Squibs and Discussion

Predicative Adverbs: Evidence from Polish

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Abstract: This squib argues that adverbs can act as primary predicates. In Polish, a relatively large class of adverbs are frequently used in predicative constructions when the subject of predication is an InfP (infinitival phrase) or a CP referring to abstract objects: event kinds or facts. This requirement of a purely verbal rather than nominal subject of predication is the main difference between predicative adverbs and predicative adjectives, explaining contrasts between their syntactic behavior in extraction and coordination. Predicative adverbs usually express attitudes toward event kinds or facts and often combine with dative experiencers; in the case of InfP subjects, dative experiencers obligatorily control the subject.

Keywords: predication, adverbs, events, control, adjectives, experiencers

1 Introduction

It is commonly—even if usually tacitly—assumed that adverbs cannot act as primary predicates. Although it is not fully clear whether it is meant as a crosslinguistic generalization, an explicit statement to this effect may be found in a prominent monograph on predication (Rothstein 2001:129): "I assume that the absence of a predication relation is because adverbs are just not syntactic predicates. They never appear in a position in which they can be predicated of a syntactic argument; this is not because they must be predicated of events, since even if the argument denotes an event, it cannot have an adverb predi-

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cated of it. The examples in [(1)–(3)] are all unacceptable with adverbial predicates, though the corresponding adjectives are all OK."

(1) The destruction of the city was brutal/*brutally.

(2) The reading of the verdict was slow/*slowly.

(3) John considered [the running slow/*slowly].

More often, discussions of nonverbal predication concentrate on nominal, adjectival, and prepositional predicates, implicitly assuming that adverbs cannot be productive predicates. For example, the only adverbial predicates mentioned in Roy 2013, a monograph on nonverbal predication, are lexical idiosyncrasies such as the Irish and Spanish equivalents of *well* in *Jane is well.*

The aim of this squib is to show that it is not universally true that "adverbs are just not syntactic predicates" or that they may act as primary predicates only exceptionally. We demonstrate on the basis of attested data[1] that, in Polish, a certain—relatively large and varied—class of adverbs may be productively used as predicates in copular constructions, namely, in constructions in which the subject is a verbal constituent—a complementizer phrase (CP) or a bare infinitival phrase (henceforth, InfP; not to be confused with InflP or IP, i.e., Inflectional Phrase)—denoting a fact or an event kind.[2]

2 Verbal Subjects of Predication

It is well-known that, crosslinguistically, CPs and InfPs may act as grammatical subjects, also in predicative constructions in which they are predicated of, that is, in which they act as subjects of predication. (4)–(5) are examples from Uhrig 2018:chap. 6, a recent corpus study of English subjects.[3]

(4) [That he ate lots of junk food] was not healthy.

(5) [To redouble humanitarian efforts during Ramadan] would also be both honourable and politically effective.

Similarly for Polish, as in the attested (6)–(11) from the National Corpus of Polish.[4]

[1] This squib is almost exclusively based on authentic examples drawn from the National Corpus of Polish (NKJP; http://nkjp.pl; Przepiórkowski et al. 2011, 2012).

[2] While there are other constructions in Polish that might perhaps also be analyzed as involving predicative adverbs, in this squib we concentrate exclusively on constructions with verbal subjects.

[3] For the sake of clarity, subjects of predication are marked with square brackets.

[4] Verbal subjects in Polish predicative constructions are further discussed—and provided a syntactic analysis couched in Lexical Functional Grammar (Kaplan and Bresnan 1982, Dalrymple, Lowe, and Mycock 2019)—in Patejuk and Przepiórkowski 2018.

