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VARIATION IN CIRCUMSTANTIAL

MODALITY: POLISH VERSUS

ST'ÁT'IMCETS

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1 Introduction

St'át'imcets 'out of control' constructions (OOCs) and Polish *involuntary-state constructions* (ISCs) may share similar meanings, as the italicized phrases in (1) and (2) show (OOC data given by Davis, Matthewson, and Rullmann (DMR) (2009), who cite sources).

- (1) Kens-7ílhen ku=t'éc szaq', t'u7 OOC
 try-eat DET=sweet bread but
ka-nsnán7-a.
 CIRC-sneeze-CIRC
 'She wanted to eat a cookie, but *she suddenly had to sneeze.*'
- (2) Marta chciała zjeść ciastko, a jej ISC
 Marta wanted eat cookie but she.DAT
się kichnęło.
 REFL sneezed.NEU
 'Marta wanted to eat a cookie, but *she could not help sneezing.*'

DMR (2009) state that (3) is suitable when someone draws with a blindfold on and discovers that she accidentally wrote her name. In such a context, (4) is also well formed.

- (3) Ka-mets-s=kan-á=k'a OOC
 CIRC-write-CAUS=1SG.SUBJ-CIRC=EPIS
 ti=n-skwátsits=a.
 DET=1SG.POSS-name=EXIS
 'I drew my name by accident.'

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A difference for future research relates to entailments. Past ISCs carry actuality entailments (Bhatt 2006). By contrast, DMR (2009) show that OOCs do not carry an actuality entailment.

- (4) Napisało mi się własne imię. ISC
 PREF.wrote.NEU I.DAT REFL OWN name.ACC
 'I wrote my own name (by accident).'

On independent grounds, it has long been noted that constructions in both languages may involve agents without control over the event (for St'át'imcets, see Davis and Demirdache 2000, DMR 2009, Demirdache 1997, among others; for Polish, see Dąbrowska 1997, Dziwirek 1994, Gołąb 1975, Wierzbicka 1988, among others). DMR (2009) argue that OOCCs involve a circumstantial modal, as in Kratzer 1981, 1991. Inspired by their analysis, we propose in section 2 that ISCs carry a silent circumstantial modal, thus accounting for parallelisms with OOCCs. However, such 'out of control' constructions in Polish are not identical to the ones in St'át'imcets, and in section 3 we show how the syntax and semantics of the modal in ISCs in section 2 contribute toward the differences. First, the ISC modal has a fixed interpretation, while OOCCs display several interpretations due to variation in quantificational force. Rullmann, Matthewson, and Davis (2008; also DMR 2009) argue that St'át'imcets modals are not specified for force, and OOCCs may display both existential- and universal-like interpretations. By contrast, we show that force in ISC modals is universal. Second, OOCCs may be personal or impersonal, but the ISC modal must be human-dependent/personal, a requirement that we derive from its syntax. The ISC modal heads an Applicative Phrase with a dative specifier and a clausal complement: a Tense Phrase (TP). The TP contains a reflexive *human* pronoun resuming the dative: so-called impersonal *się*. ISCs, then, display sensitivity to the subject based on dative and reflexive marking hardwired into the interpretation of the modal, which must be personal. By contrast, the OOC affix displays optional sensitivity to the subject, so modality can remain impersonal. Third, the ISC modal is manner-oriented and makes a claim about the subject's lack of control *over the manner of the eventuality*. By contrast, the OOC affix is not oriented to manner and may express 'out of control' with respect to various factors.

Our proposals seek to contribute to an understanding of crosslinguistic variation in modality. ISCs provide an unusual window into modal meanings, in terms of both syntactic and semantic organization. In the syntax, we find a meaning constructed with resources outside the inflectional system and verbal paradigm, namely, with a dative in a new type of high applicative with modal properties that stands above TP and thus dominates the inflectional space of the clause. In the semantics, we find a specialized circumstantial modal indicating that the dative has *no control* over the *manner* of the action. Borrowing some scenarios from DMR (2009), in section 2 we discuss the ISC modal, and in section 3 we compare it with the OOCC.

2 On the Syntax and Semantics of Polish Involuntary-State Constructions

Consider the ISC in (5), with a dative, a neuter V, a reflexive, and a manner adverb. It makes a claim about the subject's lack of control

over the manner of the action, and it contrasts with the regular sentence in (6), with a nominative subject and no reflexive.

(5) Jankowi tańczyło się dobrze.
 Janek.DAT danced.NEU REFL well
 ‘Janek danced, and could not help enjoying it.’

