

The Voice-adjunction theory of agentive ‘by’-phrases and the Icelandic impersonal passive*

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Abstract

We investigate ‘by’-phrases in the Icelandic impersonal passive and argue that they are grammatical, contra previous reports in the literature. However, it is only acceptable to use them when there are agent-specific pressures to realize the agent on the linear right, i.e., when the agent expresses new information or when it is phonologically heavy. We develop a formal analysis in the spirit of the Voice-adjunction theory of ‘by’-phrases and consider facts from historical syntax.

1 Introduction

This paper investigates agentive ‘by’-phrases in Icelandic impersonal passives and it argues that such phrases are syntactically well-formed contra what previous reports in the literature suggest. We show evidence that the acceptability of ‘by’-phrases in this environment is affected by the discourse status of the agent and its phonological weight. When the agent expresses new information and/or if it is phonologically heavy, there is an independent pressure to realize it to the linear right and then a ‘by’-phrase becomes a more natural syntactic strategy.

In recent work by Bruening (2013), it is argued that agentive ‘by’-phrases (as well as certain other types of adjuncts) syntactically select for a VoiceP adjunction site. According to this theory, the distribution of ‘by’-phrases is crucially constrained by the syntactic distribution of the agent-introducing head Voice (Kratzer 1996). This accounts for the phenomena discussed by Bruening, but it raises questions about ‘by’-phrases in languages like Icelandic that allow impersonal passives of unergatives (1) and of agent-associated verbs with a PP complement (2). Here,

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the agent is suppressed and there is a **passive participle** with passive morphology but no theme can be raised to grammatical subject status. Note that the expletive *það* in these examples is a first-position element, not overtly present when other elements topicalize or when the verb moves to form a yes-no question.

- (1) *Það var dansað.*
 there was danced
 ‘Somebody danced.’
- (2) *Það var borgað undir konuna.*
 there was paid under the.woman
 ‘Somebody paid for the woman.’

Those verbs are associated with **agents** and therefore, in the absence of an independent explanation, their impersonal passive should be compatible with a ‘by’-phrase under Bruening’s account. If ‘dance’ is syntactically compatible with agentive VoiceP, which is uncontroversial, and if impersonal passives of unergatives are available, as in Icelandic, a ‘by’-phrase in that context should most obviously be grammatical. Yet, the ‘by’-phrase in (3) is reported as ungrammatical by H.Á. Sigurðsson (1989:322), a judgment confirmed by other Icelandic speakers, at least when the example is presented out of the blue (see also Maling 1987:7, Thráinsson 2007:270, Jónsson 2009:294).¹

¹In this paper, we focus on impersonal passives of unergatives, as in (1), and impersonal PP passives, as in (2). However, similar restrictions on ‘by’-phrases seem to hold in, e.g., transitive expletive passives without DP movement; see (i).

- (i) a. *Það var gripinn einhver nemandi* (*af kennaranum).
 there was caught some student.NOM (*by the.teacher)
 ‘Some student was caught.’ (Thráinsson 2007:272)
- b. *Það var laminn lítill strákur* (??af óknyttadrengjum).
 there was beaten little boy.NOM (??by bullies).
 ‘A little boy was beaten by bullies.’ (Eythórsson 2008:179)

The grammaticality of ‘by’-phrases in the New Impersonal Passive (NIP) as shown in (ii) has also been debated (see, e.g., Maling and Sigurjónsdóttir 2002; Jónsson 2009, E.F. Sigurðsson and Stefánsdóttir 2014). The acceptability of the NIP seems to be reduced if a ‘by’-phrase is used

- (3) Það var dansað (*af öllum).
 there was danced (*by everyone)
 ‘Somebody danced.’

Results from a survey conducted in 2010–2012 in the project Linguistic change in real time in Icelandic phonology and syntax (Höskuldur Thráinsson, PI) also corroborate this. A vast majority of speakers rejected the sentence in (4): 160 (81%) speakers rejected it, 28 (14%) found it questionable, and only 9 (5%) accepted it.²

- (4) Previous discourse: ‘There was a lot of fun in the party.’
 Það var dansað [af gestunum] fram á morgun.
 there was danced [by the.guests] until morning
 ‘There was dancing by the guests until morning.’