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(6) Ciekawostką jest, [że w akumulatorach jako paliwo
curio.INS is.3SG that in batteries as fuel
używany będzie alkohol].
used will alcohol
'It is an interesting fact that alcohol will be used as fuel in batteries.' (NKJP)

(7) Grzechem jest [oglądać ten film].
sin.INS is.3SG watch.INF this film
'It is a sin to watch this film.' (NKJP)

(8) Jasne było, [że pochodzi on z
clear.NOM.SG.N was.3SG.N that comes he from
kradzieży].
theft
'It was clear that it had been stolen.' (NKJP)

(9) Ciekawe jest [odpowiadać na znane sobie
interesting.NOM.SG.N is.3SG answer.INF on known self
pytania]?
questions
'Is it interesting to answer questions known to oneself?' (NKJP)

(10) Bez sensu było, [że atakowali cały świat].
without sense was.3SG.N that attacked whole world
'It did not make any sense that they were attacking the whole world.' (NKJP)

(11) W dobrym guście jest [zapożyczyć coś z
in good taste is.3SG borrow.INF something from
męskiej garderoby].
male wardrobe
'It is in good taste to borrow something from men's wardrobe.' (NKJP)

Polish is a relatively free word order language, and the typical (but not exclusive) word order in such constructions is "predicate – copula – verbal subject," perhaps due to the relative heaviness of such verbal (CP/InfP) subjects. In (6)–(7), the nominal predicate is in the instrumental case, just as in the usual predicative constructions with nominal subjects (see, e.g., Pisarkowa 1965 and Przepiórkowski 1999). Similarly, in (8)–(9), the adjectival predicate is in the nominative, again mirroring the usual predicative constructions with nominal subjects. As shown in (10)–(11), the predicate may be a prepositional phrase, just as in the case of nominal subjects. Examples (6)–(11) show that all six possibilities—nominal/adjectival/prepositional predicate × CP/InfP subject—are fully acceptable and attested. Note that, in all six examples, the copula occurs in the "default" third person singular neuter[5] form because the grammatical subject is not nomina-

[5] In Polish, gender is overt on finite verbs only in the past tense—that is, in (8) and (10), but not in the other four examples.

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tive (it is not cased at all); this is an instance of so-called default agreement (Dziwirek 1990).

Such verbal subjects of predication may also occur in "small clause" constructions involving verbs such as *uważać* 'consider', where—unlike in (6)–(11)—they are grammatical objects rather than grammatical subjects.

(12) Koledzy . . . uważali za dyshonor
colleagues.NOM considered.3PL as dishonor.ACC
[przegrywać z kobietą].
lose.INF with woman
'Colleagues . . . considered it a dishonor to lose against a woman.' (NKJP)

(13) Uważam za prawdopodobne, [że wirus ten może
consider.1SG as probable.ACC.SG.N that virus this may
się rozprzestrzenić].
REFL spread
'I consider it probable that this virus may spread.' (NKJP)

As expected, such subjects of predication in the object position become grammatical subjects in the passive voice (a *by*-phrase may also be used, as shown in (14)).

(14) [Przegrywać z kobietą] było uważane
lose.INF with woman was.3SG.N considered.NOM.SG.N
za dyshonor (przez kolegów).
as dishonor.ACC by colleagues
'To lose against a woman was considered a dishonor (by colleagues).'

(15) Jest uważane za prawdopodobne, [że
is.3SG considered.NOM.SG.N as probable.ACC.SG.N that
wirus ten może się rozprzestrzenić].
virus this may REFL spread
'It is considered probable that this virus may spread.'

In brief, it is uncontroversial that verbal (CP/InfP) constituents may act as subjects of predication—and often as grammatical subjects—in Polish predicative constructions.

3 Predicative Adverbs in Polish

It turns out that in such cases the predicate may often be expressed by an adverb.[6] For example:

(16) Dobrze jest, [że czują respekt].
good.ADV is.3SG that feel respect
'It is good.ADV that they feel respect.' (NKJP)

[6] The existence of predicative uses of adverbs has occasionally been pointed out in Polish linguistic literature, especially in Grzegorczykowa 1975: 32–36, where constructions with InfP subjects are discussed; predicative adverbs are also mentioned in Kibort 2004:sec. 4.5 and Bondaruk and Szymanek 2007:sec. 4.2.