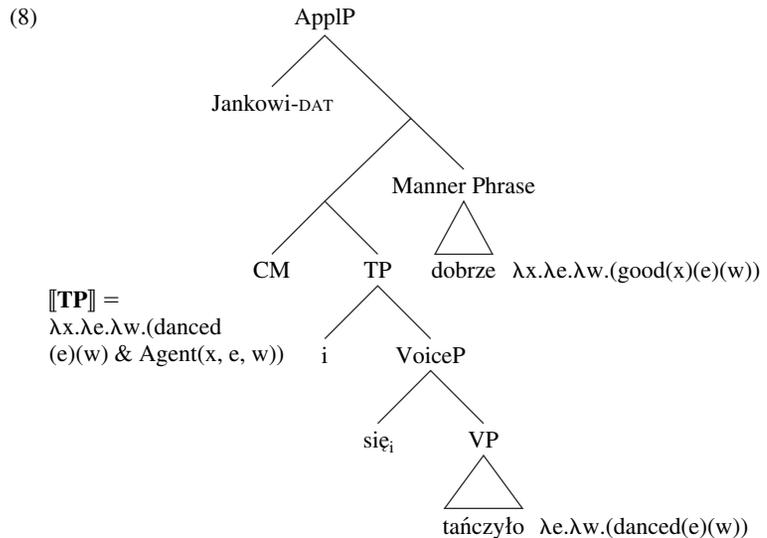
(6) Janek tańczył dobrze.
 Janek.NOM danced.MASC well
 ‘Janek danced well.’

Sentence (5) tells us that Janek could not help enjoying himself when dancing. By contrast, (6) tells us that Janek’s dancing was good. The denotation of *dobrze* ‘well’ in (6) as a property of events contrasts with the denotation in (5), where goodness is relativized to the subject: *dancing* was good versus dancing was good *for Janek*. Manner in ISCs, then, is shifted from an event property and relativized to an entity, as in (7).

(7) $\llbracket \text{dobrze} \rrbracket = \lambda x.\lambda e.\lambda w. e$ is good for x in w

Thus, if Janek danced horribly, (5) could be true, but (6) would be false.

In Rivero’s (2003, 2009) analysis, Slavic involuntary states are high applicative constructions, with an oblique subject as an additional item not part of the argument structure of their verb, and a TP complement. Within this analysis, we propose that in Polish ISCs Applicative Phrases (AppIP) are headed by a silent circumstantial modal (CM) with three obligatory constituents. On this view, (5) has the structure in (8).



In (8), the AppIP headed by CM takes a human dative specifier and includes both arguments of CM as embedded clauses: a TP as re-

strictor, and a Manner Phrase as the modal's nuclear scope. *i* is an index abstracting over the pronoun *się*_{*i*}.

ISCs are oriented toward the dative subject, which in Polish is presented as unable to control the way the eventuality develops. For Gołąb (1975:27), "The logical subject . . . does not cause the quality of the action . . . [which] results from circumstances independent of him." For Wierzbicka (1988:219), "The agent experiences his own action as proceeding well (or not well) for reasons independent of him and unspecifiable." In (14), we propose a denotation for CM in (8) that captures the role of the dative.

The first argument of CM in (8) is an impersonal construction with the indefinite pronoun *się* (Rivero and Sheppard 2003:sec. 5). That is, without a dative subject and a manner phrase, the TP is the full impersonal sentence in (9), with (a) an indefinite reflexive and (b) a V with default agreement (here, neuter). This TP is similar to Italian impersonal *si*-constructions (e.g., Chierchia 1995) such as *Si canta* 'People sing'.

- (9) Tańczyło się.
danced.NEU REFL
'One/People/Someone danced.'

In (8), the reflexive introduces a variable for an agent in a Voice Phrase (Kratzer 1996) dominated by TP, which restricts ISCs to *human* subjects. A common view is that impersonal reflexives must allude to humans. Here, we follow Chierchia (1995) and Rivero and Sheppard (2003:sec. 3.1.4, sec. 4 for argumentation), who view impersonal *się* as a specialized variable with a human presupposition. For Chierchia, Italian *si* binds off a property and quantifies over the nominative subject position. In ISCs, *się* only does part of that job: it introduces a variable bound by a freely generated index to create a property of individuals (see Heim and Kratzer 1998). TP in (8) with the denotation in (10) accounts for the fact that ISCs are possible only with human subjects, that is, are restricted to personal modality.

