Implicit Control Cross-Linguistically

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In Landau (2015), it is proposed that the acceptability of control by the implicit external argument of a passive verb into complement clauses (implicit control) is not only restricted by the Revised Visser's Generalization (van Urk 2013), but also depends on the type of matrix predicate involved. While attitude matrix predicates allow implicit control, non-attitude matrix predicates do not. Landau takes this bifurcation to support his two-tiered theory of control, by assuming that with non-attitude matrix predicates, the control relation is essentially a predication relation, from which implicit arguments are independently excluded. In this paper, we subject these claims to empirical scrutiny, showing that Landau's generalization on implicit control holds only in a subset of languages, while other languages license implicit control with both types of matrix predicates. We investigate and reject the hypothesis that the cross-linguistic split regarding the acceptability of implicit control with non-attitude matrix predicates relates to *different types of implicit arguments, only some of them being syntactically represented in a way that they can enter a predication relation; based on the licensing of depictives, we conclude that in principle implicit external arguments of passives in all languages (under consideration) can enter predication. As an alternative hypothesis about what distinguishes the two sets of languages, we argue that languages which allow implicit control with non-attitude verbs are exactly those languages that allow impersonal passives of unergative verbs and we provide an attempt to account for this correlation.*

1. Introduction

The publication of Landau (2010) has led to a renewed interest in questions about the grammatical properties of implicit arguments. In particular the syntactic status of the implicit external argument of verbal passives has been a matter of some dispute, with accounts ranging from syntactically projecting it as a set of phi-features (e.g., Landau 2010, Legate 2012, 2014), or as arbitrary PRO (e.g., Collins 2005), to syntactic non-projection (e.g., Bruening 2012, Reed 2014, Alexiadou et al. 2015); see Williams (2015) for an overview over different broad types of approaches. One reason for why it has been so difficult to arrive at a definite answer to this question is that many of the test that originally had been advanced to support the view that the implicit external argument of passives must be syntactically projected (licensing of a *by*-phrase, agent-oriented modifiers, disjoint reference effects, control into purpose clauses), have in the meantime been shown to be compatible with analyses of passives that do not project the implicit argument syntactically (e.g. Bhatt & Pancheva 2006/2016). While much of the discussion has revolved around the above mentioned tests, implicit control into complement clauses has at best played a minor role in this discussion. Yet, one of the most detailed and explicit accounts of this type of control, provided by van Urk (2013), crucially relies on the implicit argument being syntactically projected and capable of entering a syntactic Agree-relation with matrix T (and thereby indirectly, with PRO). The facts captured by van Urk's analysis relate to the, by now, well-known observation that subject control predicates do not passivize ((1); Visser's

Generalization (VG); Visser 1973, Bresnan 1982). van Urk shows that this generalization only holds if passivization results in a personal passive, i.e., if an internal argument is promoted to structural subject position. If no other DP establishes an Agree-relation with T, as is the case in impersonal passives, implicit control is licit (Revised Visser's Generalization (RVG)). This set of facts is illustrated in (1) - (3) (IMP stands for the implicit external argument of the passivized verb for the sake of representation).

(1) a. Peter$_1$ promised Maggie [PRO$_1$ to watch *Mad Men*].
b. *Maggie was IMP$_1$ promised [PRO$_1$ to watch *Mad Men*].

(2) a. Peter persuaded Maggie$_1$ [PRO$_1$ to watch *Mad Men]*.
b. Maggie$_1$ was IMP persuaded [PRO$_1$ to watch *Mad Men*].

(3) a. Peter$_1$ decided [PRO$_1$ to watch *Mad Men*].
b. It was IMP$_1$ decided [PRO$_1$ to watch *Mad Men*].

Landau (2015), however, has claimed that there is another empirical generalization involving implicit control which van Urk's account cannot capture. He argues that the RVG holds true if the control predicate is an attitude predicate, i.e., belongs to the class of predicates allowing Partial Control (see Landau 2000, 2004, 2008). With non-attitude matrix predicates, i.e., predicates that only allow Exhaustive Control, passivization is always infelicitous, i.e., the original VG holds. This split is illustrated with the Russian data taken from Landau's work below, and will be referred to in the following as Landau's Generalization (5).