However, ‘by’-phrases do sometimes appear in impersonal passives, including in carefully crafted language, as in (5) by writer (and Nobel laureate) Halldór Laxness (here the subject gap of the impersonal licenses stylistic fronting of the passive participle; see Maling 1980).

- (5) ...borgað hafi verið undir konuna [af mormónum]
 ...paid had been under the.woman [by Mormons]
 ‘... [that] some Mormons paid for the woman.’ (Laxness 1957:8;
 see also Árnadóttir to appear)

(Maling and Sigurjónsdóttir 2002, Jónsson 2009).

- (ii) %Það var skoðað bílinn af bifvélavirkjanum.
 %there was inspected the.car.ACC by the.car.mechanic
 ‘The car mechanic inspected the car.’ (Maling and Sigurjónsdóttir 2002:119)

The reason why ‘by’-phrases are degraded in impersonal passives, transitive expletive passives and the NIP may be connected with the lack of DP-movement (Eythórssón 2008 and Jónsson 2009). We will not look further at the transitive expletive passive and the NIP in this paper but future research should investigate whether the ideas that are developed here can be extended to these as well. For further discussion on the NIP, see, e.g., Barðdal and Molnár (2003), H.Á. Sigurðsson (2011), E.F. Sigurðsson (2012), Ingason et al. (2013), Legate (2014), and Maling and Sigurjónsdóttir (2015).

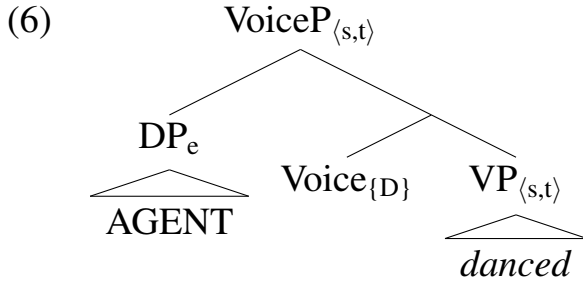
²Thanks to Höskuldur Thráinsson for giving us access to the project’s results.

Icelandic speakers find examples like these acceptable as confirmed by Árnadóttir's (to appear) survey – which appears to contradict what the literature suggests.

The main point of this paper is that the apparent contradictions in judgments are explained if the active voice is the default mechanism to express an agent and that an impersonal passive with a 'by'-phrase is only available if there are agent-specific pressures from discourse context and/or phonology to express the agent on the linear right. The fact that 'by'-phrases are more readily available in canonical passives is then possibly related to theme-specific pressures from discourse and phonology (or such pressures on other non-agentive arguments in general). Note that no theme can be promoted to subject in unergatives or out of a PP complement and such pressures are therefore irrelevant in impersonal passives.

2 Formal analysis

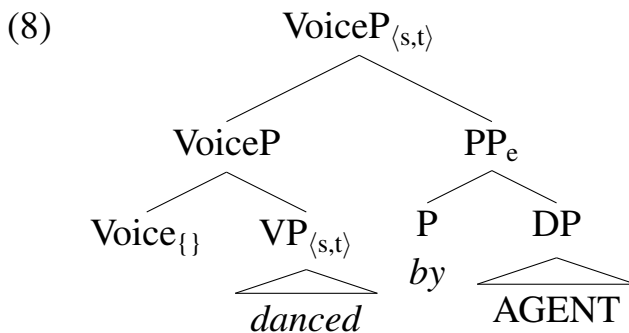
We will adopt the crucial Voice-adjunction ingredient in Bruening's analysis of 'by'-phrases with some technical adjustments. In this kind of an analysis, syntactic selection for a certain category is crucial, not only for complements and specifiers, but also for adjuncts. An unergative verb like 'dance' can combine with Voice and in the active, the Voice head requires a specifier of category D as in (6). Notationally, a subscript D in curly brackets indicates this requirement following Schäfer (2008) and Wood (2015). Empty curly brackets express the absence of a specifier requirement. We adopt standard event semantics. Important nodes in the tree are annotated with semantic type. The type signature e is for an individual whereas $\langle s,t \rangle$ is a function from events to truth values.



