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VALENCY REARRANGEMENT PHENOMENA AND THEIR LIMITATIONS WITH POLISH 'CLEAR' VERBS^{*}

A b s t r a c t. The paper is concerned with very basic questions concerning the nature of lexical representation of verbs which take part in valency rearrangement alternations and the contribution of grammar to the morpho-syntactic phenomena involved in this rearrangement.

We analyze a group of such valency rearrangement verbs which are referred to as 'clear' verbs in Polish and compare their behaviour and properties with the corresponding material from English, Greek and Hebrew. In particular we try to establish which properties enable some verbs to undergo the alternation, while some others accept only one of the alternants. We propose lexical representations for alternating and non-alternating verbs and establish a connection between these representations and the alternating propensity of prefixed verbs in Polish.

1. INTRODUCTION OF THE DATA

Recently a lot of attention in morpho-syntax has been devoted to such verbs which show valency rearrangement possibilities of the type where the two internal arguments of a single verb adopt alternative positions without any major change of meaning.¹ The subclass of such verbs analyzed in this paper is referred to in

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¹ See e.g. RAPPAPORT HOVAV and LEVIN (1998), LEVIN (2006) for English, SEGAL and LANDAU (2012) for Hebrew, ALEXIADOU and ANAGNOSTOPOULOU (2012) for Greek.

linguistic literature as 'clear' verbs, as they, generally speaking, convey the meaning that something is removed, i.e. 'cleared', from a Location, or, in the other variant, some place is 'cleared of ' some Substance. In Polish these verbs show little researched irregularities in their morpho-syntax: many allow this re-arrangement, as the examples in (1) below illustrate; others can function in a specific frame only: (2) below illustrates such situations where the verb is followed by a Noun Phrase in the Accusative case (Direct Object) specifying Substance (Stuff) and by a Prepositional Phrase introduced by the preposition z plus an NP in the Genitive case — informing about Location. Examples in (3) contain the third subclass of 'clear' verbs which admit of the opposite frame — DO Location and Stuff in the PP. The type of morpho-syntactic structure in (2) is called Change of Location Frame (COL), while the one in (3) — Change of State (COS).

Many Polish 'clear' verbs associate with both COL and COS structures. Such predicates are called alternating 'clear' verbs. A selected sample is supplied in (1) below with the relevant internal arguments typed in bold characters:²

1.

- a. czyścić 'clean'
 - COL Narzędziem skutecznie czyszczącym dane z dysków jest program Acronis DriveCleanser.' The instrument effectively cleaning data off disks is Acronis DriveCleanser'

COS - Czyścili podłogę z krwi. 'They cleaned the floor of blood'

b. szorować 'scrub'

- COL-Kobiety szorowały brud z podłogi. (A.M.) 'Women scrubbed dirt off the floor'
- COS *Kobiety wiejskie szorowały naczynia z resztek mięsa i tłuszczu*. 'Country women scrubbed dishes from the remaining meat and fat'

c. sprzątać 'clean'

COL - Sprzątali śmieci z ulic. 'They cleaned trash off the streets'

COS – *Co rano trzeba było sprzątać okolicę z prezerwatyw*. 'Every morning it was necessary to clean the surroundings of condoms'

² The data, whenever possible, have been taken from the *National Corpus of the Polish Language*, included in the references as: PRZEPIÓRKOWSKI, BAŃKO, GÓRSKI and LEWANDOWSKA-TOMA-SZCZYK (2012). This has been done to avoid notorious difficulties with grammaticality judgments that appear with this material. In further sections of this paper the author's own examples will also be given as necessitated by the complexity of the structures since we will have to supply the appropriate testing ground: Linguistic corpora frequently fail to offer such intricate phrases, especially when we aim at particular lexical elements, not at numerous classes. Whenever a reasonable doubt may arise whether the data are taken from the Corpus or supplied by the author of this paper, such data are initialed: (A.M.).

- d. drenować 'drain'
 - COL *drenując pieniądze z kieszeni podatników* 'draining money from the pockets of tax-payers'³
 - COS *poza handlowcami, drenującymi rynek z pieniędzy* 'apart from businessmen, draining the market of money'
- e. grabić 'rob'
 - COL *Grabiąc złom z posesji, dokonują dużej szkody.* 'By robbing rummage from the property they do a lot of damage'
 - COS *Grabiąc posesję ze złomu*, *dokonują dużej szkody*. (A.M.) 'By robbing the property of rummage they do a lot of damage'

As the examples above show, both frames convey the same meaning and both are equally grammatical. Polish has a number of alternating verbs, but for the purposes of our exposition we have selected mostly such that occur in the Corpus in the relevant frames.

Then some other verbs, with the same semantics, appear in the COL frame exclusively, while COS with them is not merely unattested, but ungrammatical, e.g.:

2.

- a. łamać 'break'
 - COL *Lamię gałązkę z rosnącego przy drodze bzu*. 'I am breaking a twig from a lilac bush growing near the road'
 - COS **Lamię rosnący przy drodze bez z gałązki*. (A.M.) *'I am breaking a lilac bush growing near the road of a twig'
- b. ratować 'rescue'
 - COL *Uległ tragicznemu wypadkowi ratując dzieci z pożaru*. 'He had a tragic accident while rescuing the children from the fire'
- c. usunąć 'remove'
 - COL *Będą usuwać bezdomnych z* dworców. 'They will remove the homeless from railway-stations'
- d. brać 'take'

COL - Brali pieniądze z miejskiej kasy. 'They took money from the city funds'

e. zdejmować 'take off'

COL - Zdejmują nogę z gazu. 'They take off their feet from the accelerators'

Finally, there are 'clear' verbs that favor the COS frame, while COL is inadmissible with them, e.g.:

 $^{^{3}}$ English translations of the data are frequently very awkward, but we strive to stick as much as possible to the Polish original pattern, which — as it will become very clear in the course of this paper — diverges from what English allows. In a nutshell it has few alternating verbs, while Polish has dozens of them.