(4) a. **Attitude verbs/Partial Control verbs:**
Bylo zaplanirovano/obeščano obnovit'
was.SG.NEUT planned.SG.NEUT/promised.SG.NEUT to.renovate
zdanie.
building
'It was planned/promised to renovate the building.'
b. **Non-attitude verbs/Exhaustive Control verbs:**
***Bylo** načato/prodolženo/zakončeno
was.SG.NEUT begun.SG.NEUT/continued.SG.NEUT/finished.SG.NEUT
tratit' den'gi na bespoleznye lekarstva.
to.spend money on useless medicines
'*It was begun/continued/finished to spend money on useless medicines.'
(Landau 2015: 72, (102))

(5) **Landau's Generalization:**
Attitude predicates allow implicit control in the context of an impersonal passive.
Non-attitude predicates never allow implicit control.

If correct, the generalization in (5) has fundamental consequences for the theory of control, as well as the grammatical status of implicit arguments. In this paper, we quickly introduce into the main aspects of Landau's Two-Tiered Theory of Control (section 2) and we then investigate the validity of Landau's Generalization in a larger set of languages. In doing

so, we will show in section 3 that while (5) is true in some languages (English, French, Hebrew, Russian), it does not hold in others (Dutch, German, Icelandic, Norwegian). Landau's claim that (5) follows from a general inability of implicit arguments of passives to enter a predication relation must therefore be false. The second part of the paper (section 4) attempts to reconcile this split regarding the acceptability of implicit control with non-attitude matrix predicates with Landau's (2015) Two-Tiered Theory of Control. We investigate two possible explanations for the cross-linguistic split: (i) languages differ with respect to whether the implicit argument of passives is projected as a weak or strong implicit argument in the sense of Landau (2010). Only in languages where it is a strong implicit argument is predication, and thus, implicit control with non-attitude verbs possible. Based on a discussion of depictives in passives, we conclude that (i) is untenable (section 4.1). Instead, the following generalization seems to be empirically more adequate (section 4.2): (ii) implicit control with non-attitude verbs is blocked in languages that lack a (plain) impersonal passive. Finally, section 4.3 proposes a theoretical explanation for generalization (ii). Section 5 concludes.

2. The Two-Tiered Theory of Control and Landau's Generalization

In this section, we will have a closer look at the Two-tiered theory of control (TTC) developed in Landau (2015) to see how Landau's Generalization is taken as supporting evidence for such an approach to control.

The TTC was born out of an attempt to overcome a number of issues within the Agree-model (Landau 2000, 2004, 2008), without losing the ability to account for the fundamental split in control configurations between obligatory control (OC) contexts (which host an anaphor-like null subject called PRO), and no control (NC) contexts (which host a lexical DP or a pro subject). In the domain of complement control, this distinction was related to a certain feature composition on T/C, which involved [Agr]eement and abstract [T]ense features, the general observation here being that if the two are positively specified, the result does not involve control, while in all other cases, obligatory control arises. This empirical generalization is captured in the OC-NC generalization in (6).

(6) **The OC-NC Generalization**

In a fully specified complement clause (i.e., a clause in which the I head carries slots for both [T] and [Agr]):

a. If the I head carries both semantic tense and agreement ([+T,+Agr]), NC obtains.

b. Elsewhere, OC obtains.

(Landau 2015: 7, (6))

Landau (2015: section 2.3) lists a number of problems for his Agree-model. For example, it crucially relies on the notion of abstract Tense which in the meantime has been argued to be problematic in the context of infinitives (Wurmbrand 2014, Grano 2015), as well as on an unsatisfactory rule of R-assignment which stipulates that PRO, being [-R(eferential)], appears in the context of (6a) and DP/pro, being [+R(eferential)], appear in the context of (6b). Therefore, Landau (2015) attempts to provide a more fundamental account of the distribution of OC and NC. In doing so, the split between exhaustive and partial control predicates, which in the Agree-model was derived from the tense properties of the infinitival complement, found

an explanation driven by the lexical semantics of the control verb: all of the exhaustive control predicates are non-attitude verbs, whereas control predicates license partial control if they are attitude verbs (Pearson 2013, 2016).