The Voice head yields the interpretation that the noun phrase in its specifier expresses the agent of the event described by its complement. Its type signature is $\langle \langle s,t \rangle, \langle e, \langle s,t \rangle \rangle \rangle$. A formal denotation is given in (7). The denotation abstracts away from the Event Identification operation in Kratzer’s (1996) implementation; the difference between using Functional Application and Event Identification is not important for the present study.

(7) $\llbracket \text{Voice} \rrbracket = \lambda P_{\langle s,t \rangle} . \lambda x . \lambda e . P(e) \wedge \text{agent}(x,e)$

In the passive, we assume a specifierless Voice, shown in (8). The semantics is blind to the specifier requirement in our analysis and therefore the same denotation is inserted for the passive Voice head.³



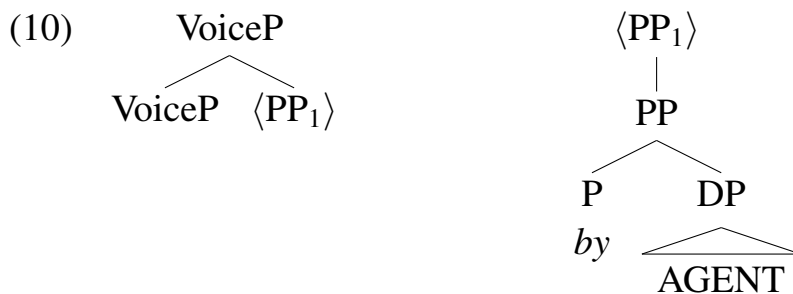
The agent can be provided in the passive by merging a ‘by’-phrase adjunct with VoiceP. For concreteness, ‘by’ is the realization of the morpheme (=head) in (9). Like any other morpheme, P_{by} is a partial function from feature keys to feature values (based on the formal definition of a morpheme in Ingason 2016:17), its label is P, it selects a D complement, and it selects an adjunction site of type Voice

³Here, we abstract away from the derivation of the passive morphology which is plausibly associated with the Asp head (Embick 2004).

for itself to attach to. We refer to this adjunction type of merge as Target Merge; this is similar to how adjunction works for Bruening (2013).

$$(9) \quad P_{by} = \{ \langle LAB, P \rangle, \langle COMP, D \rangle, \langle TARG, Voice \rangle \}$$

Target Merge is characterized by the fact that the selectee projects rather than the selector. We hypothesize that any other empirical properties of adjunction result from the mechanics of Target Merge. For example, this operation may be best characterized by a placeholder analysis – see (10) – the adjunct being constructed in a separate workspace and not being retrieved for realization at the interfaces with LF and PF until it is needed (Ingason 2016; Ingason and Sigurðsson 2017 [forthcoming]). That would account for phenomena that are sometimes analyzed in terms of Late Adjunction (Lebeaux 2000; Stepanov 2001); see also Ingason and Sigurðsson (cited above) on adjunct invisibility in morphological suffixation phenomena. Such empirical phenomena provide independent motivation for an operation like Target Merge being fundamentally distinct from canonical Merge.



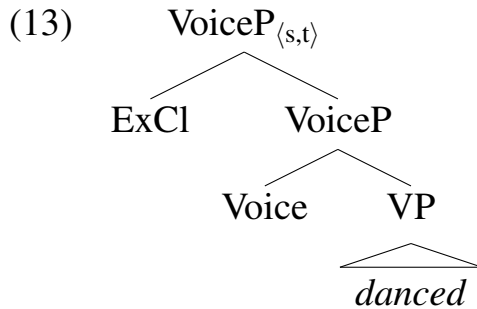
The ‘by’ morpheme is just syntactic glue in our analysis. It makes the agent noun phrase available for semantic composition with Voice but the P itself is semantically vacuous.

