

Variation in circumstantial modality: Polish vs. St'át'imcets.

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St'át'imcets *Out of Control* constructions (OOC) and Polish *Involuntary State* constructions (ISCs) may share similar meanings, as the **bolded** phrases in (1-2) show (OOC data from Davis, Matthewson, & Rullmann (DMR) (2009), who cite sources).

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

DMR (2009) tell us 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 ti=n-skwátsits=a. OOC
CIRC-write- CAUS=1SG.SUBJ-CIRC=EPIS DET =1SG.POSS-name=EXIS
'I drew my name by accident.'
- (4) Napisało mi się własne imię. ISC
PREF.wrote.NEU I.DAT REFL own name.ACC
'I wrote up 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 OOC, see a. o., Davis

& Demirdache 2000, DMR 2009, Demirdache 1997. For Polish, see a. o., Gołąb 1975, Dąbrowska 1997, Dziwirek 1994, Wierzbicka 1988). DMR (2009) argue that OOC involves a circumstantial modal, as in (Kratzer 1981, 1991). Inspired by their analysis, we propose in §1 that ISCs carry a silent circumstantial modal, thus accounting for parallelisms with OOC. However, such ‘out-of-control’ constructions are not identical, and in §2 we show how the syntax and semantics of the modal in ISCs in §1 contribute towards the differences. First: the ISC modal has a fixed interpretation, while OOC displays several interpretations due to variation in quantificational force. DMR (2008, 2009) argue that St’át’imcets modals are not specified for force, and OOC may display both existential- and universal-like interpretations. By contrast, we show that force in ISC modals is universal. Second: OOC may be personal or impersonal, but the ISC modal must be human-dependent / personal, which we derive from its syntax. The ISC modal heads an Applicative with a dative specifier and a clausal complement: a Tense Phrase (TP). The TP holds 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, affixal OOC 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, OOC is not oriented to manner, and may express ‘out-of-control’ with respect to various factors.¹

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, so 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), §1 discusses the ISC modal, and §2 compares it to OOC.

1 On the syntax and semantics of Polish ISCs

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 contrasts with the regular sentence in (6), with a nominative subject and no reflexive.

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

(6) Janek tańczył dobrze.
John.NOM danced.MASC well
'John danced well.'

Sentence (5) tells us that John could not help enjoying himself when dancing. By contrast, (6) tells us that John's dancing was good. The denotation of *dobrze* 'well' in (6) as a property of events contrasts with (5), with goodness relativized to the subject: *dancing* was good vs. dancing was good *for John*. Manner in ISCs, then, is shifted from an event property and relativized to an entity, as in $[[\mathbf{dobrze}]] = \lambda x.\lambda e.\lambda w. e$ is good for x in w . Thus, if John danced horribly, (5) could be true, but (6) would be false.

manner phrase, the TP is the full impersonal sentence in (8), with (a) an indefinite reflexive, and (b) a V with default agreement (here Neuter). This TP is similar to Italian impersonal *si*-constructions (Chierchia 1995, a. o.): *Si canta* ‘People sing.’

- (8) Tańczyło się.
dance.NEU REFL
‘One/people/someone danced.’

In (7), 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 & Sheppard (2003: §3.1.4, §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 & Kratzer 1998). TP in (7) with the denotation in (9) accounts for why ISCs are only possible with human subjects, i.e. restricted to personal modality.

- (9) $[[i \text{ się}_i \text{ tańczyło}]] = \lambda x: x \text{ is human. } \lambda e. \lambda w. e \text{ is a dancing by agent } x \text{ in } w.$

The manner phrase is generally obligatory in ISCs. If omitted, 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 (18-19)). 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.^{2,3}

Three arguments support the contention that manner in (7) is a constituent of ApplP, not TP. One, impersonal constructions (TPs) do not *require* manner: (10). If the manner phrase in ISCs were inside TP, it would be unclear why it is obligatory.

(10) Kiedy się było młodym, się było szczęśliwym.