Furthermore, building on insights from the semantic literature on attitude reports (see Pearson 2013, 2016 and the literature cited there), Landau argues that depending on the class of matrix predicate involved, the control relation is established differently.[1] The two types of control, with the corresponding syntactico-semantic relations involved are represented for subject control in (7) and (8) (irrelevant projections are omitted; we also leave out the semantic derivation and refer the reader to Landau (2015) for the details).

With a non-attitude predicate, the control relation involves predication, as suggested for all instances of OC in Chierchia (1984, 1989, 1990; Williams 1980) (Predicative Control in (7)), whereas the complement of attitude predicates contains in addition a logophoric layer that hosts information with respect to the context of evaluation (Logophoric Control in (8)). The author/addressee coordinate of the latter is projected as a variable (pro in (8)) in the left periphery of the infinitival clause and gets bound by the controller (typically the attitude holder; cf. Landau 2015: 34) in the matrix clause.

(7) **Predicative Control (former Exhaustive/PRO-Control):**
$[_{vP}$ DP $[_{VP}$ $V_{non\text{-}attitude}$ $[_{FinP}$ PRO Fin $[_{TP}$ ~~PRO~~ T $[_{vP}$ ….]]]]]

Control-relation: DP --- predication --- $FinP_{<e<s,t>>}$

(8) **Logophoric Control (former Partial/C-Control):**[2]
$[_{vP}$ DP $[_{VP}$ $V_{attitude}$ $[_{CP}$ pro C $[_{FinP}$ PRO Fin $[_{TP}$ ~~PRO~~ T $[_{vP}$ ….]]]]]]

Control-relation: DP --- variable binding --- pro
pro --- predication --- $FinP_{<e<s,t>>}$

Two comments are in order before we proceed: First, the property-denoting FinP in (7) and (8) is a predicate derived via movement of PRO. Adopting the treatment of movement as lambda-abstraction (Heim & Kratzer 1998), Landau assumes that PRO, being a minimal pronoun in the sense of Kratzer (2009), cannot saturate the lambda-variable generated by moving PRO into SpecFinP and is therefore functioning like an operator in deriving an open predicate. Second, Logophoric Control essentially involves two dependencies, one of them (predication) identical to the one involved in Predicative Control. This is where the theory gets its name from: Logophoric control is predicative control with a second layer/tier stacked on top.

Landau shows that many of the properties originally related to PRO- vs. C-Control now fall out from the type of control relation involved. For example, the lack of partial control in the

[1] This is not strictly speaking a new claim. The two types of control correlate with PRO- and C-control in the Agree-model. In the former, the controller DP agrees with matrix T and T agrees directly with PRO resulting in exhaustive control relation. In the latter, the Agree relation between T and PRO is mediated by an intervening C-head, resulting in a potential partial control relation.

[2] The projected coordinate in Spec,CP is, strictly speaking, not a pro, but an element formally identical to PRO. We follow Landau simply in using this notational variant in order not to create the impression of another movement step. Keep in mind, however, that for Landau, both pro and PRO in (8) are minimal pronouns in the sense of Kratzer (2009).

context of non-attitude predicates boils down to the predication relation, which disallows a collective predicate that requires a (semantically) plural subject to predicate over a (semantically) singular DP (but see Pearson (2013, 2016) for a semantic derivation of partial control that relies on a Chierchia-style predication analysis of control). The same goes for control shift, as well as split control, which are claimed to be excluded by a predication analysis (Landau 2015, section 4.3). Landau also provides an explanation for how the difference between predication and variable binding entails the lack of a control relation (NC) in logophoric, but not predicative control into inflected infinitives, and thus derives the OC-NC Generalization in (6) above (see Landau 2015, section 3.5 and 3.6). The properties of the two control types are summarized in (9).

