyletki powyciągałem
 I_{NOM} these razors_{ACC} take+out_{PST.1SG.MASC}
i się skaleczyłem. **K (2;4)**
 and REFL cut_{PST.1SG.MASC}
 ‘I took these razors out and cut myself.’

On the first view, clitic constructions can be seen as predicative with modifier **się**, resembling unergatives and unaccusatives – not a new idea. The second view may receive support in Polish from the alternation of (8a) with Tata goli siebie ‘Daddy is shaving himself’, with a non-clitic Acc reflexive in A-position. Then, it can be assumed that the reflexive clitic can receive an analysis that is similar to the one often proposed for pronominal clitics. That is, the reflexive clitic heads the syntactic (clitic) chain of an argument independent from the Nom NP, and

thus resembles SELF in the strategy Reuland (2001:480) calls *protective* (i.e. argument positions are preserved). In section 3, we combine the two views to capture the split chronology for the development of reflexivity in CHILDES.

Constructions in Stage III are impersonals, Dative impersonals, and reciprocals. Impersonals are as in (2) and (10), and differ in morphology from other patterns.

(10) a. A tego wagonu się nie da. **K** (2;4)

but this wagon_{GEN. MASC. SG} REFL not be+able+to+do_{3SG}

‘But one cannot {do/manipulate} this wagon.’

b. <*Ta> lokomotywę też się podłącza. **K**

(2;4)

<*this_{INS}> locomotive_{ACC. FEM. SG} also REFL

connect_{PRES.3SG}

‘One also connects this locomotive.’

First, impersonals cannot display an overt Nom NP, but their clitic functions as the impersonal "subject" with non-overt Nom marking (for Polish Kański 1986, for Italian Cinque 1988, among others). Second, V has default morphology: 3SG in the present tense, and Neuter in the past tense. In other uses, V agrees with the (overt) Nom NP. Third, with transitive Vs, impersonal patterns may display an Acc NP in affirmative clauses – (2) and (10b) – and a Gen NP in negative clauses – (10a).⁴ The traditional view is that Polish impersonals are active sentences (Dziwirek 1994 for references), and for Rivero (1999, 2000) they project two syntactic arguments. The {Acc/Gen NP} is the internal argument, and the clitic stands for the external argument, which is a type of SE-anaphor, as in Reinhart and Reuland (1993). More precisely, a (null) Nom pronoun with a human feature and no phi-features that does not make the predicate semantically reflexive raises from the VP to check Case against the clitic, repairing its referential deficiency. Crucial aspects for us are the two syntactic arguments, beyond the scope of the UEAPP, and the clitic as (argument) pronoun.

Patterns with clitics and Datives as in (11) are called involuntary state constructions in the academy grammar (Mieczkowska and Zondek 1984), inversions in relational grammar (Dziwirek 1994, Moore and Perlmutter 2000), and Dative impersonals here.

- (11) a. Pij, małpkusiu, pij, chce
 drink_{IMP.SG} monkey_{VOC} drink_{IMP.SG} want_{PRES.3SG}
ci się pić? I(2;9)
 you_{DAT} REFL drink_{INF}
 'Drink, little monkey, drink, are you thirsty?'
- b. Nie uda się tatusiowi zrobić
 Neg be+able_{FUT.SG} REFL daddy_{DAT} make_{INF}
półki nowej. W(2;8)
 shelf_{GEN.SG.FEM} new_{GEN.SG.FEM}
 'Daddy will not {be able/manage} to make a new shelf.'
- c. Bo mi się już tego nie chce. W(3;0)
 because I_{DAT} REFL already this_{GEN} Neg want_{PRES.3SG}
 'Because I do not want this any more.'

They are formally identical to (10) except for the Dative, with a) an obligatory (Nom) reflexive, b) a default morphology V, c) no overt Nom NP, and d) possibly an Acc or Gen object, as in (11b).⁵ For them, we adopt the analysis in Rivero and Sheppard (2001, 2002). The Dative is equivalent to a Left Dislocated or high Applicative Phrase, and the semantic subject of predication. The remaining structure is a Tense Phrase that is the complement of the Applicative and is the predicate, and Nom **się** is the resumptive pronoun for the dislocated Dative. In this analysis, (11b) is similar to As to **Daddy**, he will not manage to make a new shelf, with two differences. The first is the Polish dislocated phrase in the Dative, and the second is the Polish resumptive, which is Nom **się**, not an ordinary

pronoun. For us, the important aspects are the two syntactic arguments, and the clitic that functions as the pronoun that signals one of them.

In the reciprocal in (12), the clitic may alternate with non clitic **siebie**: żeby one siebie widziały ‘So that they see each other’, which suggests two syntactic arguments similar to English **each other**. On this view, the Nom NP is the plural antecedent called distributor in Heim, Lasnik and May (1991), and the clitic signals an argument chain qua reciprocator.