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(17) Najłatwiej i najtaniej było [upłynnić
easy.ADV.SUP and cheap.ADV.SUP was.3SG.N sell.INF
ziarno czy ziemniaki].
grain or potatoes
'It was easiest.ADV and cheapest.ADV to sell grain or potatoes.' (NKJP)

Forms marked in (16)–(17) as ADV, while glossed here with English adjectives, are uncontroversial adverbs in Polish. Although they are morphologically related to corresponding adjectives—for example, *dobrze*.ADV :: *dobry*.ADJ.NOM.SG.M—they cannot be analyzed as adjectives: (a) they cannot be used adnominally (see (18)); (b) they can be used adverbally (see (19)); and (c) they are not syncretic with any forms in the inflectional paradigms of corresponding adjectives.[7]

(18) {dobry.ADJ.NOM.SG.M / *dobrze.ADV} pływak.NOM.SG.M
'good swimmer'

(19) On {dobrze.ADV / *dobry.ADJ.NOM.SG.M} pływa.3SG.
'He swims well.'

Constructions with adverbial predicates are analogous to those with typical—nominal, adjectival, and prepositional—predicates: in both, the copula may be dropped in present tense, as in (20)–(21); in both, other verbs that can combine with nonverbal predicates may be used (e.g., *wydawać się* 'seem', *stać się* 'become'), as in (22)–(23); in both, the verbal CP/InfP subject triggers "default agreement" on the verb.

(20) Najtrudniej [pogodzić się z tym] ludziom
difficult.ADV.SUP reconcile.INF REFL with this people.DAT
młodym.
young.DAT
'[It is] most difficult.ADV for young people to come to terms with this.' (NKJP)

(21) Przykro, [że nie udało się uratować sosen].
sad.ADV that NEG managed REFL save pines
'[It is] sad.ADV that we did not manage to save the pines.' (NKJP)

(22) Praktyczniej wydaje się [mieć ją na oku w
practical.ADV.CMP seems.3SG REFL have.INF her on eye in
koalicji].
coalition
'It seems more practical.ADV to keep an eye on her in the coalition.' (NKJP)

[7] Moreover, since the adverbs in (17) are superlative (comparative could also be used, as in (22)–(23)), it is not feasible to analyze them as some sort of defective verbs, or "quasi-verbs" (see Saloni 1974, as well as Bańko 2001 and references therein, on this grammatical class), as is sometimes done in Polish linguistics (see, e.g., Laskowski 1999:60–61).

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(23) . . . stało się lepiej, [że teraz kadrę
became.3SG.N REFL good.ADV.CMP that now team
poprowadzi ktoś inny].
lead somebody else
' . . . it is (lit. became) better.ADV that somebody else will now lead the national team.' (NKJP)

When predicative adverbs are replaced with corresponding adjectives, the meaning normally remains the same;[8] compare the predicative constructions in (16)–(17) with those in (24)–(25).[9]

(24) Dobre jest, [że czują respekt].
good.ADJ is.3SG that feel respect
'It is good.ADJ that they feel respect.'

(25) Najłatwiejsze i najtańsze było [upłynnić . . .].
easy.ADJ.SUP and cheap.ADJ.SUP was.3SG.N sell.INF
'It was easiest.ADJ and cheapest.ADJ to sell . . . '

Furthermore, it is possible to coordinate an uncontroversial prepositional predicate with an adverb, as in the attested (26).

(26) W dobrym guście i modnie było [mieć w
in good taste and trendy.ADV was.3SG.N have.INF in
domu wypchanego cietrzewia].
home stuffed grouse
'It was in good taste and trendy.ADV to have a stuffed grouse at home.' (NKJP)

While it is a matter of debate which cases of unlike category coordination should be analyzed via ellipsis of sentential coordination (so-called conjunction reduction), it is generally assumed that the unlike category predicates are conjoined directly, within a single predicative position, by virtue of bearing the same predicative features (Sag et al. 1985) or predicative "supercategory" (Bruening and Al Khalaf 2020). Indeed, (26) has the same predicative meaning as the prototypically predicative (27), which involves a nominative gerundial subject instead of an InfP and an adjective in place of an adverb.

(27) W dobrym guście i modne było
in good taste and trendy.ADJ.NOM.SG.N was.3SG.N

[8] In the case of InfP subjects, as in (25), adjectives are sometimes perceived as degraded with respect to the corresponding adverbs. They are also much less frequent in the National Corpus of Polish, although naturally occurring and fully acceptable examples may easily be found; see, for example, (28) and (31).