$$(11) \quad \llbracket P_{by} \rrbracket = \lambda x.x$$

In a passive without a ‘by’-phrase, the agent role is provided via existential closure. A dissociated LF morpheme ExCl is attached to VoiceP at the LF interface – schematized in (12). This mechanism is parallel to the insertion of dissociated

AGR nodes at the PF interface (Embick 1997). The resulting LF is shown in (13) and the denotation of ExCl in (14).

$$(12) \quad [\text{VoiceP}] \rightarrow [\text{ExCl VoiceP}]$$



$$(14) \quad \llbracket \text{ExCl} \rrbracket = \lambda P_{\langle e, \langle s, t \rangle \rangle} . \lambda e . \exists x [P(x)(e)]$$

This analysis, which is inspired by important ingredients of Bruening’s (2013) account, predicts that the syntactic distribution of ‘by’-phrases reflects the distribution of agent-introducing Voice heads. To account for the fact that ‘by’-phrases are often not very good in impersonal passives of unergatives and verbs that take a PP complement, an independent explanation is needed. We propose that in such cases, the speaker defaults to using the active variant, only resorting to an impersonal with a ‘by’-phrase when there are independent agent-specific pressures to realize the agent on the linear right. We hypothesize that the independent pressures in question are the tendency to place new information to the right as well as elements that are phonologically heavy.

3 New information and heaviness

In the introduction, we showed that ‘by’-phrases in impersonal passives are sometimes described as ungrammatical, even though there also seem to exist examples where such phrases are well-formed. This section elaborates on the view that the acceptable cases involve agents that express new information and/or are phonologically heavy. Consider first canonical passivization in the case of a transitive verb

like ‘eat’, schematized in (15). The choice of a passive without a ‘by’-phrase can be motivated by a need to change the status of the agent relative to the theme, by any theme-specific pressures to place the theme in the first position or by agent-specific pressures to place the agent at the end of the clause. The variant with the ‘by’-phrase is subject to more or less the same types of preferences. The agent in the ‘by’-phrase can be seen as somehow demoted to an adjunct relative to the theme, and this allows the theme, of course, to raise to the subject position on the left side of the sentence.

- (15) a. **AGENT** ate THEME.
 b. THEME was eaten (by **AGENT**).

Contrast the above with a schematized alternation between an active of an unergative and an impersonal passive variant in (16).

- (16) a. **AGENT** walked.
 b. There was walked (by **AGENT**).

The choice of an impersonal without the ‘by’-phrase can of course be motivated by a need to suppress the agent. However, what might motivate the use of an impersonal passive with a ‘by’-phrase? Theme-specific pressures are irrelevant and so are any reasons one might want to demote the agent relative to the theme – because there is no theme in the sentence. One plausible reason for choosing the construction in (16b) is the presence of some agent-specific pressures to realize the agent on the linear right.⁴ Let us see how this is borne out.

Turning to constructed examples which illustrate factors which influence the availability of a ‘by’-phrase in an impersonal passive in Icelandic, it is very odd to use a ‘by’-phrase to express an agent in an impersonal passive if the agent is an established discourse referent as in (17a). Here, it is much more natural to use the

⁴Another potential way of thinking about the motivation for using an impersonal passive involves analyzing the event denoted by the main verb as the information-structural topic (see Árnadóttir to appear). We will not discuss such an analysis here.

active voice variant (17b).⁵

- (17) Context: What did the central bank do when inflation went up?
- a. ??Pað var stigið á bremsurnar [PP af Seðlabankanum].
 ??there was stepped on the.breaks [PP by the.central.bank]
 ‘The Central Bank hit the breaks.’
- b. [DP Seðlabankinn] steig á bremsurnar.
 [DP the.central.bank] stepped on the.breaks
 ‘The Central Bank hit the breaks.’