- (12) a. Kogutki tu są, biją się dwa takie. I (2;5)
 rooster_{NOM.PL} here are beat_{PRES.3PL} REFL two_{NUM} such_{DEM.PL}
 ‘There are roosters here, they are fighting, these two.’
- b. Żeby one się widziały. W (3;2)
 so+that they_{NOM.PL.FEM} REFL see_{PAST.3PL.NON-VIR}
 ‘So that they (=two tape recorders) see each other.’

Finally, two uses absent in the database are middle and passive. The middle in (13) is rare and restricted to a few predicates.

- (13) Te samochody łatwo się prowadzą.
 These cars_{NOM} easily_{ADV} REFL drive_{PRES.3PL}
 ‘These cars drive easily.’

Many consider the passive in (14) obsolete (Siewierska 1988, among others).⁶ In most circumstances Polish adults opt for the impersonal or {Acc + Default V} pattern in (11), judging the passive or {Nom + agreeing V} pattern in (14) as unnatural or ungrammatical.

- (14) Dom szybko się zbudował.
 house_{NOM.SG.MASC} fast_{ADV} REFL built_{PAST.SG.MASC}
 ‘The house was built fast.’

With asymptomatic morphology, the choice most often reflected in CHILDES is the impersonal, as in (15), translated by generic **you**: ‘You join it like this’.

- (15) Tak się podłącza. K (2;4)
 so REFL connect_{PRES.3SG}

‘ONE connects (it) like this.’ NOT: ‘(It) is connected like this.’

In sum, the Polish clitic is a functional category poor in semantic content, and unusually rich in syntactic functions. For acquisition purposes, however, these multiple functions can be divided into two general classes: a) non-argument predicate modifier, and b) (defective) argument. Telic and Dative impersonal uses have received limited attention in generative grammar, but fit into the two classes. Regarding acquisition, non-argument functions emerge first and argument functions follow, due to the UEAPP, which undergoes maturation. The UEAPP also guides the development of modal **wolno**, which is richer in semantic content but more limited in syntactic functions.

3. Stages in the acquisition of Polish reflexive clitics

Children are systematically exposed to the major clitic constructions, but some adult patterns emerge soon, and others are systematically delayed, independent of input.

Figure 1 sketches the three grammatical Stages of **I** and **W**, the only children in our corpus who display all three stages. The measure of grammatical development is the mean length of utterance (MLU), which is said to be a reliable method of identifying the point of development of grammar in children (Brown 1973). Brown carried MLU calculations, recording the mean number of morphemes per utterance when analyzing his children’s linguistic development. He hypothesized that, if done consistently, MLUs of children at a similar stage of grammatical development will be similar. Using CLAN software provided with the CHILDES database, we carried out calculations of mean length of utterance *in words*. Polish is a highly inflected language. Comparing its morphemic calculations with those of children acquiring English, it contains considerably more morphemes per word, an observation that made us turn to calculations of the number words, not morphemes, per utterance.

As Figure 1 suggests, we did not find a correlation between **I**’s and **W**’s MLU values. The children and their respective adult input values did, nevertheless,

correlate. The child whose caretakers' utterances contained more words also spoke more. Interestingly, the trend in the children's MLU values is ascending in relation to the more stable values in the corresponding adult input. This indicates that sentences get longer, and grammar develops independent of the length of input utterances. Note also that the age disparity in the stages of reflexive development in **I** and **W** diminishes considerably by Stage III.