- 3.
- a. *leczyć* 'cure'
 - COS *Ja nie ośmielilbym się leczyć kogoś z depresji.* 'I would not dare to treat anybody for depression'
 - COL **Ja nie ośmielilbym się leczyć depresję z kogoś. *'I would not dare to treat depression from anybodyody'*
- b. plądrować 'plunder'
 - COS *Gdy jedna z kobiet zajmowała się osobą pokrzywdzoną, druga plądrowała mieszkanie z pieniędzy*. 'While one of the women was taking care of the hurt person, the other plundered the appartment from money'
- c. otrzeźwić 'sober'
 - COS-*Otrzeźwili ojca z upojenia*. 'They have sobered the father from intoxication' (A.M.)
- d. opróżniać 'empty'
 - COS *Nie można jednocześnie opróżniać szafy ze⁴ starych, nierzadko zniszczonych ubrań.* 'You cannot empty the closet of old, frequently damaged, clothes'
- e. obrobić 'rob'
 - COS *Obrobili mieszkanie z cennych przedmiotów i pieniędzy*. 'They robbed the appartment of precious objects and money'

Some 'clear' verbs appear with one full frame and the other truncated, i.e. shortened by the phrasal argument⁵:

- 4.
- a. COL-only verb Addy wchodzi do pokoju pełnego butelek Smirnoffa, odkręca zakrętkę z jednej z nich. 'Addy enters the room full of bottles of Smirnoff vodka, unscrews the cap from one of them'

Truncated COL - Addy odkręca butelkę. 'Addy unscrews the bottle'

- Truncated COS Addy odkręca zakrętkę. 'Addy unscrews the cap'
- COS *Addy odkręca butelkę z zakrętki. *'Addy unscrews the bottle of the cap'
- b. COL-only verb *leczyć kogoś z depresji* 'treat sb. for depression' Truncated COL – *leczyć kogoś* 'treat sb.' Truncated COS – *leczyć depresję* 'treat depression' COL – **leczyć depresję z kogoś* *'treat depression from sb.'

The alternating verbs allow also truncated frames in all the cases, e.g.: *czyścić dane*, *czyścić dysk* (see 1.a.), however COL-only verbs (see 2. above) and COS-only verbs (see 3. above) are unpredictable in this respect as the examples in (5.) below, when compared with these in (4.), show:

⁴ The preposition z has an allomorphic variant ze-. For details of this allomorphy see e.g. GUSS-MANN (2007: 235).

⁵ The term 'truncated frame' is taken from SEGAL and LANDAU (2012).

5.

- a. COL-only verb: *ratować dzieci z pożaru* (see 2.b) Truncated COS – *ratować dzieci* Truncated COL – **ratowac pożar*
- b. COS-only verb: *plqdrowała mieszkanie z pieniędzy* (see 3.b) Truncated COL – *plqdrowały mieszkanie* Truncated COS – **plqdrowały pieniądze*

Summing up, in Polish certain 'clear' verbs allow the valency re-arrangement alternation and thus can appear either in COS and COL frames indiscriminately, as well as in truncated COS and COL frames. Contrariwise, COL-only and COSonly verbs appear in truncated COS and COL frames respectively, but their appearance in the truncated frame of the opposite type cannot be predicted, just like whether a given 'clear' verb will alternate or not. This situation resembles the data in English, Greek or Hebrew, to be discussed in section 3. In Polish, however, there may exist a certain bond between verbal morphology and morpho-syntax, so the 'clear' alternation phenomena may not be quite as random as in other languages. This issue will be substantiated on the basis of prefixed verbs in the next section.

2. VALENCY REARRANGEMENT PHENOMENA WITH PREFIXED 'CLEAR' VERBS IN POLISH

Such a complicated and highly idiosyncratic body of data breeds many questions concerning the nature of their representation in the Lexicon, the type of information which should be available therein as well as to the contribution made by grammatical, regular structures/principles or processes.

So far we have presented the data as random in the choice of the frame variant. Nevertheless, Polish shows a certain propensity towards the alternation if verbs are prefixed. Below we will illustrate the situation with examples of prefixed verbs that show the 'clear' alternation, while the non-prefixed variants do not have the same force. A few prefixes have this effect. Sometimes both frames are allowed, but occasionally only one or the other. Below we will give examples with wy- (in 6 below), z-/s-/s-⁶ (7), ob- (8), od- (9), o- (10), where the relevant data are the most prominent, and also some incidental cases in (11).

⁶ See GUSSMANN (2007: 210) for the alternations involved.

- a. wycisnąć 'squeeze'⁷
 - COL [...] *maszynę, która wyciśnie olej z nasion*. 'a machine which will squeeze oil from seeds'
 - COS [...] wycisnę tubkę z połowy [zawartości]! 'I will squeeze the tube out of half [of its content]'
 - *cisnąć*⁸ 'throw', e.g. *Ktoś inny cisnął miskę z rozmachem przed siebie*.'Sb. else threw the bowl ahead with force'
- b. wytrzepać 'beat, shake'
 - COL wytrzepał słomę z butów 'He shook out straw from his shoes'
 - COS *Tu trzeba ratować ziemską cywilizację, wytrzepać Planetę z pierza. 'Here one must save the Earth civilization, beat the Planet from fluff'*

trzepać 'beat'

COL – *trzepać kurz z dywanu* (A.M.) 'to beat a carpet from dust'

c. wycierać 'wipe'

COL - wyciera kredę z dłoni 'He wipes chalk off his hand'

COS – *wyciera wąsy z musztardy* 'he wipes his moustache of mustard' *trzeć* 'rub', e.g. *trzeć rece* 'rub hands'

- inzec lub, e.g. inzec rece lub
- d. wysuszyć 'dry'

COL - Wysusz wodę z włosów! 'Dry water from your hair'

COS - Wysusz włosy z wody! 'Dry your hair of water'

suszyć 'dry', e.g. COS - Susz włosy z wody! 'Dry your hair of water'

- e. wyprać 'wash up'
 - COL wyprać plamy z sukni 'wash stains off a dress'
 - COS *wyprać sumienia z poglądów politycznych* 'wash conscience.pl from political views'
 - prać 'wash up'

COS - prać bieliznę z brudu (A.M.) 'wash the underware from dirt'

f. wyprzedawać 'sell out'

COL – *wyprzedawała mienie z domu* (A.M.) 'She sold out the belongings from home' COS – *wyprzedawała rodzinę z mienia* 'She sold her family out of their belongings' *sprzedawać* 'sell'⁹

COL - sprzedawała mienie z domu (A.M.) 'She sold the belongings from home'

^{6.}

⁷ Prefixes are indicated with bold characters.