[9] In such constructions with verbal subjects of predication, predicative adjectives must appear in the "default" nominative singular neuter form (Patejuk and Przepiórkowski 2018), so—for reasons of space and to avoid unnecessary clutter—such forms are henceforth glossed as ADJ rather than (ADJ.) NOM.SG.N.

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[posiadanie w domu wypchanego cietrzewia].
having.NOM.SG.N at home stuffed grouse
'Having a stuffed grouse at home was in good taste and trendy.ADJ.'

4 Predicative Adverbs vs. Predicative Adjectives

As noted above, in the case of InfP and CP subjects, the same predicative meaning may be expressed by adverbial and adjectival predicates—compare again (16)–(17) with (24)–(25). While there is no systematic difference in meaning between the two constructions, there are some idiosyncratic lexical differences. For example, there is no adverb with the meaning corresponding to the main meaning of the adjective *ważny* 'important',[10] so only the adjective may be used (see (28)), and—conversely—it seems that only the adverb *głupio* 'stupid, awkward' has the meaning 'awkward', so only the adverb can be used in the intended sense in (29).

(28) Bardzo ważne / *ważnie jest [ukazać jego
very important.ADJ/*ADV is.3SG show.INF his
naturalne piękno].
natural beauty
'It is very important.ADJ to show his natural beauty.' (NKJP)

(29) . . . {głupio / #głupie} było [milczeć],
{awkward.ADV/#stupid.ADJ} was.3SG.N be-silent.INF
skoro jechałyśmy razem metrem.
as traveled.1PL.F together subway.INS
' . . . it was awkward.ADV to be silent, as we traveled together on the subway.' (NKJP)

However, there are systematic syntactic differences between the two constructions. First, only in the case of adjectival predicates may the nominalizer *to* 'it' be added to the subject CP; compare (30) with (16) and (24).[11]

(30) Dobre / *Dobrze jest [to, że czują respekt].
good.ADJ/*ADV is.3SG it.NOM.SG.N that feel respect
'It is good.ADJ that they feel respect.'

Second, extraction out of InfP is only possible with adverbial predicates.[12] The following example, not involving extraction, is attested

[10] The morphologically related adverb *ważnie* seems to only have legal uses, where it means 'binding, valid', as in *małżeństwo ważnie zawarte* 'valid marriage', lit. 'marriage bindingly established'. The English sentential adverb *importantly* may be expressed in Polish as *co ważne* lit. 'what('s) important'.

[11] InfPs cannot be nominalized in this way; see (34).

[12] Extraction out of CP is generally very limited in Polish (see, e.g., Witkoś 1995), so we do not examine it here.

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with the adjectival predicate *najtrudniejsze* 'most difficult', but it is at least equally acceptable with the adverb *najtrudniej*:

(31) {Najtrudniej / Najtrudniejsze} jest [udowodnić
difficult.ADV.SUP/ADJ.SUP is.3SG prove.INF
swoją wartość . . . w seniorach].
self's.ACC value.ACC in seniors
'It is most difficult.ADV/ADJ to prove one's value at the senior level.' (NKJP)

However, when the direct object of the infinitive is topicalized, only the version with an adverb is acceptable.

(32) Swoją wartość {najtrudniej / *najtrudniejsze} jest
one's.ACC value.ACC difficult.ADV.SUP/*ADJ.SUP is.3SG
[udowodnić w seniorach].
prove.INF in seniors

Third, as noted in footnote 8, when an InfP subject may occur either with an adverbial predicate or with an adjectival predicate, the adverbial version is much more frequent and often preferred. Thus, the adverbial version of (31) seems more natural than the attested adjectival version, and similarly for (17) vs. (25). No such acceptability contrast is observed with CP subjects, in which case adjectival predicates are often more frequent.