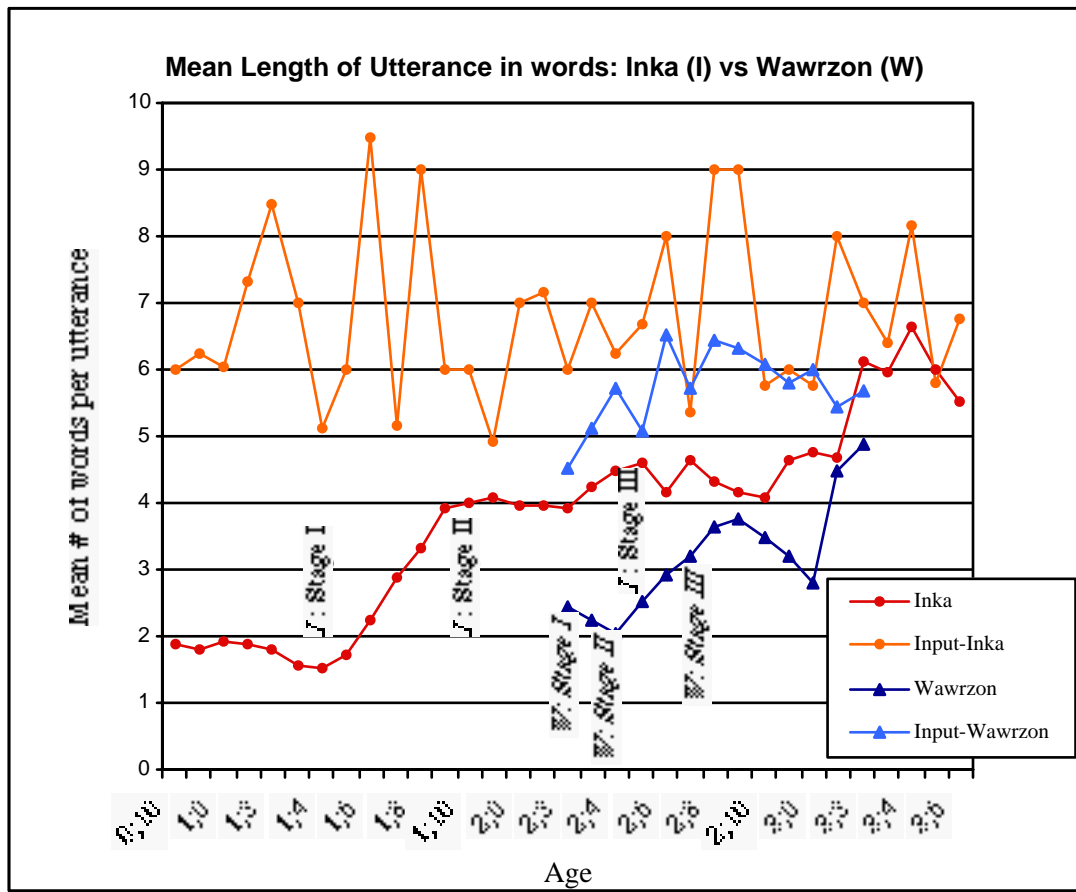


Figure 1 The Mean Length of Utterance in words for Inka (I) and Wawrzon (W) and their input – all stages

Wawrzon's rocky road of acquisition of the **się**-constructions is illustrated in Figure 2. The emergence of the early reflexive constructions is marked by a sharp

peak at Stage II, after which the percentage of correct **się** use rises, reaching a plateau at Stage III.

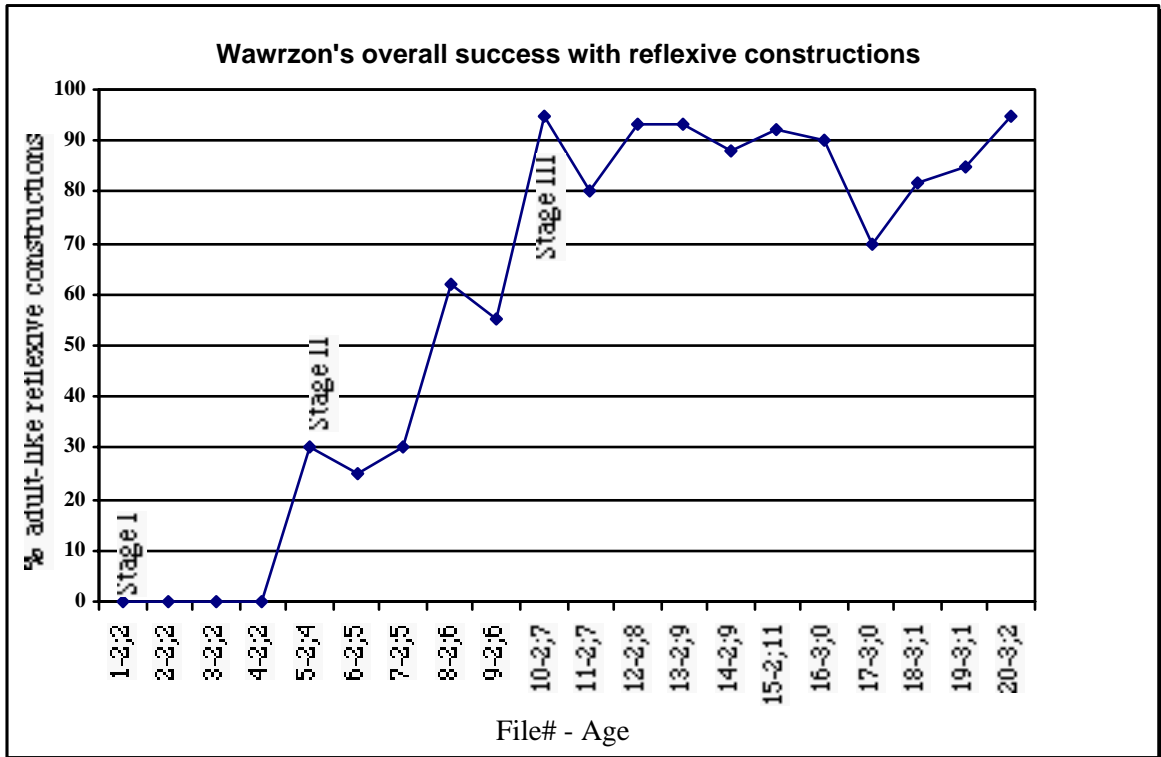


Figure 2 Wawrzon's overall success with reflexive constructions

Let us look at the stages of development in detail. During the first months of development, in Stage I, the required clitic is missing in unaccusatives including inchoatives (16-17), inchoatives of unaccusative and unergative types, (18-19), telics (20), reflexives (21), and impersonals (22).