(9)

		Predicative control	**Logophoric Control**
a.	Inflected complement	OC	NC
b.	Control Shift	*	ok
c.	Split Control	*	ok
d.	Partial Control	*	ok
e.	**Implicit Control**	*****	**ok**

Particularly relevant for our purposes is (9e): the proclaimed lack of an implicit control relation in predicative, but not in logophoric control. To account for this split, Landau builds on the assumption that implicit arguments cannot function as the subject of predication. He advances the following data that supposedly support this claim.

(10) a. John ate *(the meat) raw.
b. I am now hiring *(people) for John to work.
c. The room was left (*angry at the guests). Landau (2015: 69, (91a-c))

(10a, b) show that an object cannot be dropped if it functions as the subject to some type of secondary predicate. (10c) is taken to illustrate the same for the implicit external argument of a verbal passive. Landau's generalization with respect to implicit control given in (5) (repeated here for the sake of convenience) is thus but one out of a number of empirical phenomena that fall under the principle in (11) - and therefore follows from how the control relation is established in his system.

(5) **Landau's Generalization:**
Attitude predicates allow implicit control in the context of an impersonal passive.
Non-attitude predicates never allow implicit control.

(11) **Condition on Syntactic Predication** (Landau 2015: 69, (90)):
The argument predicated of must be syntactically represented.

In the following, we will investigate the cross-linguistic validity of (5) and (11). Note that in particular (11) has frequently been challenged in the literature for implicit arguments of

passives in that data similar to (10c) have been judged acceptable;[3] we will discuss this in section 4.

3. Landau's Generalization Cross-Linguistically

In Landau (2015), the generalization in (5) is given cross-linguistic validity. In this section, we will show that obligatory control in English, French, Hebrew and Russian conform to Landau's Generalization (section 3.1). Dutch, German, Icelandic and Norwegian, however, allow implicit predicative control, contrary to (5) (section 3.2).

3.1 Languages without implicit predicative control

3.1.1 English

We ran a small questionnaire study, asking 8 speakers to rate the acceptability of the test sentences on a 7-point Likert scale, with 1 corresponding to inacceptable, and 7 to fully acceptable. The results for the test sentences are reported below (we provide the individual judgments, as well as the arithmetic mean).[4]

(12) **Non-attitude verbs/predicative control: English**

a. It was tried to understand the analysis.
   1, 1, 1, 1, 1, 1, 5, 1 (mean: 1,5)
b. It was begun to raise the taxes.
   1, 2, 1, 1, 1, 1, 2, 1 (mean: 1,25)
c. It was begun to clean up the living room.
   1, 2, 1, 1, 1, 1, 2, 1 (mean: 1,25)
d. (After the stock market crash) it was stopped to invest money in stocks.
   1, 3, 1, 1, 1, 1, 1, 1 (mean: 1,25)
e. It was managed to find a solution to this problem.
   1, 3, 1, 1, 1, 1, 1, 1 (mean: 1,25)
f. It was dared to question her authority.
   2, 6, 1, 2, 1, 1, 1, 4 (mean 2,25)

(13) **Attitude verbs/logophoric control: English**

a. It was decided to leave the country immediately.
   4, 7, 6, 5, 6, 5, 7, 6 (mean: 5,75)
b. It was planned to renovate the kitchen next month.
   5, 6, 5, 4, 4, 2, 6, 7 (mean: 4,9)
c. It was promised to take out the garbage soon.
   1, 5, 2, 3, 2, 1, 4, 6 (mean: 3)
d. It was regretted to have raised the taxes so much.
   3, 4, 4, 2, 4, 2, 3, 4 (mean: 3,4)
e. It was agreed to raise the taxes again.

[3] Context potentially increases the acceptability of examples such as (10c) where the depictive predicate comes with an internal argument PP. Roeper (1987: 298) provides the following case in point.