⁸ Whether the verbs *cisnąć* and *wycisnąć* are really morphologically related may be disputed. Prefixation in Polish with verbs introduces a variety of meanings into the verbal stems, frequently only partially predictable, or utterly idiosyncratic. We believe the verbs we have chosen for our analysis show close enough similarity of meaning and form to be believed related. For recent accounts on verbal prefixation in Polish see SZYMANEK (2010), WILAND (2011), for a general panorama of Slavic prefixation see SVENONIUS (2004).

⁹ The form without *wy-: przedawać* is obsolete in Polish. In all probability *prze-* functioned here as a prefix. See e.g. in DOROSZEWSKI (1965) the entry for *prze-*, which sequence in the history of the Polish language had as one of its meanings the change of location.

g. wywietrzyć 'air'

COL – wywietrzyć gaz z mieszkania 'to remove gas from the flat' COS – wywietrzyć mieszkanie z nagromadzonego gazu 'air the flat free from gas' *wietrzyć* 'air'

COS - wietrzył mieszkanie z gazu 'He aired the flat free from gas'

- *wyciągać* 'pull out' COL – *wyciągać piłkę z siatki* 'to pull out a ball from the net' *ciągnąć* 'pull', e.g.: ciągnąć sieci 'pull the nets'
- 7.
- a. spłukać 'flush, rinse'

COL – *Deszcz spłukał farbę z tabliczek*. 'Rain has rinsed the paint from tablets' COS – **spłukać ręce z tuszu i kleju** 'to rinse hands from ink and glue' *płukać*.

b. *zrzucać* 'throw down', *wyrzucać* 'throw away'

COL – *Przy większych opadach należałoby zrzucać śnieg z dachów*. 'After a bigger snowfall one should throw down snow from roofs'

COL – *Wyrzucali wszystko z meblościanki*. 'They threw everything away from a set of shelves'

rzucać 'throw', e.g. Rzucał plecak. 'He threw his rucksack'

c. zmyć 'wash'

COL – *zmywający farbę z policzków* wojowników 'washing out pain from the warriors' cheeks'

COS - zmywając ciało z grzechu 'washing the body of sin'

myć 'wash'

COS – *on myl wannę z czarnych plam* 'He washed a bath-tub of black stains' d. *ścierać* 'wipe out'

COL – ścierać wodę ze ścian 'to wipe water from the walls'

COS - ścierała podłogę z krwi 'She wiped the floor of blood'

trzeć 'rub', e.g. Tarł rękę 'He rubbed his hand'

e. zsuwać 'push'

COL – *zsuwasz kamień z pokrywy* 'You push a stone from the lid' *suwać* 'push', e.g.: *suwać nogami* 'to drag one's feet'

f. zdmuchnąć 'blow out' COL – zdmuchnęło czapkę z głowy 'It blew out a hat off one's head' dmuchnąć 'blow', e.g. dmuchnąć w trąbkę 'to blow a trumpet'

- g. zedrzeć 'scratch, tear'
 COL zdarł dach z budynku 'It tore the roof off a building' drzeć 'tear', e.g. drzeć papier 'to tear paper'
- h. *zgarniać* ¹⁰ 'gather' COL – *zgarniała piasek z chodnika*

¹⁰ Again this verb has only prefixed related predicates, or the form with the reflexive clitic, e.g.: *wygarniać* 'take out', *garnąć się* 'flock around'.

- *zdrapać* 'scratch'
 COL *zdrapać folię z kart* 'to scratch foil from cards'
 drapać 'scratch', e.g.: *drapać rękę* 'to scratch one's hand'
- *zbierać* 'gather'
 COL *zbierać wodę z całego dachu* 'to gather water from the whole roof'
 brać 'take', e.g.: *brać torbę* 'to take a bag'

8.

a. oblizać 'lick'

COL – *oblizać loda z palców* (A.M.) 'to lick ice-cream off one's fingers' COS – *oblizać palce z lodów* (A.M.) 'to lick fingers of ice-cream' *lizać* 'lick', e.g. *lizać lody* 'to lick icecream'

b. obrabować 'rob'

COS – *Obrabowali domy z kosztownosci* 'They robbed houses of precious things' *rabować* 'rob', e.g. *rabować dom* 'to rob a house', *rabować kosztowności* 'to rob precious things'

c. obierać 'peel'

COL - obrać skórkę z limetki 'to peel the skin off a lime'

COS – *obieramy pyrkę z łupiny* 'We peel the potato from its peel' *brać* 'take', e.g.: *brać lekcje* 'to take lessons'

d. oswobodzić¹¹ 'free'

COL – oswobodzić piętę z pułapki 'to free one's heel from a trap'

9.