(16) * Misiu huśta. I (1;7)

bear_{NOM} swing_{PRES.3SG}

'The teddy bear is swinging.'

Adult: Misiu huśta **się**.

(17) * Złamało. W (2;2)

break_{PAST.SG.NEU}

‘It broke.’

Adult: Złamało się.

(18) a. * Boi _____ śnieg.⁷ **I** (1;8)

fear_{PRES.3SG} snow_{NOM.SG.MASC}

‘He is afraid of snow.’

Adult: Boi się, niegu_{GEN}.

b. * Przestraszył _____ też _____ piesek. **W**(2;2)

scare_{PAST.SG.MASC} also doggy_{NOM.SG.MASC}

‘The doggy got scared also.’

Adult: Przestraszył się też

piesek.

(19) * Bawił _____ będzie. **W** (2;2)

play_{PPART.SG.MASC} be_{FUT.1SG}

‘I will play.’

Adult: Bawił się będzie.

(20) * Na-pić _____ mogę? **W** (2;2)

PP-drink_{INF} can_{PRES.1SG}

‘Can I have a drink?’

Adult: Na-pić się mogę?

(21) a. * Dziaduś _____ goli. **I** (1;8)

grandpa_{NOM} shave_{PRES.3SG}

‘Grandpa shaves.’

Adult: Dziaduś się goli.

b. * Nie kłuje. **W** (2;2)

Neg prick_{PRES.1SG}

‘I will not prick myself.’

Adult: Nie ukłuje się.

(22) * Tak _____ składa. **W** (2;2)

such fold_{PRES.3SG}

‘One folds it like this.’

Adult: Tak się składa.

Between the ages of 1;10 and 2;4 the clitic emerges, marking Stage II of the acquisition. Specifically, the children exhibit Stage II grammatical patterns in the following age intervals: **I**: 1;10-2;4; **W**: 2;4-2;5; **K**: 2;1-2;3; **B**: 1;7-1;11; and **M**: 1;7-1;10.

In this stage, the clitic emerges with unaccusatives as in (1), Przewróciłem się ‘I fell’, Okno się otworzyło ‘The window opened’, unaccusative and unergative inchoatives as in (6), Boję się ‘I fear’ and Bawimy się ‘We play’, and in the telic function in (7c) Na-piję się ‘I’ll drink up’. Omissions are still found, but interesting novelties are the overgeneralizations or “wrong” uses that emerge for each of these early functions. The third interesting feature is the reflexive use that emerges only in some children and with a specific type of predicate. Let us examine these features in turn. We begin by illustrating in (23) Stage II omissions.

(23) *Unaccusative*

- a. *Proszę, _____ tatuś, _____ obudź. **M (1;9)**
 please_{PRES.1SG} daddy_{NOM} wake_{IMP.SG}
 ‘Please, daddy, wake up.’ **Adult:** Proszę, tatuś, obudź się.
- b. *Chowam. **B (1;7)**
 hide_{PRES.1SG}
 ‘I am hiding.’ **Adult:** Chowam się.
- c. *Przewrócił. **K (2;2)**
 fall_{PST.3SG.MASC}
 ‘(He) fell.’ **Adult:** Przewrócił się.

Reflexive - intrinsic

- d. *Goli. **B (1;7)**
 shave_{PRES.3SG}
 ‘(He) is shaving.’ **Adult:** Goli się.

Reflexive - extrinsic

- e. *Uderzyłem. **B (1;7)**
 hit_{PST.1SG.MASC}
 ‘I hit myself.’ **Adult:** Uderzyłem się.

Inherent

- f. *Bawiłem. **K** (2;3)
 play_{PST.1SG.MASC}
 ‘I was playing.’ **Adult:** Bawiłem się.
- g. *Pali. **B** (1;7)
 be+ON_{PRES.3SG}
 ‘It is on.’ **Adult:** Pali się.

We attribute to the UEAPP the early appearance of **się** with unaccusatives, the two types of invariants, and the {telic/excess} use. Under the UEAPP, a) each predicate establishes a biunique relation with an argument regardless of type; b) the clitic behaves like an adverb that adds a specification without disturbing this relation; and c) unaccusatives and unergatives are similar in terms of the predicate-argument relation. If the UEAPP is adopted, the best analysis of the predicate for this period is with a basic intransitive shell (as in Hale and Keyser 1993 and later), and the transitive shell with argument suppression looks less desirable. Recall Reinhart’s (1996) proposal of argument suppression illustrated in (5) in section 2: the transitive verbal entry undergoes suppression to yield an unaccusative verb. We believe the intransitive entry serves as a basis for argument augmentation.

The proposed analysis can also account for three types of overgeneralizations that arise in Stage II, which continue in Stage III. They all fit the UEAPP, and the hypothesis that unaccusatives and unergatives belong to the same syntactic type, and are of three types. The first is with unaccusatives, (24), and the second with unergatives, (25).