(i) The crowd booed the players when they arrived. The whole game was played angry at the crowd.

[4] Note that most verbs in (12) can occur with a DP complement and then they passivize.

5, 7, 5, 5, 4, 5, 7, 7 (mean: 5,6)

f. It was preferred to leave the country as quickly as possible.
2, 6, 5, 5, 4, 3, 5, 4 (mean: 4,35)

g. It was refused to resubmit the paper to the same journal.
2, 5, 1, 2, 4, 1, 2, 4 (mean: 2,6)

h. It was arranged to welcome the guests in the garden.
6, 7, 7, 4, 6, 5, 7, 7 (mean: 6,1)

i. It was offered to do the shopping for the weekend.
2, 3, 1, 2, 1, 1, 2, 4 (mean: 2)

To the exception of three cases (*promise, refuse, offer*), a comparison between (12) and (13) clearly shows that implicit logophoric control is rated as much more acceptable than implicit predicative control, in line with Landau's generalization. The judgments also show that there is some speaker-variation with respect to the acceptability of implicit control in general, and certain cases in particular (some speakers not included here rejected all implicit control sentences). We have nothing to add here concerning possible sources of this variation and base our further discussion on the general picture in which English conforms to Landau's generalization.

3.1.2 French

The translations of the sentences we used to investigate the acceptability of implicit control in English were judged by six French speakers, again on a scale from 1-7. The results are reported below (some test items, e.g. implicit control with *stop*, *manage, arrange* had to be excluded for language-specific reasons).

(14) **Non-attitude verbs/predicative control: French**

a. Il a été essayé de comprendre l'analyse
it has been tried to comprehend the.analysis
'People tried to understand the analysis.'
1, 7, 3, 1, 3, 2 (mean: 2,5)

b. Il a été commencé à augmenter à nouveau les impôts.
it has been begun to raise at new the taxes
'People began to raise the taxes again.'
1, 1, 2, 1, 1, 1 (mean: 1,15)

c. Il a été commencé à nettoyer la salle de séjour
it has been begun to clean.up the living room
'People began to clean up the living room.'
3, 1, 2, 1, 1, 1 (mean: 1,5)

d. Il a été réussi à trouver une solution à ce problème.
it has been managed to find a solution to this problem
'People managed to find a solution to this problem.'
1, 1, 1, 1, 2, 1 (mean: 1,15)

(15) **Attitude verbs/logophoric control: French**

a. Il a été décidé de quitter le pays immédiatement.
it has been decided to leave the country immediately

‘People decided to leave the country immediately.’
7, 7, 7, 7, 7, 7 (mean: 7)

b. Il était prévu de rénover la cuisine le mois prochain.
it was planned to renovate the kitchen the month following
‘People planned to renovate the kitchen next month.’
7, 7, 7, 7, 7, 7 (mean: 7)

c. Il a été promis de sortir les poubelles très bientôt.
it has been promised to take.out the garbage very soon
‘People promised to take out the garbage very soon.’
6, 7, 6, 6, 5, 3 (mean: 5,5)

d. Il a été regretté d’avoir augmenté les impôts d’autant.
it has been regretted to.have raised the taxes this much
‘People regretted having raised the taxes so much.’
4, 7, 5, 4, 3, 2 (mean: 4,15)

e. Il a été convenu d’augmenter les impôts à nouveau.
it has been agreed to.raise the taxes again
‘People agreed to raise the taxes again.’
7, 7, 6, 7, 7, 7 (mean: 6,8)

f. Il a été préféré de quitter le pays aussi rapidement que possible.
it has been preferred to leave the country as quickly as possible
‘People preferred to leave the country as quickly as possible.’
7, 6, 4, 7, 5, 2 (mean: 5,15)

g. Il a été refusé de soumettre à nouveau le papier à la même revue.
it has been refused to resubmit again the paper to the same journal
‘People refused to resubmit the paper to the same journal.’
2, 7, 5, 4, 6, 6 (mean: 5)

i. Il a été proposé de faire les courses pour le week-end.
it has been proposed to do the shopping for the weekend
‘People offered to do the shopping for the weekend.’
6, 7, 7, 7, 6, 5 (mean: 6,3)

The picture that emerges essentially mirrors the one we found for English: despite speaker-variation, there is a general tendency to accept implicit logophoric control, but reject implicit predicative control. We conclude thus that French conforms to generalization provided in Landau (2015).