- (10) $\llbracket i \text{ się tańczyło} \rrbracket = \lambda x: x \text{ is human. } \lambda e.\lambda w. e \text{ is a dancing by agent } x \text{ in } w$

The manner phrase is generally obligatory in ISCs. Omitting it gives rise to ungrammaticality, except under restricted conditions. Manner can be omitted when recoverable from V, as in (2), where the action is inherently accidental (see also (19)–(20)). It can also be omitted when recoverable from the context more broadly, as in (4), when a speaker discovers that she wrote her name by accident.¹

Three arguments support the contention that manner in (8) is a constituent of AppIP, not TP. One, impersonal constructions (TPs) do

¹ Potential differences between "V-based" and "context-based" recoverability of manner remain for future research. A reviewer suggests that perfectivity triggers the 'out of control' interpretation, if manner is absent. However, there are mannerless imperfective ISCs, as (i) and (ii) illustrate.

not *require* manner: (11). If the manner phrase in ISCs were inside TP, it would be unclear why it is obligatory.

- (11) Kiedy się było młodym, się było szczęśliwym.
 when REFL WAS young REFL was happy
 ‘When one was young, one was happy.’
 (Rivero and Sheppard 2003:112, (34b))

Two, there may be more than one manner in ISCs. In (12), *dobrze* ‘well’ serves as argument of CM, while *fatalnie* ‘terribly’ operates within TP and describes the dancing.

- (12) Dobrze Jankowi tańczyło się fatalnie.
 well Janek.DAT danced.NEU REFL terribly
 ‘Janek enjoyed dancing terribly.’ (i.e., he could not help enjoying his awful dancing)

Three, all of Vendler’s Vs (Vendler 1957) participate in ISCs (namely, states, activities, accomplishments, and achievements), and manner adverbs that seldom modify statives (see (13a)) are natural in ISCs embedding such Vs (see (13b)). So manner is a constituent of AppIP.

- (13) a. *Basia dobrze mieszka u swojej siostry.
 Basia.NOM well live.3SG at her.own sister
 b. Basi dobrze mieszka się u swojej siostry.
 Basia.DAT well live.3SG REFL at her.own sister
 ‘Basia enjoys living at her sister’s.’
 (Dziwirek 1994:(28b))

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- (i) Nie myśli mi się dzisiaj.
 NEG think.3SG I.DAT REFL today
 ‘I can’t think today.’
 (Dziwirek 1994:61)

- (ii) Chciało mi się śpiewać.
 wanted.NEU I.DAT REFL sing
 ‘I felt like singing.’
 (Wierzbicka 1988:417)

See also Rivero and Sheppard 2003:sec. 5.2.1.

Polish has a pattern with dative subjects restricted to transitive Vs in inchoative frames, which does not require a manner phrase: the dative anticausative (DAC) in (iii) (Frąckowiak and Rivero 2008, Rivero 2003:sec. 3, Rivero and Sheppard 2003:sec. 5.5). It differs from the ISCs in (4) and (iv) in taking a nominative theme agreeing with V and in the interpretation of the dative, which Frąckowiak and Rivero dub an “unintentional causer.”

- (iii) Jankowi (niechcący) złamały DAC
 Janek.DAT (involuntarily) PF.broken.FEM.PL
 się okulary.
 REFL glasses.NOM.FEM.PL
 ‘Janek broke the glasses (involuntarily).’
 (iv) Jankowi czytało się tę książkę ISC
 Janek.DAT read.NEU REFL this book.ACC
 z przyjemnością.
 with pleasure
 ‘(Somehow), Janek read this book with (unexpected) pleasure.’

For more details on Polish, see also Rivero, Arregui, and Frąckowiak, to appear.

Following DMR's (2009) account of OOCCs, in (14) we characterize the CM in ISCs as a Kratzer-style circumstantial modal (modality based on contextually identified facts). One peculiarity of the CM in ISCs is that both the type of modality and the force are fixed: ISCs make a claim about the inevitability of the manner of the event for the subject, given the relevant circumstances. Our analysis captures this by assigning universal force to the CM in ISCs and treating manner phrases as selected arguments of the modal. The latter view is inspired by von Stechow and Iatridou (2005), who argue that purpose *to*-clauses are actually part of the *syntactic frame* of teleological modals (e.g., *To go to Harlem, you have to take the A-train*). Von Stechow and Iatridou observe that *to*-clause arguments may remain implicit when they are recoverable, which is also the case for the manner phrases in ISCs (see (2)/(4)). Wierzbicka (1988) notes that ISCs take the *eventualities* themselves for granted. We treat them as presupposed and encode this in the denotation, without espousing a specific analysis (but see, e.g., Arregui 2005, 2007, Bhatt 2006, Hacquard 2006). The presupposition view is supported by standard presupposition tests (e.g., negation).