- (24) a. *Książeczka spada się. **B** (1;8)
 book_{NOM.DIM.SG} fall_{PRES.3SG} REFL
 ‘The little book is falling.’ **Adult:** Książeczka spada.
- b. *Na nogi mi się wykopiał_o. **W** (2;8)
 On legs me_{DAT} REFL boil+over_{PST.3SG.NEU}
 ‘It boiled over on my legs.’ **Adult:** Na nogi mi wykopiał_o.

- (25) a. *Pływała się. **B (1;8)**
 swim_{PST.3SG.FEM} REFL
 ‘(She) swam.’ **Adult:** Pływała.
- b. *Ty się nie wychodź! **W (2;7)**
 You REFL Neg come+out_{PRES.3SG}
 ‘You do not come out!’ **Adult:** Ty nie wychodź.
- c. *Ja tu się wejdę do komody. **W (2;7)**
 I_{NOM} here REFL go+in_{FUT.1SG} to cupboard_{GEN}
 ‘I’ll go into the cupboard.’ **Adult:** Ja tu wejdę do komody.

The third is with the {telic/excess} use(s). Lala in (26c) is an onomatopoeic invention, and (26e), an unaccusative, has the wrong tense.⁸

- (26) a. *Na- pisze się. **B (1;7)**
 PPr write_{PRES.3SG} REFL
 Intended: ‘He (= a man writing) is writing.’ **Adult:** Pisze.
- b. *Pisze się? **B (1;7)**
 write_{PRES.3SG} REFL **Adult:** Pisze?
 ‘Is it (=the tape recorder){writing, recording}?’
- c. *Się lala. **B (1;7)**
 REFL lala_{ONOMATOPOEIA}
 Intended: ‘It (=the tape recorder) is making noise.’
- d. *Widzisz się. **K (2;3)**
 see_{PRES.2SG} REFL
 ‘You see.’ **Adult:** Widzisz.
- (cf. the grammatical intensifying use of the reflexive in Patrzysz się ‘You look.’)
- e. *Ja się tak, o taki, o tak byłem taki wielki. **K (2;6)**
 I_{NOM} REFL so oh such oh so be_{PAST.1SG.MASC} so big
 Intended: ‘I will grow to be this big.’

Turning to the reflexive use, it is surprisingly infrequent in both children and adults, so it must emerge under limited exposure. Some percentages are as follows. **B** hears 146 clitics with 5 (3.4%) in the reflexive function, and 2 repeat what he said. **M** hears 202 clitics, with 6 (3.0%) for reflexivity. By contrast, impersonals are more frequent but not produced: **B** hears 29 (close to 20.0%), and **M** hears 23 (11.4%). At 1;7, **B** utters Nie da się ‘It cannot be done / One cannot do this’ twice after his father, which we count as prompted expression, not as an impersonal type (10a).

B, **I**, and **M** develop the reflexive use in Stage II with what are called intrinsically reflexive predicates in the literature, as in (8a) Tata goli się ‘Daddy shaves’, and (27). The class awaits definition, but parallels the use of the simple reflexive *zich* as SE-anaphor in Dutch (Everaert 1986), *sig* in Icelandic and Danish, and contains verbs that may lack *SELF* in English. Its early appearance with the clitic suggests an intransitive analysis for reflexivity in Stage II, complying with the UEAPP.

- (27) a. Ubiera się. **M** (1;9)
 dress PRES.3SG REFL
 ‘(She) is dressing.’
- b. Pimpek się myje. **I** (1;11)
 Pimpek REFL wash PRES.3SG
 ‘Pimpek is washing.’

In Stage III, **K** and **W** develop the reflexive use with predicates that need not be intrinsically reflexive in English or Germanic, which are also found in **I** at this time, as in (9a) Ja się wycieram ‘I am wiping myself’, and (28).

- (28) a. Tak jak Witek się poo-bijał. **W** (2;7)
 just like Witek_{NOM} REFL Pf-hit PST.3SG.MASC
 ‘Just like Witek hit himself (all over).’
- b. Niech się Tenia pokaleczy, ja nic nie mówię,
 let REFL Tenia_{NOM} cut PRES.3SG I_{NOM}nothing_{ACC} Neg
 say_{PRES.1SG}

niech się pokaleczy. I (3;2)
 let REFL cut PRES.3SG
 ‘Let Tenia cut herself, I’m not saying anything, let her cut herself.’

The delay of the reflexive function to Stage III in some children suggests a transitive analysis as alternative. On this view, **się** plays the equivalent of what Reuland (2001) labels a “protective function,” and indicates an argument position in syntax. In contrast with the intrinsic, non-argument reflexive analysis proposed for Stage II, **się** in reflexive constructions in Stage III denotes an internal argument projected in the syntax.

If in Stage II reflexivity develops via an intransitive analysis, a fourth type of wrong use of the clitic may receive an interesting account. During this period, **B** experiences difficulty expressing clitics with body parts as in (29), which other children usually do not mention.