However, as predicted by our analysis, (17a) is improved if the preceding discourse does not mention the agent and if it cannot be easily recovered from the context; see (18a). This is compatible with the tendency of new information to appear to the right, an effect that has in fact been associated with ‘by’-phrases in canonical passives (Seoane 2012) so it is unsurprising to find signs of it in impersonal passives.⁶

- (18) Context: What happened when inflation went up?
- a. (?)Pað var stigið á bremsurnar [PP af Seðlabankanum].
 (?)there was stepped on the.breaks [PP by the.central.bank]
 ‘The Central Bank hit the breaks.’
- b. [DP Seðlabankinn] steig á bremsurnar.
 [DP the.central.bank] stepped on the.breaks
 ‘The Central Bank hit the breaks.’

Furthermore, if we still have a new agent and also make it super-heavy, the preference between an impersonal passive and an active is reversed; (19a) is more natural than (19b). This is consistent with the view that when a choice can be made (here

⁵In those examples, it is also a prominent option to use a pronoun to refer back to the old information ‘central bank’. If we do that, the ‘by’-phrase is completely unacceptable and that is consistent with our analysis. Thanks to Höskuldur Thráinsson for discussions on this issue.

⁶As shown by Sigurjónsdóttir and Nowenstein (2016), discourse status can influence the choice between a Canonical Passive and a truth-conditionally equivalent New Impersonal Passive, which is therefore another case where structural optionality in passive-like constructions is to some extent arbitrated by discourse context.

between an active/passive), there is a tendency to place long phrases at the end of clauses (e.g., Wasow 1997, Stallings et al. 1998).

(19) Context: What happened when the inflation went up after the wall fell?

- a. Það var stigið á bremsurnar [PP af sameinuðum seðlabanka
there was stepped on the.breaks [PP by united central.bank
Austur- og Vestur- Þýskalands].
East- and West- Germany]

‘The united Central Bank of East- and West Germany hit the breaks.’

- b. ?[DP Sameinaður seðlabanki Austur- og Vestur- Þýskalands]
?[DP united central.bank east and west Germany]

steig á bremsurnar.

stepped on the.breaks

‘The united Central Bank of East- and West Germany hit the breaks.’

The only relevant difference between (18a)/(18b) and (19a)/(19b) is the phonological weight of the agent.⁷ Therefore, it appears that phonological weight is an independent type of pressure to prefer the variant with a ‘by’-phrase, in addition to the agent expressing new information. This contrast is based on our own intuitions. Because it is complicated to simultaneously control weight and discourse status, it should of course be noted that further empirical work is needed to test the robustness of these patterns. We believe that the proper avenue of such investigation involves experimental methods and we plan to undertake such studies in future work. In any case, the current proposal makes clear falsifiable predictions.

Before concluding, let us consider the alternative possibility, to be rejected, that the attested variability in judgments has an historical explanation.

⁷Different views exist in the literature on the appropriate way to characterize and measure heaviness for the purpose of placing elements on the right. Heaviness is sometimes associated with grammatical complexity and sometimes with the phonological length of a phrase. This is not a core issue in the present context but we describe heaviness in terms of phonological weight rather than complexity because long and syntactically simple elements generally count as heavy in the relevant type of phenomena. For example, *supercalifragilisticexpialidocious* is heavy rather than light; see Ingason (2015) for further discussion.

4 Against an historical explanation

We have considered examples that are compatible with our view that discourse status of the agent and its phonological weight are important factors in making ‘by’-phrases available in the Icelandic impersonal passive. Let us rule out the alternative that the variation in judgments is in fact related to ongoing historical change. Looking at the IcePaHC corpus (Wallenberg et al. 2011), which spans the history of Icelandic writing, we find examples of ‘by’-phrases in impersonal passives from all periods, including the 13th century example in (20) from *Þorláks saga helga*.⁸ Such examples are sporadic but they appear to be genuine. For more discussion and similar examples from IcePaHC, see Árnadóttir et al. (2011:73, note 40).