- a. odzyskiwać 'rescue, recycle'
 COL odzyskująca węgiel z hałdy. 're-cycling coal from a pile'
 zyskać 'gain', e.g.: zyskać zaufanie 'to gain trust'
- b. *odsłaniać*¹² unveil, remove'
 - COL Odkryła moją ranę, na szczęście nie odsłaniając maty z prawego ramienia. 'She discovered my wound, fortunately without removing the mat from my right arm'

COS - Odsłania wyspę z mgły. 'It unveils the isle from fog'

- c. odciąć 'cut off'
 - COL *Nożyczkami odcinano kartkę z bloczku*. 'With a pair of scissors one cut off a page from a pad'
 - ciąć 'cut', e.g.: ciąć papier 'to cut paper'
- d. odganiać 'chase off'
 - COL *odganiam wronę z bałkonu* 'I am chasing a crow from the balcony' *gonić* 'chase', e.g. *gonić wiatr* 'to chase the wind'

¹¹ Again this verb does not have non-prefixed alternants, however the nominal stem: swobod(a) 'freedom' is attested.

¹² There are no verbs without any prefix that would correspond to *odslaniać*. However other prefixed verbs exist in Polish with this root, e.g. *przesłaniać* 'screen', *zasłaniać* 'veil', *osłaniać* 'protect', etc.

- e. *odgarniać*¹³ 'pull away' COL - odgarnia włosy z czoła 'She pulls her hair away from her forehead' f. odzyskiwać 'rescue' COL - odzyskiwać energię ze światła 'to get back energy from light' zyskać 'gain', e.g. zyskać uznanie 'to gain esteem' 10. a. oczyszczać 'cleanse' COS - oczyszcza duszę z jednego grzechu 'He cleanses soul of a single sin' czyścić 'clean' (see 1.a) b. *okradać* 'steal' COS – Okradała Regine z resztek jedzenia 'She robbed Regina of the remains of her food' kraść 'steal', e.g.: kraść pieniądze 'to steal money' c. ograbić 'rob' COS - ograbili dom z mebli 'They robbed the house of furniture' grabić 'rob' (see 1.e) d. odzierać 'tear' COS - odziera świat z tajemnicy 'to deprive the world of mistery' drzeć 'tear', e.g. drzeć papier 'to tear paper' e. osaczyć 'soak' COS - osączyć rybę z zalewy 'to soak fish of water' f. osuszać 'dry' COS - osuszał czoło z potu 'He dried his forehead from sweat' suszyć 'make dry', e.g. suszyć ubranie 'to dry clothes' 11. a. *posprzatać* 'clear' COL - posprzątać śmieci z brzegów jeziora 'to clear trash off the water-line of a lake'
 - COS *posprzątali stadion z kamieni i butelek* 'They cleared the stadium of stones and bottles'

sprzątać 'clear'(see 1.c)

b. usuwać 'remove'

COL – *usuwać bezdomnych z dworców* 'to remove the homeless from stations' *suwać* 'push', e.g.: *suwać nogami* 'to drag one's legs'

As the data in this section show, prefixed verbal stems in Polish, even if they correspond to non-prefixed non-alternating verbs, frequently appear in both COS and COL frames. This calls for an explanation, which will be forthcoming in section 8.

¹³ No non-prefixed variants appear, see ftn. 11.

3. RESEARCH BACGROUND: RAPPAPORT HOVAV AND LEVIN (1998), LEVIN (2006) FOR ENGLISH, SEGAL AND LANDAU (2012) FOR HEBREW, ALEXIADOU AND ANAGNOSTOPOULOU (2012) FOR GREEK

'Clear' alternation poses important questions in the area of morpho-syntax. The most obvious one is why some verbs should allow the alternation, while it is inadmissible with some others. The next question involves scanning a more extensive language area than just one language, and it consists in the query whether there are differences between languages with respect to this alternation. The most basic, yet most profound one asks about the nature of lexical representation of verbs and grammatical contribution to their morpho-syntax. Then one should ponder over semantic and/or morphological variation among 'clear' verbs and its contribution to the availability of the alternation. Leaving the last question to be taken up in the final section of this text, here we will concentrate on the remaining issues, as a few analyses within the area of 'clear' alternations are available and they will prepare the stage for more detailed considerations relating to Polish.

RAPPAPORT HOVAV and LEVIN (1998) and LEVIN (2006) discuss the 'clear' alternation for English, noticing that in English it is applicable to very few verbs: *clear, clean, drain* and *empty*, while for some other verbs only COS or COL frames are available, e.g.:

 Henry cleared dishes from the table. Henry cleared the table of dishes. The thief stole the painting from the museum (COL). *The thief stole the museum of the painting. The doctor cured Pat of pneumonia (COS). *The doctor cured pneumonia from Pat.

The linguists conclude that the availability of alternating power depends on the type of verb: Only manner verbs can appear in the alternating structures and their lexical entries have the following form:

13. $[XACT_{<CLEAR>}\underline{Y}]$

X is an actant inciting the action, while Y is a pure root participant, which means that it appears as an argument in the lexical representation of a verb, but it does not function in a more extensive event structure with which this verbal representation may be supplemented by grammar. This root participant status is manifested in the way the argument behaves in syntactic structures; First of all it may take up various guises, e.g. of the Direct Object in the Accusative Case or of a prepositional phrase. Alternately it may not be realized overtly, or realized as a non-specific object. Manner verbs have comparatively simple structure, as compared with result verbs, which cannot alternate as they cannot be augmented due to their already cumbersome representation as given in (14 below):

14. [[x ACT] CAUSE [BECOME [y<*RES-STATE*>]]] (e.g., *break*, *dry*, *melt*, *open*, *split*)

Consequently, it is manner verbs, whose representation may be augmented with further event structure, which show alternations like 'clear' alternation, schematically rendered in (15):

15. [XACT_{<CLEAR>}Y]CAUSE[BECOME[z NOT AT<PLACE>]
e.g.: She (x) cleared dishes (z) off the table (PLACE)
[XACT_{<CLEAR>}Y] CAUSE [BECOME [z NOT WITH <THING/STUFF>]]
e.g.: She (x) cleared the table (z) of dishes (STUFF)

ALEXIADOU and ANAGNOSTOPOULOU (2012) (see also SEGAL and LANDAU 2012:233) apply RAPPAPORT HOVAV and LEVIN's (1998) and LEVIN's (2006) ideas to Greek, proposing that the event frames augmenting manner verbs look as follows:

- 16. COL: [X CAUSE [Y BECOME[AWAY FROM Z]]]
- 17. COS: [X CAUSE [Z BECOME [WITHOUT Y]]]

Consequently, manner alternating verbs will be augmented by grammar through so called Canonical realization rules (see RAPPAPORT HOVAV and LEVIN 1998: 109) with COS and COL frames, while the non alternating verbs, allowing just one of the alternating possibilities, will be specified as such in the lexicon. The lexical representations of non-alternating verbs would look (after suggestions from Levin (2006:15) and ALEXIADOU and ANAGNOSTOPOULOU's (2012)) along the lines in (18) and (19) below:

- 18. [[x ACT] CAUSE [y BECOME [AWAY FROM z]] (with non-alternating COL verb)
- 19. [[x ACT] CAUSE [y BECOME [WITHOUT z]] (with non-alternating COS verb)

If the distinction critical to the (non)appearance of the alternation exists between manner and result verbs, than the division should, we think, correlate with some other tangible distinctions between these classes of verbs in the 'clear' group. For instance, these differences could be read off verbal meanings, or result from their morphological, morpho-syntactic and syntactic behavior, beside the 'clear' alternation facts. Were it not the case, the appeal of the proposal would be significantly diminished. In the last section we will show that at least in the area of morphology such correlatives appear in Polish. First, however, we will adumbrate some such correlatives that ALEXIADOU and ANAGNOSTOPOULOU (2012) (after RAPPAPORT HOVAV and LEVIN 1998, LEVIN 2006), as well as SEGAL and LAN-DAU (2012) discuss and confront them with Polish data.

4. ENTAILMENTS WITH ALTERNATING AND NON-ALTERNATING VERBS IN GREEK AND IN POLISH: A CONTRASTIVE ACCOUNT

ALEXIADOU and ANAGNOSTOPOULOU (2012) (after RAPPAPORT HOVAV and LEVIN 1998, LEVIN 2006) support their analysis with distinctions in the area of entailment that can be observed between alleged manner and result verbs. As alternating verbs do not possess in their lexical representation all the arguments that figure in the full frame, it is believed that the truncated structure should not entail the absent argument. This seems to work for Greek perfectly:

20. ALEXIADOU and ANAGNOSTOPOULOU (2012) for Greek: Alternating verb with V DP-Stuff (No COL entailment) *Kseplina tin laspi (alla den efige apo tis skales)* Washed-I the mud-ACC (but not left-it from the stairs) 'I washed the mud (but it stayed on the stairs)'

Alternating verb with V DP-Loc (No COS entailed) *Kseplina tis skales (alla pareminan vromikes apo laspi)* Washed-I the stairs (but remained-they dirty from mud) 'I washed the stairs (but they remained dirty with mud)'

As the missing argument is not implicit in the truncated version, then supplementing the sentence with the information about it should not bring about an overdose of information. The examples above attest precisely to this state of affairs. On the other hand, the result verbs, which show just one frame¹⁴, and thus have the particular frame specified in the lexicon, should entail both internal arguments present in the frame. Again, the entailment facts support this claim

¹⁴ Many result verbs may also appear neither in COL, nor in COS frame, but this does not bear directly on our discussion. General differences between manner and result predicates are extensively presented in BEAVERS and KOONTZ-GARBODEN (2012).

(ALEXIADOU and ANAGNOSTOPOULOU 2012) as the sentences augmented with the apparently missing arguments are unacceptable due to the surplus of contradictory information:

- Verbs with DP-Stuff (COL entailed) Diegrapsa tin protasi (#alla paremine sto kimeno) I deleted the sentence (#but it remained in the text)'
- 22. Verbs with DP-Loc (COS entailed) *Ekkenosan to ktirio (#alla pareminan kapii anthropi mesa)* 'They evacuated the building (#but some people remained inside)'

Precisely the same state of affairs is found for Hebrew (see SEGAL and LANDAU 2012:244).

The findings suggest the analysis wherein the alternating verbs are grammatically augmented with an additional argument in the added event structure frame, while the non-alternating verbs include both internal arguments in their lexical representations.

The analysis is, however, not supportable for the Polish data. In Polish the entailment facts are different. The alternating verbs and the non-alternating ones behave in the same way: Location is always entailed, but Stuff is not. This is illustrated with the data in (23-26) below:

- 23. *Chlopiec wyczyścił dyski zostawiwszy na nich dane* (cf. 1.a, an alternating verb) 'The boy cleaned the discs having left data on them'
- 24. *Chlopiec wyczyścił dane *zostawiwszy je na dyskach* 'The boy deleted the data having left them of the discs'
- 25. *Uratował dzieci *zostawiwszy je w pożarze* (cf. 2.c, a COL-only verb) 'He saved the children having left them in the fire'
- 26. *Splądrował mieszkanie zostawiwszy w nim pieniądze* 'He robbed the flat having left there money' (cf.3.b, a COS-only verb)¹⁵

¹⁵ We do not intend here to go into the nature of entailment and how it precisely works with various constructions, nor is it our purpose to analyze the role or semantics of the elements introducing the entailed clause (e.g. *and* vs. *but*). The data show clearly that there is a difference in the behavior of the Stuff argument and the Location one, which, we feel, could be the indicator of their different status in the linguistic system. In the discussion on the paper held at *SinFonIJa* it was pointed out to me that in such examples as (26) something else than money may have been a prey to the robbery. Neverhteless, in spite of the possibility that places may have to be also different in (25), e.g. somebody may have saved the children from drowning in a river, an incompatibility results, which effect is absent in (26). Consequently, the status of Location and Stuff is different in the

Thus in Polish the major division does not run between the alternating and nonalternating verbs but between those with overt Stuff and without overt Stuff, as Location is always either overtly present or entailed. This clearly shows that the status of Stuff and Location arguments must be different in Polish. Before we delve deeper into this problem, let us investigate some more properties of the morpho-syntax of the relevant constructions in Polish with the specific focus on the manner vs. result distinction.