- (29) a. *Tu uderzyłem się w... B (1;7)
 here hit PST.1SG.MASC REFL on... = *Here, I hit myself on...
 Intended in context: Uderzyłem się w nogę.
 ‘I hit myself on the leg.’
- b. *Wykręciłem się. B (1;11)
 twist PST.1SG.MASC REFL = *I twisted myself.
 Intended in context: Wykręciłem sobie nogę.
 ‘I twisted my leg.’

If body-part reflexives involve two syntactic arguments, they should cause problems in Stage II, and mature in the proper way only in Stage III. Examples in (29) illustrate the problems encountered at this stage: (29a) is an incomplete sentence where only the preposition but not its complement is expressed; (29b) lacks the body part affected by the action of twisting.

In sum, the reflexive function may develop in Stage II via non-argument **się**, or in Stage III together with reciprocals, impersonals and Dative impersonals, which involve argument **się**. As mentioned above, we propose that the reason for late

emergence of extrinsic reflexives is the construction's incompatibility with the UEAPP. Recall that the proposed Stage I contains no reflexives of any types. Then, Stage II is marked by the application of the UEAPP, and sees constructions involving a simple, biunique relation between the verb and its argument. It is then that unaccusative (4), inherent (6), and intrinsic reflexive (8) constructions emerge. Finally, upon reformulation of the UEAPP at Stage III, the grammar is able to accommodate two arguments per predicate. Consequently, the children utter reflexives of the extrinsic reflexive (9), Dative (11), reciprocal (12), and impersonal (15) types.

To conclude, early clitic constructions fall under the UEAPP and late clitic constructions do not.

4. The development of **wolno**

In this section we examine the development of **wolno**, based on the files of **I** and her caretakers. We examined the files of all children, but others offer limited data. **B** utters a total of two Nie wolno. **K** has three without Dative, including Nie wolno się bawić radiem 'It is not allowed to play with the radio' at 2;3. **M** lacks **wolno**. **W** has one without Dative at 3;1. By contrast, **I** has 75 **wolno**-sentences from 0;10 to 3;6, the last file examined in our study.

As mentioned in the introduction, in adult grammar the full-fledged argument structure of **wolno** is with two arguments: topic of permission and Dative goal, as in (3a) [Mnie] **nie wolno** [tak daleko iść] prawda? 'I am not allowed to walk that far, right?'. Inka is systematically exposed to this construction from Stage I, but her production is delayed until Stage III. In our view, this modal predicate falls under the UEAPP, so the two arguments can only be expressed in Stage III, when this early principle is modified.

Wolno emerges in **I** at 1;9, coinciding with the clitic, which was dubbed Stage II. **I**'s first utterance with the modal is (3b) Tatusiu, nie wolno bić mamusi 'Daddy, it is not allowed to hit mommy', and shows the symptoms of Stage II, which lasts until 3;0 for the modal. In Stage II, the goal is expressed as a Vocative, not as a Dative argument of the predicate. Thus, in this period, **wolno**

displays at most one syntactic argument in tune with the UEAPP. Recall that the late emergence of the second argument with **wolno** is not due to the lack of A-chains: we believe that the predicate's external argument requirement is the crucial factor in the delay. The developmental delay with the second argument of **wolno** arises as a consequence of the UEAPP. The proto-principle must be reformulated to accommodate the Dative argument projected by the modal predicate. Here are some other examples.

- (30) a. Nie **wolno** brzydko mówić, ty Barbariba! I (2;1)
 Neg allow ugly_{ADV} talk_{INF}, you_{NOM}
 Barbariba_{NOM}
 'To talk ugly is not allowed, you Barbariba!'
- b. Ty Jola, nie **wolno** na ulicę chodzić! I (2;4)
 you Jola, Neg allow on street walk_{INF}
 'You Jola, to walk on the street is not allowed!'
- c. Nie **wolno** misiu do pieluszki sisiać! I (2;6)
 Neg allow bear_{VOC} to diaper_{GEN} pee_{INF}
 'Bear, to pee in the diaper is not allowed!'

Another interesting feature is that if the required argument is nonovert, as in (31), often the previous discourse provides an antecedent. This suggests that the argument is syntactically present as a null pronoun whose content is recovered in context.

- (31) a. Nie szczekaj, nie **wolno**! I (2;1)
 Neg bark_{IMP.2SG} Neg allow
 'Do not bark! It is not allowed.'
- b. Mietek, czemu śpisz moje łóżko, nie **wolno**! I (2;1)
 Mietek, why sleep_{PRES.2SG} my bed Neg allow
 'Mietek, why are you sleeping on my bed? It is not allowed.'
- c. Nie sprzedaj Inki, tatuniu, nie **wolno**! I (2;2)

Neg sell_{IMP.2SG} Inka_{GEN} daddy_{VOC} Neg allow
 ‘Do not sell Inka, Daddy! It is not allowed.’

Datives are missing in **wolno** constructions in Stage II, but they can be found during this period as in (32), so the Dative per se is not the source of the delay:

(32) Nie **wolno**, żaba, mówiłam ci. I (2;2)
 Neg allow frog_{NOM} tell_{PST.1SG.FEM} you_{DAT}
 ‘It is not allowed, frog, I told you!’