These facts can be explained by postulating that adverbs subcategorize for strictly verbal subjects of predication, while adjectives take nominal(ized) subjects of predication. That is, whenever adjectives seem to combine with verbal subjects of predication, these apparently verbal subjects have an outer nominal layer. This explains the extraction facts in (32): on the assumption that the additional nominal layer results in an island constraint, nominalized InfPs occurring with adjectival predicates are barriers to extraction, while purely verbal InfPs occurring with adverbial predicates are not. Moreover, on the assumption that syntactically more complex structures are dispreferred to synonymous simpler structures, frequent preference for predicative adverbs is also explained (though it is not clear why this preference is only observed in the case of InfP—and not CP—subjects). This categorial difference in subcategorization properties of predicative adverbs and adjectives also explains the fact that—while unlike category coordination of predicates is robust in Polish (see, e.g., (26)–(27))—adjectival and adverbial predicates cannot be coordinated; compare the ungrammatical (33) with the grammatical (17) and (25).[13]

[13] Given that PPs may predicate of either nominal or verbal constituents, prepositional predicates may coordinate with either adverbial predicates (which, by hypothesis, expect verbal subjects) or adjectival predicates (which, by hypothesis, expect nominal subjects); compare (26) and (27).

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(33) *Najłatwiej i najtańsze było [upłynnić
easy.ADV.SUP and cheap.ADJ.SUP was.3SG.N sell.INF
ziarno czy ziemniaki].
grain or potatoes
Intended: 'It was easiest.ADV and cheapest.ADJ to sell grain or potatoes.'

This inability to coordinate adjectival and adverbial predicates is explained by conflicting expectations as to the actual categorial status of the shared InfP subject: predicative adverbs require an InfP, while predicative adjectives require a nominalized InfP. Finally, this analysis also explains the fact that when CPs are nominalized overtly, as in (30), they may combine with adjectival predicates, but not with adverbial predicates.

A potential problem for the proposed analysis is that InfPs cannot be nominalized overtly, whether the predicate is adverbial or adjectival (or in any other context); compare the grammatical (31) with the ungrammatical (34).

(34) *{Najtrudniej / Najtrudniejsze} jest [to
difficult.ADV.SUP/ADJ.SUP is.3SG it.NOM.SG.N
udowodnić swoją wartość].
prove.INF self's.ACC value.ACC

While there is a tension between overt nominalization facts and the hypothesis about different subcategorization patterns of predicative adverbs and adjectives, the impossibility of overt nominalization of InfPs does not rule out covert nominalization—a hypothesis supported by extraction facts in (32) and the coordination puzzle in (33), which cannot be explained otherwise. The relevant facts can be modeled by stating that the overt nominalizer *to* 'it' subcategorizes for CPs, while the empty N head acting as the covert nominalizer subcategorizes for both CPs and InfPs.

In summary, adverbs may be used as primary predicates in Polish; they occur in typical predicative constructions, including copular constructions; and they express predicative meanings analogous to those expressed with adjectives. However, the subjects of predication of such adverbial predicates must be strictly verbal—InfP or CP—and, given the limited range of abstract objects that such verbal constituents may denote (events, facts, etc.), the range of predicative adverbs is much smaller than the range of predicative adjectives (which may also predicate of nominal subjects, which may refer to a wide range of abstract and physical entities). This is the issue to which we turn next.

5 Types of Predicative Adverbs in Polish

What kinds of adverbs may act as primary predicates? They do not seem to correspond directly to any of the classes postulated within classifications we are aware of (including those proposed in Cinque 1999, Ernst 2001, and Maienborn and Schäfer 2011). They might be

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preliminarily characterized as "evaluative" in a sense:[14] they describe perception of eventualities (events, states, processes; Bach 1986) or facts as positive or negative, either in general or in some specific respect. The following are among the most common predicative adverbs in the National Corpus of Polish:

- Good/Bad in general: *dobrze* 'good', *fajnie* 'cool', *pięknie* 'beautiful' (used metaphorically), *wspaniale* 'wonderful'; *źle* 'bad', *niedobrze* 'not-good'
- Evoking good/bad emotions: *miło* 'nice', *przyjemnie* 'pleasant', *zabawnie* 'funny', *ciekawie* 'interesting'; *przykro* 'sorry', *głupio*, *niezręcznie* 'awkward', *smutno* 'sad', *straszno* 'scary'
- Reasonable/Unreasonable: *rozsądnie* 'reasonable', *mądrze* 'wise', *sensownie* 'sensible'; *głupio* 'stupid'
- Easy/Difficult: *łatwo* 'easy', *nietrudno* 'not-difficult', *prosto* 'straightforward', *wygodnie* 'convenient'; *trudno* 'difficult', *ciężko* 'hard', *niewygodnie* 'inconvenient', *niełatwo* 'not-easy'
- Other: *(nie)bezpiecznie* '(un)safe'; *korzystnie* 'profitable', *tanio* 'cheap'; *zdrowo* 'healthy', *praktycznie* 'practical', and others