5. LACK OF OBJECTS AND NON-SPECIFIC OBJECTS WITH 'CLEAR' VERBS IN GREEK AND POLISH: A CONTRASTIVE ANALYSIS

LEVIN (2006) as well as ALEXIADOU and AGNOSTOPOULOU (2012) associate the possibility of non-appearance of objects or appearance of non-specific objects with manner verbs, but not with result verbs. This follows from the proposed lexical representation of manner verbs, where the internal argument is represented by the pure root participant, so the element figuring there, but highly non-specific. On the other hand, the verbs which show the rigid behavior towards the choice of event frames, i.e. the non-alternating verbs, have to possess in their lexical entries the full information about specific arguments realized in specific ways. Consequently, they should not allow uses without objects or with non-specific objects. This works for English and Greek as the above sources indicate (see also BEAVERS and KOONTZ-GARBODEN 2012). To some extent it also seems to work for Polish, as shown below for the alternating and COL-only verbs:

27. Alternating verbs:

*Ta pralnia czyści dobrze '*This laundry cleans well' (see 1.a) *Kobiety szorują i szorują od rana do nocy* 'Women scrub and scrub form the morning till the nightfall' (see 1.b)

Trzeba sprzątać, nie da rady. 'You must clean up, nothing doing' (see 1.c.)

COL-only verbs:

Trzeba usuwać – powiedział dentysta. 'You must have (it) pulled out – said the dentist' (see 2.c)

Są tacy co biorą, I tacy, co nie biorą. 'There are such people who take (bribes) and such who do not take (bribes)' (see 2.e)

Ratuj! 'Help' (see 2.b.)

Polish examples, unlike in Greek or English. We understand entailment as the case where in every conceivable situation in which it is true that p, it is true that q. The particular language construction we employ for Polish gives clearer grammaticality judgments than the sentences with Polish equivalents of *but*, whose correlates are used in the quoted sources.

The above verbs seem to behave like manner verbs as they may appear without overt objects, while the ones in (28) below sound much worse without overt objects.

*Policjant otrzeźwił i odprowadził do domu. 'The policeman sobered (sb.) and walked (sb.) home' (see 3.c)
*Opróżnili z ubrań i sprzedali. 'They emptied (sth.) of clothes and sold it' (see 3.d)
*Ograbili i poszli. 'They stole (sth.) and went away' (COS-only verb)

As the entailment data in (23-26) show, as well as the object-less examples in (27) and (28), there is a difference in the behavior of alternating and COL-only verbs on one side and COS-only verbs on the other.

Still another body of data can be called forth to reveal a similar split, namely a different nature of the entailed Location with alternating and COL-only verbs and this with COS-only verbs. The analysis in the next section will testify to the same split.

6. PATH ENTAILMENT IN HEBREW (SEGAL AND LANDAU'S 2012) AND POLISH; A CONTRASTIVE ACCOUNT

Let us first introduce briefly the situation that obtains for 'clear' verbs in Hebrew. They behave in much the same way as the Greek data with respect to entailment phenomena (see section 4 above) and availability of objects (see section 5 above). However in Hebrew, unlike in Greek or Polish, there exist alternating verbs, COL-only ones, but no COS-only verbs. Among alternating verbs, there exists a significant difference between COL and COS uses. COL sentences (both alternating or not) and truncated frames do not convey grammatically relevant affectedness (result state proposition), while COS sentences do. Segal and Landau's (2012) draw from this state of affairs the conclusion that this affectedness is contributed by the event frame for COS uses, and not by the lexical representation of the verb itself, nor by the COL frame.

Let us now illustrate how they have come to such a conclusion, using English data at the outset for the ease of exposition. SEGAL and LANDAU (2012:242) observe that: *He cleaned the table of the crumbs* results in a really clean table, while *He cleaned the crumbs from the table* does not necessarily render the table completely clean. Consequently, the result state proposition is offered for the first, and not for the second utterance.

Likewise, they observe that Location is implied in the COS frame in a different way (much weaker) than in the COL frame. Namely, it is not present for grammatical purposes in COS; Another phrase in a sentence cannot rely on its presence. This phenomenon is referred to as 'path meaning' and its presence can be observed with COL frames, but not with COS ones (see Segal and Landau 2012: 244), as the data in (29-30) show:

- 29. *šatafti et ha-boc me-ha-midraxa el ha-kvi š* I washed the mud from the sidewalk to the road'
- 30. šatafti et ha- midraxa me- ha-boc (*el ha-kvi š)
 'I washed the sidewalk of the mud (*to the road)'¹⁶

Disregarding many details of SEGAL and LANDAU's (2012) discussion, the morale of this analysis is that in Hebrew the Location argument in the COS frame is not visible to grammar in the same way as in COLs. We may draw from these data the conclusion that COS frames are singled out as qualitatively different from COLs in Hebrew.

Let us check this body of data for Polish. As the material in (31) will show the situation mirrors the Hebrew 'path meaning' properties:

31.

- a. * *Obrobili mieszkanie z cennych przedmiotów i pieniędzy do worka*. 'They robbed the apartment of precious objects and money into a sack' (COS-only verb, see 3.e)
- b. *Będą usuwać bezdomnych z* dworców *do noclegowni*. 'They will remove the homeless from railway-stations to shelters' (COL-only verb, see 2.c)
- c. *Sprzątali śmieci z ulic do worków*.'They cleaned trash from streets into sacks' (alternating verb, see 1.c)
- d. * Sprzątali ulice ze śmieci do worków.'They cleaned streets from trash into sacks'

Location is grammatically active in COL frames, whether they appear with COLonly, or with alternating verbs, while it is not active, shows no 'path meaning' in COS frames.