3.1.3 Hebrew

Landau (2015: 71, (99a, b)) provides the Hebrew data in (16a, b) in support of his generalization:

(16) a. **Non-attitude verbs/predicative control: Hebrew**
*hufsak/nusa/niskax le’hitkadem ba-proyekt.
was.stopped/was.tried/was.forgotten to.move.forward in.the-project
‘*It was stopped/tried/forgotten to move forward with the project.’

b. **Attitude verbs/logophoric control: Hebrew**
huxlat/tuxnan/huvtax le’hitkadem ba-proyekt.

was.decided/was.planned/was.promised to.move.forward in.the-project
'It was decided/planned/promised to move forward with the project.'

Where possible, we constructed Hebrew equivalents or near-equivalents of the English test sentences and had two native speakers judge their acceptability on a binary scale. The result is reported in (17) and (18).

(17) **Non-attitude verbs/predicative control: Hebrew**

a. *nusa lehavin et ha-nituax.
was.tried to.understand ACC the-analysis
'People/someone tried to understand the analysis.'

b. *hutxal lesader et ha-xeder.
was.begun to.arrange ACC the-room
'People/someone begun cleaning up the living room.'

c. *hufsak liʃtot alkohol.
was.stopped to.drink alcohol
'People/someone stopped drinking alcohol.'

d. *hoaz lefakpek be-samxut-a.
was.dared to.doubt in-authority-hers
'People/someone dared to challenge her authority.'

(18) **Attitude verbs/logophoric control: Hebrew**

a. huvtax lehorid et ha-zevel.
was.promised to.take.down ACC the-trash
'Someone/people promised to take out the garbage.'

b. hutsa laasot kniot.
was.offered to.do shopping
'Someone/people offered to do the shopping.'

c. tuxnan leʃapets et ha-mitbax.
was.planned to.renovate ACC the-kitchen
'Someone/people planned to renovate the kitchen.'

d. huxlat laazov et ha-arets.
was.decided to.leave ACC the-country
'Someone/people decided to leave the country.'

Although the judgments are not as fine-grained as the ones we provided for English or French, since we are mainly interested in the general tendency, the judgments we gathered for Hebrew again support the generalization advanced by Landau: attitude predicates allow implicit control, whereas non-attitude predicates do not.

3.1.4 Russian

In short, Russian behaves exactly like the languages discussed before. This is illustrated below. (19) repeats the Russian data provided by Landau. (20) and (21) involve (near-) equivalents to some of the English sentences. The judgments are taken from three native speakers, who judged the acceptability on a binary scale.

(19) a. **Non-attitude verbs/predicative control: Russian**

*Bylo načato/prodolženo/zakončeno
was.SG.NEUT begun.SG.NEUT/continued.SG.NEUT/finished.SG.NEUT
tratit' den'gi na bespoleznye lekarstva.
to.spend money on useless medicines
'*It was begun/continued/finished to spend money on useless medicines.'

b. **Attitude verbs/logophoric control: Russian**

Bylo zaplanirovano/obeščano obnovit' zdanie.
was.SG.NEUT planned.SG.NEUT/promised.SG.NEUT to.renovate building
'It was planned/promised to renovate the building.'

(Landau 2015: 72, (102a, b))

(20) **Non-attitude verbs/predicative control: Russian**

a. *Bylo poprobovano ponjat analiz.
was.NEUT.SG tried.NEUT.SG to.understand analysis
'People/someone tried to understand the analysis.'

b. *Bylo načato ubirat' gostinuju.
was.NEUT.SG begun.NEUT.SG to.clean.up living.room
'People/someone begun cleaning up the living room.

c. *Bylo zakončeno pit' alcogol'.
was.NEUT.SG stopped.NEUT.SG to.drink alcohol
'People/someone stopped drinking alcohol.'