The complete list of such adverbs is much longer, and many of them occur in predicative constructions very frequently. For example, within the 300-million-token balanced subcorpus of the National Corpus of Polish, there are a few thousand occurrences of predicative *trudno* 'difficult', *łatwo* 'easy', and *dobrze* 'good', and hundreds of occurrences of *ciężko* 'hard', *miło* 'nice', *przyjemnie* 'pleasant', and others. Both the number of different adverbs that can be used predicatively and the frequency of such predicative uses demonstrate the productivity of the construction.

The observation that predicative adverbs often refer to subjective perception of facts or events (or event kinds; see below), rather than to their objective characteristics, is supported by minimal pairs such as the following:

(35) Jan dobrze pływał.
Jan.NOM well.ADV swam.3SG.M
'Jan swam well.'

(36) Janowi dobrze było [pływać].
Jan.DAT well.ADV was.3SG.N swim.INF
'Jan enjoyed swimming.'

While (35) means that Jan was a skillful swimmer (even though perhaps he did not like swimming), (36) may only mean that swimming felt good to Jan (even though perhaps he was a terrible swimmer).

[14] This is also how they are characterized in Grzegorczykowa 1975:36.

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6 Predicative Adverbs with Experiencers

Since predicative adverbs often—but perhaps not always (see, e.g., *tanio* 'cheap')—express subjective attitudes, it is not surprising that they often take an experiencer argument—a dative nominal phrase, as in the attested (20) and (37)–(38).[15]

(37) Maciusiowi bardzo przyjemnie było, [że
Maciuś.DAT very pleasant.ADV was.3SG.N that
królewski poseł nie mówił w zagranicznym języku].
royal envoy NEG spoke in foreign language
'It was very pleasant.ADV to Maciuś that the royal envoy was not speaking in a foreign language.' (NKJP)

(38) Oczywiście autorowi najtrudniej było
obviously author.DAT difficult.ADV.SUP was.3SG.N
[uzyskać szczegóły].
get.INF details
'Obviously, it was most difficult.ADV for the author to get the details.' (NKJP)

While in (37) the experiencer is an argument of *(bardzo) przyjemnie* '(very) pleasant.ADV' only, in (38) the dative dependent of *najtrudniej* 'most difficult.ADV' is at the same time the subject of the infinitival phrase headed by *uzyskać* 'gain'; that is, the dative experiencer controls the subject of the infinitival subject of predication.

According to the criteria in Landau 2013:29, this is an instance of obligatory control: the dative experiencer and InfP are codependents (they are dependents of the predicative adverb)[16] and the controlled "PRO" (the subject of InfP) is interpreted as a bound variable, as evidenced for example by the exclusively sloppy readings under ellipsis in (39).

(39) Janowi najtrudniej było [poprosić o pomoc],
Jan.DAT difficult.ADV.SUP was.3SG.N ask.INF for help
{Marysi też / ale nie Marysi}.
Marysia.DAT too / but NEG Marysia.DAT

[15] In the case of adjectival predicates, such an experiencer is instead expressed by a prepositional phrase headed by *dla* 'for', as in (i), corresponding to (38) in the main text.

(i) Oczywiście dla autora najtrudniejsze było [uzyskać
obviously for author.GEN difficult.ADJ.SUP was.3SG.N get.INF
szczegóły].
details
'Obviously, it was most difficult.ADJ for the author to get the details.'