When REFL was young, REFL was happy

‘When one was young, one was happy.’ (Rivero & Sheppard 2003)

Two, there may be more than one manner in ISCs. In (11), *dobrze* ‘well’ serves as argument of CM, while *fatalnie* ‘terribly’ operates within TP, and describes the dancing.

(11) Dobrze Jankowi tańczyło się fatalnie.

Well John.DAT danced.NEU REFL terribly

‘John enjoyed dancing terribly.’ (i.e. he could not help enjoying his awful dancing)

Three, all Vendler’s Vs participate in ISCs, and manner adverbs that seldom modify statives, (12a), are natural in ISCs embedding such Vs: (12b). So manner is under ApplP.

(12) a. *Basia dobrze mieszka u swojej siostry.

B.NOM well live.3SG at her.own sister

b. Basi dobrze mieszka się u swojej siostry.

B.DAT well live.3SG REFL at her.own sister

‘Barbara enjoys living at her sister’s.’ (Dziwirek 1994: (28b))

Following DMR’s account of OOC, in (13) we characterize CM in ISCs as a Kratzer-style circumstantial modal (modality based on contextually identified facts). One peculiarity of CM 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 CM, 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 a.o. Bhatt 2006, Hacquard 2006, Arregui 2005, 2007). The presupposition view is supported by standard presupposition tests (e.g. negation).

$$(13) \quad [[\mathbf{CM}]]^{w, f\text{-circumstantial}} (\mathbf{P}_{\langle e, \langle l, \langle s, t \rangle \rangle}) (\mathbf{Q}_{\langle e, \langle l, \langle s, t \rangle \rangle}) (x_e)(w) = 1$$

iff $\{w' : w' \in \cap \mathbf{f}_{\text{circumstantial}}(w) \ \& \ P(x)(e)(w') = 1\} \subseteq \{w' : Q(x)(e)(w') = 1\}$

where e is a salient presupposed eventuality and $\mathbf{f}_{\text{circumstantial}}$ is a salient circumstantial modal base.

In (13), CM takes two properties as arguments, and results in a property of individuals which, given (7), 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: i.e. given the circumstances, the manner of the event is INEVITABLE. In (14), we show the denotation for (5), given (7) and (13):

$$(14) \quad [[[\mathbf{Jankowi} [[\mathbf{CM} [\mathbf{i} \text{ się; tańczyło}] [\mathbf{dobrze}]]]]]]^{w, f\text{-circ}} =$$

$$\lambda w_s. \{w': w' \in \cap \mathbf{f}_{\text{circ}}(w) \ \& \ \mathbf{e} \text{ is a dancing by John in } w'\}$$
$$\subseteq \{w': \mathbf{e} \text{ is good for John in } w'\}.$$

The interpretation of the sentence is defined because John satisfies the human presupposition in the property corresponding to TP (we assume that modal base and event presuppositions are also defined). According to (14), 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 as to relevant circumstances) including the presupposed event of John dancing, are also worlds in which the event was pleasurable for John. In other words, given the circumstances, the pleasurable manner was inevitable, and so *out of John's control*.

In sum, ISCs consist of a High Appl 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 associate with 'out of control' in the precise sense of *no choice as to the manner of the eventuality*. In §2, we argue that such properties underlie the more restricted interpretation of the ISC modal compared to OOC.

2 Comparing ISCs in Polish and OOC in St'át'imcets

ISC (4) bears a semantic resemblance to OOC (3), which for Demirdache (1997), a. o., involves an agent not in control, and an action not done on purpose. Inspired by the analysis of OOC in (DMR 2009), we have captured the resemblance with an analysis of ISCs in terms of a circumstantial modal. However, ISCs differ from OOC, as we now

argue in more detail. A first difference is that ISCs display a fixed interpretation, while OOC may display five interpretations illustrated below, which DMR reduce to two. DMR argue that St'át'imcets modals are not specified for force, so may display interpretations with universal force and with force weaker than necessity (Rullmann, Matthewson & Davis 2008). Concerning OOC, they classify the 'ability' and 'manage-to' interpretations in (15a-b) as existential, and the 'accidentally' interpretation in (3), the 'suddenly' interpretation in (16a), and the 'non-controllable' interpretation in (16b) as universal.