$$(14) \llbracket \mathbf{CM} \rrbracket^{w,f\text{-circumstantial}} (P_{\langle e, \langle 1, \langle s, t \rangle \rangle \rangle}) \\ (Q_{\langle e, \langle 1, \langle s, t \rangle \rangle \rangle})(x_e)(w) = 1 \\ \text{iff } \{w' : w' \in \cap \mathbf{f}_{\text{circ}}(w) \ \& \ P(x)(e)(w') = 1\} \\ \subseteq \{w' : Q(x)(e)(w') = 1\} \\ \text{where } \mathbf{e} \text{ is a salient presupposed eventuality and } \mathbf{f}_{\text{circ}} \text{ is a} \\ \text{salient circumstantial modal base.}$$

In (14), CM takes two properties as arguments and results in a property of individuals that, given (8), will be predicated of the dative. The restrictor of the modal is TP, and the nuclear scope is the manner phrase. CM claims that in all the worlds in the salient circumstantial modal base in which the restrictor property is true of the relevant individual and event, the nuclear scope property is also true of the relevant individual and event. So, in all the worlds that fit the relevant circumstances in which the dative participates in the event, the manner of the event is as described; that is, given the circumstances, the manner of the event is *inevitable*. In (15), we show the denotation for (5), given (7) and (14).

$$(15) \llbracket [\mathbf{Jankowi} \llbracket [\mathbf{CM} [\mathbf{i} \ \text{się}_i \ \text{tańczyło}] \\ [\mathbf{dobrze}]]] \rrbracket \rrbracket^{w,f\text{-circ}} = \\ \lambda w_s. \{w' : w' \in \cap \mathbf{f}_{\text{circ}}(w) \ \& \ \mathbf{e} \text{ is a dancing} \\ \text{by Janek in } w'\} \subseteq \{w' : \mathbf{e} \text{ is good for Janek in } w'\}$$

The interpretation of the sentence is defined because *Janek* satisfies the human presupposition in the property corresponding to TP (we assume that modal base and event presuppositions are also defined). According to (15), the ISC in (5) is true in a world iff all the worlds that satisfy the modal base (i.e., those matching the actual world with respect to relevant circumstances), including the presupposed event of Janek dancing, are also worlds in which the event was pleasurable for Janek. In other words, given the circumstances, the pleasurable manner was inevitable, and so *out of Janek's control*.

In sum, ISCs consist of a high ApplP headed by a null universal modal relativized to a dative subject linked to a human reflexive pronoun. The modal has a semantically encoded circumstantial modal base and takes two arguments: a TP that restricts its modal base, and a manner phrase formally reminiscent of a purpose clause in goal-oriented modality. The modal requires manner, so the manner of the eventuality with the dative agent is inevitable. Thus, ISCs have an ‘out of control’ interpretation in the precise sense of *no choice as to the manner of the eventuality*. In section 3, we argue that such properties underlie the more restricted interpretation of the ISC modal compared with OOCs in St’át’imcets.

3 Comparing Involuntary-State Constructions in Polish and ‘Out of Control’ Constructions in St’át’imcets

The ISC (4) bears a semantic resemblance to the OOC (3), which for Demirdache (1997), among others, involves an agent not in control and an action not done on purpose. Inspired by the analysis of OOCs in DMR 2009, we have captured the resemblance with an analysis of ISCs in terms of a circumstantial modal. However, ISCs differ from OOCs, as we now argue in more detail. A first difference is that ISCs display a fixed interpretation, while OOCs may display the five interpretations illustrated below, which DMR (2009) reduce to two. DMR argue that St’át’imcets modals are not specified for force, hence may display interpretations with universal force and with force weaker than necessity (Rullmann, Matthewson, and Davis 2008). Concerning OOCs, they classify the ‘ability’ and ‘manage-to’ interpretations in (16a–b) as existential, and the ‘accidentally’ interpretation in (3), the ‘suddenly’ interpretation in (17a), and the ‘noncontrollable’ interpretation in (17b) as universal.