[16] The experiencer is a dependent of the adverb rather than the copula since (a) its acceptability depends on the particular predicate, not on the copula, and (b) the absence of the copula does not affect the experiencer (see (20)); see also Patejuk and Przepiórkowski 2018. Bondaruk and Szymanek (2007) also analyze the dative experiencer as a dependent of the adverb, albeit as its external argument.

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'It was most difficult.ADV for Jan to ask for help, {for Marysia too / but not for Marysia}.'

Here, the elided clause may only be understood as 'It was most difficult for Marysia to ask for help' (and similarly for the negated version); it cannot be understood as 'Jan asking for help was most difficult for Marysia'.

While the issue of obligatory control into subject is controversial, it has been reported for languages as diverse as Balinese (Arka and Simpson 1998) and German (Stiebels 2007). Constructions with predicative adverbs, dative experiencers, and infinitival subjects provide another argument against a ban on control into subject.

7 Semantics of Predicative Adverbs

Let us consider the following constructed examples, with InfP and CP subjects of predication, the latter with a pro-dropped subject, here assumed to refer to Jan:

(40) Janowi miło było {[pływać] / [że pływał]}.
Jan.DAT nice.ADV was.3SG.N swim.INF / that swam.3SG.M
'Jan enjoyed {swimming / the fact that he swam}.'

Both examples seem to be saying that Jan experienced a certain event as nice. However, their meanings differ: the InfP version may only mean that he enjoyed swimming, while the CP version means that he considered it nice that he swam—perhaps because swimming was nice, or perhaps because he thus overcame his fear of water. Hence, only the CP version may be followed by something like *ale samo pływanie nie było takie miłe* 'but the swimming itself was not so nice' without creating a direct contradiction.

Such considerations lead to the conclusion that predicative adverbs may predicate of two sorts of abstract objects: events (or their kinds; see below) expressed by InfPs or facts expressed by CPs. This conclusion is supported by the fact that while all of the adverbs listed in section 5 occur with InfP subjects, only some of them—mostly those expressing general or emotional attitude—may occur with CP subjects. Thus, both events and facts may be good, bad, nice, reasonable, and so on, but only events—not facts—may be easy, safe, healthy, and so on. Also, the textual frequency of predicative adverbs with CP subjects is a couple of orders of magnitude lower than with InfP subjects.

The preliminary conclusion that predicative adverbs occurring with InfP subjects refer to specific event tokens is incompatible with the following example:

(41) Janowi trudno było [wstać].
Jan.DAT difficult.ADV was.3SG.N get up.INF.PFV
'It was difficult.ADV for Jan to get up.'

The verb *wstać* 'get up' has perfective aspect, so it seems to refer to telic events. But (41) does not assert or presuppose that there was any

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particular getting-up-by-Jan event—(41) may describe a situation in which Jan did not even seriously start getting up. Rather, what was perceived by Jan as difficult was (instantiating) the getting-up-by-Jan telic event *kind.* Where InfP is interpreted as referring to particular events, it is because of the veridical entailments of the predicate: unlike *trudno* 'difficult', *miło* 'nice' is veridical in this sense.[17]

On the basis of these observations, and representing facts as true propositions, we propose the following partial meaning representations (leaving out tense, etc.) for the InfP and CP versions of (40):[18]

(42) $\lambda s.\ nice(s) \wedge exp(s) = j \wedge$
$arg(s) = (^{\cap}\lambda e.swim(e) \wedge ag(e) = exp(s))$

(43) $\lambda s.nice(s) \wedge exp(s) = j \wedge$
$arg(s) = (^{\wedge}\exists e.\ swim(e) \wedge ag(e) = j)$

These representations follow the neo-Davidsonian approach to event semantics (Davidson 1967, Castañeda 1967, Parsons 1990), in which particular thematic roles such as experiencer or agent are represented as separate functional predicates—for example, $exp(s) = j$ or $ag(e) = j$. For concreteness, the predicative schema proposed in Rothstein 2001 is assumed here, on which the semantic representation of, for example, *Jane is nice* would be $\lambda s.\ nice(s) \wedge arg(s) = j$ (leaving out tense and aspect contributed by the copula); that is, the subject of predication is represented via the *arg* function from the predicate state *s* to the subject *j*. Such states *s* may host various semantic roles (Rothstein 2001:295), here the experiencer role. What is special about the constructions considered here is that the subjects of predication are not ordinary entities, but kinds of events (see, e.g., Gehrke 2019 and references therein) and facts. Again for concreteness, in (42) we adopt Chierchia's (1998:348–349) down operator $^{\cap}$, which shifts properties into corresponding kinds. In this case, it shifts the property (function from entities to truth values) of being a swimming-by-Jan event to the respective event kind (i.e., an entity). After existential closure over *s*, this representation leads to the proposition that this event kind is nice for Jan.[19]