In this stage, Inka comes to differ in style from the adults surrounding her, as the following numbers demonstrate.

Stage Age	Inka: wolno			Inka’s input: wolno		
	Total tokens	Tokens with vocative, % total	Tokens with dative, % total	Total tokens	Tokens with vocative, % total	Tokens with dative, % total
Stage I 0;10 - 1;8	0	–	–	94	12 (12.7)	10 (10.6)
Stage II 1;9 - 2;9	55	16 (29.0)	0	39	0	22 (56.0)
Stage III 3;0 - 3;6	29	1 (3.4)	8 (27.6)	22	1 (4.5)	16 (72.7)

Table 3 The emergence of wolno in Inka vs. adult input

Stage I lasts from 0;10 to 1;8 when the child utters no **wolno**, and hears 94 tokens: 12 (12.7%) with a Vocative as in (30), and 10 (10.6%) with a Dative as in (3a). Stage II is from 1;9 to 2;9, when she utters 55 tokens, 16 (29.0%) with a Vocative, more than doubling the adult rate for Stage I, and 0 with a Dative. By contrast, in this period adults utter 39 tokens, no Vocatives, and 22 Datives (56.0%!!). Why should the behavior of adults change from Stage I to Stage II and why should Vocatives be suppressed? Why should Inka be ignorant of the Dative input in Stage II? We submit that on the one hand, Vocatives make the child sound rude, as glosses convey, so adults try to influence the child and suppress them, favoring the more refined Dative. On the other hand, the child is under the influence of the UEAPP so she ignores the Dative input.

Stage III goes from 3;0 to 3;6, which is the last file we examined, and Inka produces 29 tokens: 1 with a correct Vocative (3.4%), and 8 with Datives (27.6%). Thus, from Stage II to Stage III she reverses the proportion of Datives and Vocatives, which we take as a signal of the modification of the UEAPP. However, the **wolno**-constructions she hears in Stage III follow the proportions of those heard in Stage II: out of the 22 heard, 16 constructions (72.7%) are with a Dative. Here are some late examples:

- (33) a. A wolno [mi] [się bawić] mamusiu? I (3;0)
 but allow I_{DAT} REFL play_{INF} mommy_{VOC}
 ‘But, am I allowed to play, mommy?’
- b. Wolno [mi] [się bawić z dziewczynkami]? I (3;0)
 allow I_{DAT} REFL play_{INF} with girls_{INST}
 ‘I am allowed to play with girls?’
- c. A nie wolno [jej] [krzyżeć], będzie płakała.
 I (3;4)
 but Neg allow she_{DAT} yell_{INF} will cry_{P.PART.SG.FEM}
 ‘But she is not allowed to yell, she will cry.’

In brief, the development of the modal **wolno** is similar to that of the clitic **się**, strengthening the evidence for the existence of UEAPP in child grammar. While the proto-principle is operative, **wolno** projects only one argument in the syntax. A reformulation of the proto-principle allows the second argument to surface.

5. Conclusion

We have argued for Maturation in view of the UEAPP that establishes a biunique relation between predicates and arguments. In Polish, the development of reflexive clitics and modal **wolno** ‘allow’ observed in five children in the CHILDES database supports Maturation: UG is not available in adult form in all stages of acquisition, and matures. Reflexive clitic and modal constructions

develop in three chronologically parallel stages. The first is complete omission or absence. The second obeys the U(nique) E(xternal) A(rgument) P(ROTO)-P(inciple). Unaccusative, unergative, and intrinsic reflexive uses of the clitic develop, and **wolno**-constructions display only one syntactic argument. The proto-principle is modified in the third stage, when clitic and modal constructions with two syntactic arguments emerge: the children utter **się**-impersonals, reciprocals, Datives, and extrinsic reflexives, as well as **wolno**-Datives. In brief, the UEAPP regulates the syntactic development of functional categories such as the reflexive clitic **się** and modal **wolno**, supporting the Maturation Hypothesis.

Footnotes

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¹ Similar French Vs do not combine with être ‘be’, and Spanish Vs are not used as Absolute Participles, proposed as unaccusativity symptoms: L'enfant a (*est) joué ‘The child (has/*is) played,’ *El niño jugado, entraron ‘*The child played, (they) went in.’

² Spanish has also a telic **se** which contrasts in (in)transitivization, coexisting with an obligatory object NP as delimiter (Nishida 1994, Sanz 1999):

- (i) a. Se aprendió la lección.
REFL learn_{PAST.3SG} the lesson
‘He learned the lesson (well, completely).’
- b. Se bebió el vino.
REFL drink_{PST.3SG} the wine
‘He drank up (all) the wine.’

³ Another (agentive) predicate modifier use is in (i).

- (i) a. Bo ja pytam się. **W** (2;6)
because I_{NOM} ask_{PRES.1SG} REFL

‘Because I am asking.’