(21) **Attitude verbs/logophoric control: Russian**

a. Bylo obeščano vysnesti musor.
was.NEUT.SG promised.NEUT.SG to.take-out garbage
'Someone/people promised to take out the garbage'

b. Bylo predloženo sxodit' za pokupkami.
was.NEUT.SG offered.NEUT.SG go for shopping
'Someone/people offered to do the shopping.'

c. Bylo zaplanirovano otremontirovat' kuxnju.
was.NEUT.SG planned.NEUT.SG to.renovate kitchen
'Someone/people planned to renovate the kitchen.'

d. Bylo rešeno pokinut' stranu.
was.NEUT.SG decided.NEUT.SG to.leave country
'Someone/people decided to leave the country.'

3.2 Languages with implicit predicative control

3.2.1 German

Landau (2015) provides the German examples below to support his claim that non-attitude predicates do not license implicit control (judgments are taken over from his work).

(22) a. ??Es wurde aufgehört Zigaretten zu rauchen.
it was stopped cigarettes to smoke
'It was stopped to smoke cigarettes.'

b. ??Es wurde geschafft / gewagt den Gefangenen zu helfen.

it was managed / dared the prisoners to help
'It was managed/dared to help the prisoners.' (Landau 2015: 71f., (100a, b))

While it is true that such examples are often felt to be slightly strange in out-of-the-blue contexts, it can be shown that, in German, implicit control with non-attitude verbs is not qualitatively different from implicit control with attitude predicates.

Initial support for this view comes from the fact that a simple Google-search turns up hundreds of examples of implicit predicative control. Some of the hits are provided below. In (23)-(25) we list examples of different sub-types of non-attitude verbs (see also Landau 2000 for this subclassification), in order to guarantee broad empirical coverage:

(23) **German implicatives verbs with implicit control**

a. Jeder hat ihn geliebt, **weil vermieden wurde** über seine
everyone has him loved because avoided was about his
Vergangenheit zu reden.
past to talk
'Everyone loved him because people avoided talking about his past.'

b. Am meisten verstört hat mich der Fakt, **dass vermieden wurde,** mit
at.the most disturbed has me the fact that avoided was with
gefährdeten Kindern direkt zu sprechen.'
imperiled children directly to speak
'What disturbed me the most was the fact that people avoided talking directly with imperiled children.'

c. Jessi war geradezu beleidigt, **dass gewagt wurde** so etwas
Jessi was virtually offended that dared was something.like this
überhaupt zu fragen.
even to ask
'Jessi was really offended that people even dared to ask something like this.'

d. Seltener noch war zu beobachten, **dass gewagt wurde,** außerhalb
rarer still was to observe that dared was outside
wirtschaftlicher Krisen Einschnitte im sozialen Netz vorzunehmen.
economic crises cuts in.the social network to.take
'Even less frequently one was able to observe that outside of economic crises cuts were made in the social network.'

e. Alle Beteiligten waren erleichtert, **dass es geschafft wurde,** die so Unheil
all participants were relieved that it managed was the so mischief
bringende Maschine zu vernichten.
bringing machine to destroy
'All participants were relieved that people managed to destroy the machine that brought that much mischief.'

f. Wir freuen uns, **dass es geschafft wurde,** in den Sommerferien die
we are.excited that it managed was in the summerbreak the
notwendigen Gleisanlagen auszutauschen …
necessary tracks to.replace
'We are excited that people managed to replace the necessary tracks in the summer holidays.'