Similarly, understanding facts as true propositions and employing the standard intensional representation of propositions, (43) is saying

[17] See Grimm and McNally 2015:92 for similar considerations in the context of English gerunds referring to event kinds and interpreted as referring to event tokens by virtue of the entailments of the higher predicate.

[18] Note that $ag(e) = exp(s)$ in (42) is truth-conditionally equivalent to $ag(e) = j$, as in (43). This difference in representation between (42) and (43) stems from the fact that the agent within InfP subjects—but not within CP subjects—is established via control.

[19] We assume that, from the fact that some event kind is experienced as nice by Jan, it follows that tokens of this event kind are also experienced as nice by Jan; hence the aforementioned contradiction when (40) with an InfP subject is followed by *ale samo pływanie nie było takie miłe* 'but the swimming itself was not so nice'.

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that Jan considers the fact that he swam as nice. This encoding of facts results in a formal difference between (42) and (43). In the case of (42), the semantic type of the subject of predication (i.e., the value of $arg(s)$) is of type e (an event kind understood as an entity), and in the case of (43), it is of type $\langle s, t \rangle$ (an intensional proposition, i.e., a function from worlds to truth values). This suggests that perhaps two different—even if clearly related—predicates *nice* are involved in (42)–(43); let us call them $nice_e$ and $nice_{st}$. If so, all adverbs combining with InfP subjects denote predicates such as $nice_e$, and those additionally combining with CP subjects are ambiguous, as they also denote predicates such as $nice_{st}$.[20]

However, there is another common understanding of facts, on which they are not propositions, but particulars (see, e.g., Kratzer 2002, Mulligan and Correia 2017, and references therein), that is, entities of type *e*. If so, predicative adverbs are unambiguous. A possible argument for this view could be the acceptability of sentences such as (44), in which an InfP and a CP are coordinated within the subject position.

(44) Janowi miło było [pływać i że pływała
Jan.DAT nice.ADV was.3SG.N swim.INF and that swam
z nim też Maria].
with him also Maria
'Jan enjoyed swimming and the fact that Maria was also swimming with him.'

Assuming that only constituents of the same semantic type may be coordinated, (44) suggests that denotations of InfP and CP subjects are of the same semantic type *e*.

Unfortunately, neither of the two arguments for the two positions above is very strong. On the "formal ambiguity" view, (44) could be explained via some coercion or type-shifting operation turning an event kind into a fact (that an instance of this event kind took place). Conversely, on the "no ambiguity" view, the cooccurrence of different predicative adverbs with InfP and/or CP subjects could be a matter of syntactic selectional restrictions of particular adverbs. We leave this issue for future research.

8 Conclusion

The main aim of this squib was to refute the (often tacit) assumption that adverbs cannot act as primary predicates. In Polish, a relatively large class of adverbs may be used in predicative constructions when

[20] As suggested by the *LI* Squibs and Discussion editors, perhaps these meanings could be related by a type-shifting rule triggered by some meaning component of those adverbs that also combine with CP subjects.

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subjects of predication are abstract objects—event kinds and facts—expressed by InfPs and CPs. This requirement of purely verbal rather than nominal(ized) subjects of predication is the main difference between predicative adverbs and predicative adjectives, explaining differences in their syntactic behavior with respect to extraction and coordination. Predicative adverbs usually express an attitude toward event kinds and facts and may often combine with dative experiencers; in the case of InfP subjects, the dative experiencer acts as an obligatory controller into the subject. Constructions with predicative adverbs are textually frequent and fully acceptable—they clearly belong to the "core" rather than the "periphery," if such a distinction is made.

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