- b. Babunia też się na tym nie zna.
 granny_{NOM} also REFL about this Neg know_{PRES.1SG}
 ‘Granny has no idea about it.’ (from M’s grandmother)

Vs like ask and know display non-reflexive and reflexive versions with similar (truth conditional) semantics, with the last indicating deeper involvement. Grappin (1963) glosses patrzeć as ‘to look’ and patrzeć się ‘to look intensely’. Reflexive look, which is compatible with Stage II, develops in I at 1;6, but it is unusually frequent in her input, so we consider it prompted. The productive and non-prompted use of się begins in Inka at 1;10.

⁴ In (b), the Demonstrative has the wrong Instrumental.

The transitive impersonals in the text seem to develop slightly earlier than intransitive impersonals of type (i).

- (i) Tu się wsiada i jedzie się. W (2;9)
 here REFL get+on_{PRES.3SG} and go_{PRES.3SG} REFL
 ‘Here one gets on and goes (by vehicle).’

If (i) contains only one syntactic argument indicated by the clitic, its delay does not follow from the UEAPP. Rivero (1999, 2000) argues that impersonals contain SE-anaphor chains with mixed A and A-bar properties, which could locate their delay in the ACDH discussed in the introduction. In the examined period some impersonal types have not developed. The unaccusative type for One dies only once is missing, but it is found in I’s files with die at 3;8, and with grow at 4;2.

⁵ The constructions in (11) are often grouped together with (inherently reflexive) Nom + Dative psychological Vs such as please/like as in (i).

- (i) Ta mi się podoba, ta, ta. W (2;7)
 this_{NOM.FEM.SG} I_{DAT} REFL please_{PRES.3SG} this_{NOM.FEM.SG} this_{NOM.FEM.SG}
 ‘This one pleases me, this one, this one! / I like this one, this one, this one!’

The two differ in morphology, so for this and other reasons should not be unified. (i) relies on the modifier use, not on (impersonal) argument się, and falls outside of the UEAPP with Theme and Experiencer as syntactic arguments. We do not examine Nom-Dat psychological Vs, which are not always (inherently) reflexive, and examples with please/like are few. However, the UEAPP also seems to delay psychological Vs. Adult-like sentences as in (i) seem to belong to

Stage III (i), and the early dativeless strategy in (ii) is reminiscent of **wolno** constructions in Stage II, with only one argument projected in the syntax:

- (ii) a. * Podoba się. M (1;8)
 please_{PRES.3SG} REFL **Adult:** Podoba mi_{DAT} się.
 ‘It-pleases (me). / (I) like-it.’
- b. * Podobaja. I (2;5)
 please_{PRES.3PL} **Adult:** Podobaja mi_{DAT} się.
 ‘They-please (me). / (I) like-them.’
- c. * Nie podoba. W (2;4)
 Neg please_{PRES.3SG} **Adult:** Nie podoba mi_{DAT} się.
 ‘It does not please (me). / (I) do not like it.’

⁶ Passive reflexive constructions are common in other Slavic languages, and are often analyzed with NP-movement resulting in an A-chain. From this perspective, the comprehension experiments carried out by Stojanović (2000) with Croatian and Serbian **se**-passives are important for our purposes.

These experiments show that Croatian children (mean age 3;9) and Serbian children (mean age 4;2) understand **se**-passives such as (i) along parallel lines, but differ considerably from the adults tested as controls, which in our view is consistent with Maturation:

- (i) Tamo se jedu jabuke.
 there REFL eat_{PRES.3PL} apples_{NOM}
 ‘There apples are eaten. / There people eat apples.’

When presented with the construction in (i) and three pictures in a sentence-picture matching task, 100% of the adults selected a picture where a boy is looking at a group of people eating apples. By contrast, 21% of the children chose a picture where the boy was looking at the apples, 39% chose a picture where the boy was eating an apple, and only 40% chose the picture unanimously selected by the adults.

The contrast between children and adults seems clear, and we suggest that the reason is the A-Chain Deficit Hypothesis. If children lack A-chains or experience difficulties with them, then (i) is probably treated as an adjectival passive, which makes it resemble in child grammar the unaccusative and unergative reflexive constructions of Polish. That is, the NP apples is in a predicative relation with eat, so the sentence corresponds to something along the lines of These apples are fit for eating, which can suit all three pictures, and accounts for the three-way split in the children. By contrast, for the adults the sentence involves NP-movement and an implicit Agent, which is the “passive” reading they all select.

⁷ In (18a) NP is Nom, and not the expected Gen. This could be because the child projects it as the unique argument, similar to Snow frightens.

⁸ While the colloquial register allows for some variation in clitic position, usually Polish clitics are non-initial, a rule which children may ignore. The ungrammatical (i) could be interpreted as an attempt to repair the violation of the strict initial position prohibition.

- (i) *Się _____ nie _____ pali _____ się. **B** (1;7)
 REFL Neg be+onPRES.3SG REFL
 'It is not on.' (said of the tape recorder light). **Adult:** Nie pali się.

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