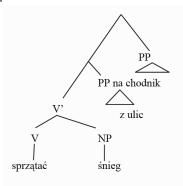
7. SOLUTION AND CONCLUSION

Let us now sum up the so-far findings for Polish: Entailment in Polish shows that Location is always entailed, while Stuff is not (see 23-26); in the case of alter-

¹⁶ A reflection forces itself upon me; namely it may be mere linear proximity which has some role to play with this data, but another explanation is also convincing. I will return to this issue in the final section.

nating and COL-only verbs objects can be easily dispensed with (27-28), but not so with COS-only verbs; finally, Location is grammatically active with COL frames ('path meaning', see 31.b, c), but not with COS ones (31.a, c). We would like to draw the following conclusion from the above data: 'clear' verbs in Polish, both alternating and COL-only, are represented in their lexical entries with single internal arguments, unspecified for their realization (pure root participants), which would explain the behavior of these verbs re non-specific objects or objectless constructions. As such objectless constructions can be semantically processed, the internal argument is understood, so it must be listed with the verb. COL-only verbs are entered in the lexicon with the Locative frame: This explains why it is this frame that they adopt if they appear in the full bi-argumental construction. Alternating verbs have no lexical information referring to particular frames but grammar may augment them with the two frames, indiscriminately. The pure root participant (in alternating and COL-only verbs) is specified for Location information, as Location always figures in entailments of alternating and COL-only verbs. Yet pure root participants are invisible to augmenting frames, which explains why both COS and COL frames can augment them — otherwise there would be excessive marking of Location in locative uses of alternating verbs, with possible adverse effect on adding a COL frame. There might arise the question: how come Location is visible in 'path meaning' structures in all COL cases, but not in COSs, if it should not be visible to alternating augmented frames altogether. I believe Location's availability for the 'path meaning' in COLs must be due to the structural adjacency of locative elements in these cases; both prepositional locative phrases in COL structures are on the structurally adjacent levels (see: 31.c):





In COS structures one Location is merged as the Direct Object, so it is too deep in the structure for the 'path meaning' to arise.

With COS-only verbs no pure root participants appear, thus objectless constructions are felt to be incomplete—some lexical information is lacking. Likewise, Location here is included in the lexical frame for merging as the Direct Object and it is not available in the 'path meaning'.

Consequently, we believe that the alternating 'clear' verbs in Polish should be represented in the following way:

32. [XACT_{<czyścić>}<u>Y Location</u>] (e.g. for the verb *czyścić* 'clean')

The non-alternating 'clear' verbs will have the same basic lexical representation plus the augmented locative frame:

[XACT_{<lamać}><u>Y Location</u>] CAUSE [BECOME[Z NOT AT PLACE Y] (e.g. for the verb *lamać* 'break')

While COS-only verbs will be deprived of the pure root participant, but will be accompanied by the COS frame:

34. [XACT_{<*leczyć*>}] CAUSE [BECOME[Z NOT WITH THING/STUFF Y]] (e.g. for the verb *leczyć* 'cure').

Whether a verb is lexicalized in one of the three above ways does not seem predictable in Polish on any independent grounds, e.g. thanks to the specific meaning of such verbs. The data in (35-40) include alternating and non-alternating verbs which are virtually synonymous¹⁷:

- 35. Żołnierze konfiskowali ('confiscated') mienie ze szkoły (COL-only) 'Soldiers confiscated the property from the school' vs. Żołnierze grabili ('rob') szkołę z mienia/mienie ze szkoły (alternating COS/COL) 'Soldiers robbed the school of the property/the property from the school'
- 36. *Joanna zbiera* ('gather, wipe out') *wodę ze stołu*. (COL-only) 'Joanna gathers water from the table' vs. *Joanna wyciera* ('wipe out') *wodę ze stołu/stół z wody*. (alternating COL/COS) 'Joanna wipes out water from the table/the table of water'
- Joanna usunęla ('remove') brud z koszuli. (COL-only) 'Joanna removed dirt from the shirt' vs. Joanna spłukała ('wash out') koszulę z brudu/brud z koszuli. (alternating COS/COL) 'Joanna washed out the shirt of dirt/dirt from the shirt'

¹⁷ The examples in this collection are mine — A.M.

- Złodziej okradł ('steal') dom z pieniędzy. (COS-only) 'The thief robbed the house of money' vs. Żołnierze grabili ('rob') szkołę z mienia/mienie ze szkoły. (alternating COS/COL)(see 35)
- 39. *Policjant otrzeźwił* ('sober') *mężczyznę z upojenia*. (COS-only)' The policeman sobered the man out of intoxication' vs. *Kłusownik oswobodził* ('free') *padlinę z łyków/łyki z padliny*.¹⁸ ' The poacher freed the carcass from the trap /the trap of the carcass' (alternating COL/COS) vs. *Myśliwy ratował zwierzę z łyków*. 'The hunter saved the animal from the trap' (COL-only)
- 40. *wyrzucać odpadki z kubła* (COL-only) 'to throw the scraps out of the bucket' vs. *opróżniać kubeł z odpadków* (COS-only) 'to empty the bucket of the scraps'

If it really is manner and result verbs which are responsible for the erratic behavior of 'clear' data in Polish, we lack independent evidence to distinguish them among 'clear' verbs. The tests supplied by BEAVERS and KOONTZ-GAR-BODEN (2012)¹⁹ which allow us to differentiate these subclasses do not seem to work satisfactorily for 'clear' data in Polish. For instance the selectional restriction diagnostics which they present in section 4.1 should distinguish manner verbs from result ones: Manner verbs put tight selectional requirements on their external arguments, but result verbs are much more flexible in this respect—they accept natural forces and inanimates. Polish 'clear' data show no such distinction, as the verbs in (41) below illustrate:

41.