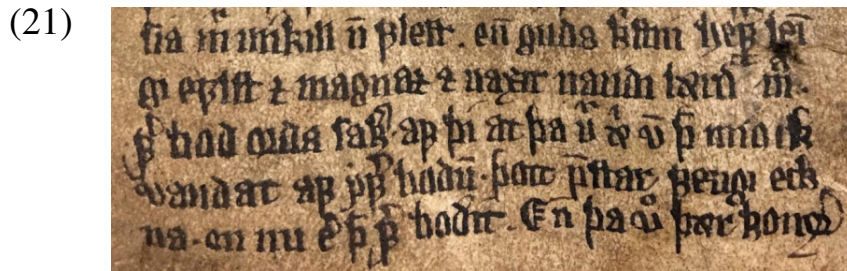
- (20) En guðs kristni hefir lengi eflst og magnast og
 but god’s Christianity has long become stronger and intensified and
 vaxið vandi lærðra manna fyrir boðorða sakir af því að þá
 grown difficulty learned men for ordinances sake because that then
 var eigi um það mjög vandað [PP af yfirboðum] þótt prestar
 was not about that very moralized [PP by authorities] although priests
 fengi ekkna en nú er það fyrirboðið.
 got widows but now is it forbidden
 ‘But God’s Church has long grown strong and increased in might, and
 the obligations of learned men have also grown in terms of ordinances,
 because then not much fault was found by the authorities even if priests
 married widows, but now that is forbidden.’⁹

Let us mention one methodological note: Although the corpus, a parsed phrase structure treebank, is based on modernized spelling, it should be noted that once

⁸The orthography in the example is based on the edition by Ásdís Egilsdóttir (1989:121) of the so-called A-version of *Þorláks saga helga*. This saga is believed to be from the early 13th century. We refer to the edition and related philological work cited there for further discussion of the relevant manuscripts and their dating. We believe the notion of new information is important for this particular example although we are hesitant to draw strong conclusions from our modern Icelandic intuitions about this old example. We understand the words but the flavor of the prose is quite archaic.

⁹The translation of the example is taken from Jakobsson and Clark’s translation; see *The saga of Bishop Thorlak* (2013:4)

an example is found in the treebank, it is not difficult to trace it back to its source. For example, (20) appears as in (21) in the manuscript.



Although there is no period where ‘by’-phrases with impersonal passives are common in the corpus, sporadic examples are found during all periods of written Icelandic. Thus we believe that historical change is not a likely explanation for the judgment differences reported above. The pattern seems to be diachronically stable which makes it less likely that there are sharp differences between speakers.

5 Conclusion

At the outset of this paper we noted that examples like (3), repeated as (22), have been taken as evidence that ‘by’-phrases are not compatible with impersonal passives in Icelandic. However, we have shown that the use of such ‘by’-phrases is in fact acceptable under certain conditions which depend on discourse context and phonological weight.

- (22) Það var **dansað** (*af **öllum**).
 there was **danced** (*by **everyone**)
 ‘Somebody danced.’

Our findings suggest it might be wise to revisit empirical differences that have been reported between languages; ‘by’-phrases in impersonal passives are reported as grammatical in Dutch (Perlmutter 1978:168) and German (Schäfer 2012:230) whereas reports for Norwegian are mixed. Hovdhaugen (1977), cited in Áfarli (1992), believes that ‘by’-phrases in Norwegian impersonal passives tend to be quite bad whereas according to Áfarli (1992:28, note 11) they cannot be considered

ungrammatical. Phrases of this type are considered ungrammatical in the Swedish s-passive (Engdahl 2006:38). Perhaps the factors that we have discussed in the context of Icelandic will also prove to be relevant for some other languages. We have focused on the role of new information and phonological weight but it is of course also possible that other interpretive factors will turn out to be important, including the semantic type of the agentive noun phrase (Sigurðsson 2017 [forthcoming]); see also Roberts (1985:546–547, note 10) on the notion of plurality in the context of ‘by’-phrase acceptability in impersonal passives in German and Dutch.

The findings are also interesting because the role of discourse and phonology in these data looks like the psychological factors that often condition intra-speaker variability in individuals (“p-conditioning” in the sense of Tamminga et al. 2016). We might expect discourse status and heaviness to shift the probability of using a particular construction – perhaps due to cognitive restrictions on the processing of sentences in context – yet they seem to arbitrate facts that the literature reports as grammaticality contrasts.

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