- (16) a. Wá7=lhkan ka-cát-s-a ta=k’ét’h=a.
 IMPF=1SG.SUBJ CIRC-lift-CAUS-CIRC DET=rock=EXIS
 ‘I can lift the rock.’
- b. Ka-cwák-s=kan-a na=wá7 xúq’wleqs
 CIRC-wake-CAUS=1SG.SUBJ-CIRC DET=IMPF snore
 n-snúk’wa7.
 1SG.POSS-friend
 ‘I managed to wake up my snoring friend.’
- (17) a. Ka-lhexw-min-ts=kácw-a.
 CIRC-come.up-RED-1SG.OBJ=2SG.SUBJ-CIRC
 ‘You came up to me all of a sudden.’
- b. Ka-lhéxw-a ta=snéqwem=a.
 CIRC-come.up-CIRC DET=sun=EXIS
 ‘The sun came out.’

The core perspective unifying the above universal interpretations is that they involve a lack of choice. In ‘accidentally’ (3), an agent could be in control but in fact is not, and in impersonal ‘noncontrollable’ (17b), no agent could potentially be in charge. DMR argue that the

modal base in these examples is circumstantial because events happen without any choice when facts in the world conspire to make them inevitable.

Polish ISCs have *one* fixed interpretation, resembling the OOC reading in (3) called ‘accidentally’. ISCs do not display the other four interpretations of OOCs. Our analysis in section 2 can account for this difference. Partly, variation comes from quantificational strength. The force of the Polish CM modal is lexically determined (as in English), and it is universal. This makes the correct prediction that ISCs should not display interpretations with a force weaker than necessity—those dubbed ‘ability’ and ‘manage-to’ in OOCs.

Two of the three universal interpretations of OOCs are also absent in ISCs. DMR state that the ‘suddenly’ flavor of the OOC in (17a) is cancelable and arises pragmatically because accidental events are also often sudden. Given the manner orientation of ISCs, it seems reasonable that the ‘suddenly’ flavor should be absent, as manners can easily be accidental without being sudden. The pattern in (17b) called ‘noncontrollable’ displays impersonal modality, and its ISC translation is ungrammatical, as in (18).

- (18) *Słońcu się wzeszło.
 sun.DAT REFL came.out.NEU
 ‘*The sun (somehow) came out.’

It is often noted in the literature on Polish that ISCs are restricted to human dative subjects. In section 2, we derived this restriction from sensitivity to the subject hardwired into the interpretation of the modal linked to dative marking in the AppIP and reflexive marking in its complement. In contrast with the affixal OOC modal *ka . . . a*, and borrowing terminology from DMR (2009), ISCs are restricted to *personal* modality.

The last difference is that the CM in ISCs is specialized for manner, while the affixal OOC modal expresses ‘out of control’ with respect to various factors. The fact that manner is the key for ISCs is made evident by the contrast between (19) and (20). The latter is completely parallel to the ‘accidentally’ OOC (21). In (20), *zaprószyć* ‘start a fire by accident’ has an accidental manner built into its meaning, and the ISC may appear without an overt manner. In (19), the ISC with ‘mannerless’ *zapalić* ‘light up’ requires an overt manner.

- (19) Zapaliło mi się sofę ISC
 lighted.up.NEU I.DAT REFL sofa.ACC
 *(przez przypadek).
 *(accidentally)
 ‘I started a fire in my sofa accidentally.’
- (20) Zaprószyło mi się ogień ISC
 set.on.fire.NEU I.DAT REFL fire.ACC
 w łóżku.
 in bed
 ‘I (accidentally) started a fire in my bed.’

- (21) *Ka-gwél-s=kan-a* *ta=ngúy'tten=a.* OOCC
 CIRC-burn-CAUS=1SG.SUBJ-CIRC DET=bed=EXIS
 'I accidentally set my bed on fire.'

4 Conclusions

We have compared ISCs and OOCCs, observing both similarities and differences. Similarities arise because both constructions are headed by a circumstantial modal. The contrasts are derived from differences in quantificational strength and the syntactic frame in which the modal appears. The comparison between ISCs and OOCCs has proven fruitful. The similarities have led us to expand the typology of applicatives in Universal Grammar. Namely, other than the individual/low and event/high types proposed by Pytkäinen (2008), we have argued for *modal applicatives*, which stand in the CP domain and establish a modal relation between individuals and features of events. This is both a novel type of applicative and a novel location for a modal head. Perhaps more importantly, the comparison illustrates the wide range of variation in the expression of modality, which has not been addressed in the traditional literature on this topic. In comparing ISCs and OOCCs, we see different ways in which languages (re)combine the basic building blocks of modal meanings to arrive at results that are strikingly similar, with differences mediated by syntax.

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