- An alternating verb (manner?)
 Jan (agent) czyści dywan z brudu. 'John cleans the carpet of dirt' Ajaks 'Ajax' (inanimate argument) czyści dywan z brudu. Wiatr 'Wind' (natural force) czysci dywan z brudu.
- b. A COS-only verb *Doktor* (agent) *leczy go z depresji*. 'The doctor treats him for depression' *Lekarstwo* 'The drug' (inanimate argument) *leczy go z depresji*. *Wiatr* 'Wind' (natural force) *leczy go z depresji*.

 c. A COL-only verb Jan (agent) lamie galęzie. 'John breaks branches' Samochód 'A car' (inanimate argument) lamie galęzie. Wiatr 'Wind' (natural force) lamie galęzie.

¹⁸ Prof. Cetnarowska suggests that this later alternant is possible with an argument which specifies an entity which is less important than the trap, e.g. a carcass. The sentence would be much worse if an animal was alive and so more 'important' than the trap itself. I agree completely with this suggestion. The alternations which are the topic of this paper present still many intriguing points to tackle and this hierarchy of importance is certainly one of them.

¹⁹ For similar tests see also e.g. LEVIN (2006), RAPPAPORT HOVAV and LEVIN (1998, 2008), LEVIN and RAPPAPORT HOVAV (2010, 2005, 2006).

Other tests do not give indisputable results either, and the entailment and indefinite object criteria criss-cross the alternating — non-alternating distinction, as discussed in sections 4. and 5. above. The only regularity that seems to hold is the fact that prefixed verbs are more frequently alternating than non-prefixed ones. We will try to account for this regularity in the next section.

8. ALTERNATING PREFIXED VERBS IN POLISH

In the light of the hitherto discussion it is unclear why prefixed verbs should show any greater propensity for entering the 'clear' alternation than non-prefixed ones. Recall, however, that we have postulated that the element of Location has to be present with alternating verbs. At the same time it is precisely the information concerning the direction (which presupposes location as its point of reference), which constitutes the main semantic contribution of Polish prefixes to the basic verbal meaning. For instance SZYMANEK (2010: 172)²⁰ describes *wy*- (see 6 above) as contributing the 'meaning of direction': 'to bring/take something out [of Location]', z- (see 7 above) signifies 'downward movement' [from a location] (Szymanek 2010:175). O-/ob- (pp.152-153) signifies 'a movement around a given landmark' (see 8 above), od- (p.154) means 'movement away from some location' (see 9 above). Consequently, as the element of Location is assumed to be important in the lexical description of 'clear' verbs (alternating and COL-only) and the prefixes, which add the meaning of location, automatically make their derivatives more eligible for the alternating status, or for being lexicalized with the COL frame. This analysis is supported by the fact that alternating and COL-only verbs predominate in the prefixed data. It is just the examples in (8. e, f, g, h, i, j) which have additional COS-only frames, when compared with their morphologically less complex verbal relatives. Moreover, all of these COS prefixed verbs are formed with prefix o-, thus analogy may be at work in these few cases.²¹

We feel that the prefixation facts in Polish speak strongly in favor of the proposed representation of 'clear' verbs in Polish as presented in section 7^{22} .

²⁰ See also SVENONIUS (2004) for a detailed account of spatial relations implicit in prefixes in Slavic languages.

 $^{^{21}}$ It was pointed to me by prof. Cetnarowska that other prefixed verbs show also COS-only frames, e.g. *uleczyć* 'cure'. Notice, however, that *leczyć* (see 3.a), the non-prefixed verb, has also the same frame, so COS is not contributed by the prefix. In the data we have managed to collect it is only the verbs prefixed with *o*- which manifest this behavior in any numbers.

²² ALEXIADOU and ANAGNOSTOPOULOU (2012) claim that the greater productivity of the alternation with 'clear' verbs than in the case of other verbs with double objects is conditioned in Greek

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PRZESZEREGOWANIA WALENCJI I NAŁOŻONE NA NIE OGRANICZENIA W GRUPIE POLSKICH CZASOWNIKÓW DOTYCZACYCH 'CZYSZCZENIA'

Streszczenie

Artykuł daje odpowiedzi na bardzo podstawowe pytania dotyczące reprezentacji leksykalnej czasownika i podziału zadań między tę reprezentację a operacje gramatyczne w odniesieniu do morfo-syntaksy czasowników, których argumenty wewnętrzne mogą być realizowane różnorodnie.

Analizowana jest grupa polskich czasowników dotyczących 'czyszczenia', które przydzielają dwa argumenty wewnętrzne – w formie dopełnienia wyrażonego frazą rzeczownikową w bierniku i frazą przyjmkową z elementem głównym z, w przypadku których zamianie struktury syntaktycznej

by the fact that the preposition *apo*, which appears with this group of verbs, is semantically more salient, directional, than *se*, which also appears with double object verbs. In Polish the preposition *z*, which introduces the PP in our structures, is also non-salient semantically. It represents also non-directional meanings: e.g. 'consisting of , made of ' (*z drewna* 'out of wood'), 'because of' (*ze złości* 'out of anger), etc. etc. Perhaps prefixed verbs, where directionality is strengthened by the prefix, are more salient in this respect and thus abound in the alternating possibilities.

nie towarzyszy zmiana znaczenia. Autorka zastanawia się, co jest przyczyną takiego stanu rzeczy, że tylko część czasowników o odpowiednim znaczeniu pozwala na tę alternację. Jednocześnie stara się ustalić, jaka reprezentacja leksykalna może wyjaśnić zróżnicowane zachowanie tych czasowników i jakie towarzyszą jej zjawiska gramatyczne. Znajduje związek między elementami prefiksalnymi w takich czasownikach a ich właściwościami alternacyjnymi. Dane dla języka polskiego porównuje z danymi z angielskiego, greckiego i hebrajskiego.

Streściła Anna Malicka-Kleparska

- Key words: morpho-syntax, verbal valency, lexicon, event structure, Polish, English, Greek, Hebrew.
- Słowa kluczowe: morfo-syntaksa, walencja czasownikowa, leksykon, struktura zdarzenia, polski, angielski, grecki, hebrajski.