- (15) a. Wá7 =lhkan **ka-** cá-t-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 n-snúk'wa7.
 CIRC-wake-CAUS=1SG.SUBJ-CIRC DET=IMPF snore 1SG.POSS-friend
 'I managed to wake up my snoring friend.'
- (16) a. **Ka-** lhéxw- 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 'non-controllable' (16b), 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.

Pol ISCs have *one* fixed interpretation, resembling the OOC reading in (3) called ‘accidentally’. ISCs do not display the other four interpretations of OOC. Our analysis in §1 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 OOC.

Two of the three universal interpretations of OOC are also absent in ISCs. DMR tell us that the ‘suddenly’ flavor of OOC in (16a) 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 (16b) called ‘non-controllable’ displays impersonal modality, and its ISC translation is ungrammatical, as in (17).

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

It is often noted in the Polish literature that ISCs are restricted to human dative subjects. In §1, we derived this restriction from sensitivity to the subject hardwired into the interpretation of the modal linked to dative marking in the ApplP 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 CM in ISCs is specialized for manner, while OOC 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 (18) and (19). The latter is completely

parallel to ‘accidentally’ OOC (20). In (19), *zaproszyć* ‘start a fire by accident’ has an accidental manner built into its meaning, and the ISC may appear without an overt manner. In (18), the ISC with ‘mannerless’ *zapalić* ‘light up’ requires an overt manner.

- (18) Zapaliło mi się sofę *(przez przypadek).
Lighted.up.NEU I.DAT REFL sofa.ACC *(accidentally)
‘I started a fire in my sofa accidentally.’
- (19) Zaproszyło mi się ogień w łóżku. ISC
Set.on.fire.NEU I.DAT REFL fire.ACC in bed
‘I (accidentally) started a fire in my bed.’
- (20) **Ka-gwél-s=kan-a** ta=ngúy’tten=a. OOC
CIRC-burn-CAUS=1SG.SUBJ-CIRC DET=bed=EXIS
‘I accidentally set my bed on fire.’

3 Conclusions

We have compared ISCs and OOCs, 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 OOC has proven fruitful. The similarities have led us to expand the typology of Applicatives in UG. Namely, other than the Individual / Low and Event / High types proposed by Pyłkkänen (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 OOC, we see different ways in which languages (re)combine the basic building blocks of modal meanings, to arrive to results that are strikingly similar, with differences mediated by syntax.

Footnotes

¹ Work subsidized by SSHRC Grant 410-2006-0150 to M. Rivero. We thank three anonymous reviewers for useful comments. Usual disclaimers apply. A difference for future research relates to entailments. Past ISCs carry actuality entailments (Bhatt 2006). By contrast, DMR show that OOC do not carry an actuality entailment.

² Potential differences between ‘V-based’ and ‘context-based’ recoverability of manner remain for future research. A reviewer suggests perfectivity as a trigger for ‘out-of-control’, if manner is absent. However, there are mannerless imperfective ISCs: *Nie myśli mi się dzisiaj*. ‘I can’t think today’ (Dziwirek 1994: 61), *Chciało mi się śpiewać*. ‘I felt like singing’ (Wierzbicka 1988: 417). See also (Rivero & Sheppard 2003: §5.2.1).

³ 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 (i) (Frąckowiak & Rivero 2008, Rivero 2003: §3, Rivero & Sheppard 2003: §5.5). It differs from the ISCs in (4) and (ii) in taking a nominative theme agreeing with V, and in the interpretation of the dative, which Frąckowiak and Rivero dub an ‘Unintentional Causer’.

(i) Jankowi (niechcący) złamały się okulary. DAC

John.DAT (involuntarily) PF.broken.FEM.PL REFL glasses.NOM.FEM.PL

‘John broke the glasses (involuntarily).’

(ii) Jankowi czytało się tę książkę z przyjemnością. ISC

John.DAT read.NEU REFL this book.ACC with pleasure

‘(Somehow), John read this book with (unexpected) pleasure.’

For more details on Polish see also (Rivero, Arregui, and Frąckowiak 2009).

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