(24) **German aspectual verbs with implicit control**

a. Obgleich im postdramatischen Theater niemals gänzlich **aufgehört**
even.though in.the post-dramatic theatre never fully stopped
wurde zu erzählen.
was to narrate
'Even though people never fully stopped to narrate in the postdramatic theatre.'

b. Das Problem besteht darin, **dass aufgehört wurde,** ein alternatives Projekt
the problem lies therein that stopped was an alternative project
für Argentinien zu entwickeln.
for Argentina to develop
'The problem is that people stopped developing an alternative project for Argentina.'

c. Die Liste wurde öffentlich ausgehängt und **es wurde** **begonnen**, sie
the list was openly posted and it was begun her
abzuarbeiten.
to.work.off
'The list was posted in public and people began to work it off.'

d. Ein wichtiger Erfolg der Reise ist sicherlich, **dass begonnen wurde,** ein
an important success of.the trip is certainly that begun was a
gemeinsames Netzwerk zu knüpfen.
joint network to knot
'An important success of the trip is certainly that people started building up a joint network.'

e. Man spürte, dass **angefangen wurde** sich als Mannschaft und nicht nur als
one felt that started was REFL as team and not only as
Mitspieler zu verstehen
teammate to understand
'One felt that they started to see themselves as a team and not only as teammates.'

f. Nach Aufruf von Laufwerk c: in der Dos-Box konnte ich feststellen, **dass**
after requesting of harddrive c: in the Dos-box was.able I realize that
angefangen wurde, die Dateien des Betriebssystems zu kopieren.
started was the files of.the operation.system to copy
'After requesting harddrive c: in the Dos-box, I was able to detect that the someone/something started to copy the system's files.'

(25) **German *versuchen* (try) with implicit control**

a. Erst am Montag wurde der Polizei gemeldet, dass **versucht wurde** in ein
only on Monday was the police told that tried was in a
Haus in der Schmitzinger Straße in Waldshut einzubrechen.
house in the Schmitzinger street in Waldshut to.break.in
'Not before Monday someone told the police that someone tried to break into a house in the Schmitzinger street in Waldshut.'

b. Es **wurde versucht**, eine Datei mit einem falschen Format zu laden.

it was tried a file with a wrong format to load
'Someone/something tried to load a file with the wrong format.'

All of the sentences provided in (23)-(25) sound perfectly natural to us and other native speakers we consulted. In order to substantiate this impression, we also conducted a small questionnaire study to elicit the grammatical status of implicit predicative control. The study, which included various other test items not relevant for the discussion here, contained two implicit control sentences with attitude predicates, and two with non-attitude predicates. In total, the questionnaire contained 68 sentences that were fully randomized. 58 subjects participated in the study and rated the sentences show to them on a 7-point Likert scale (with 1 indicating unacceptability, and 7 full acceptability). The study was carried out online via the platform www.qualtrics.com and distributed amongst first-year students at the University of Stuttgart. The results in form of an arithmetic mean for the relevant test items are provided below.

(26) **non-attitude verbs/predicative control**:

a. Es wurde angefangen, das Kinderzimmer aufzuräumen.
it was begun the playroom to.tidy.up
'People began cleaning up the playroom.' (**mean 5.72**, st.dev. 1.74)

b. Es wurde versucht, das Land zu verlassen.
it was tried the country to leave
'People tried to leave the country.' (**mean 6.10,** st.dev. 1.32)

(27) **attitude verbs/logophoric control:**

a. Es wurde versprochen, das Kinderzimmer aufzuräumen.
it was promised the playroom to.tidy.up
'People promised to clean up the playroom.' (**mean 5.91**, st.dev. 1.72)

b. Es wurde beschlossen, das Land zu verlassen.
it was decided the country to leave
'People decided to leave the country.' (**mean 6.38**, st.dev. 1.00)

(26) and (27) show that there is no difference between the acceptability of implicit logophoric and implicit predicative control, and that both types receive high acceptability ratings. We thus conclude that German does not conform to Landau's generalization in that it productively allows implicit control with non-attitude predicates.

It should also be noted at this point that the examples of implicit predicative control provided in this section are control configurations and do not involve restructuring. This can best be seen by the fact that structural case is assigned to the internal argument of the infinitive clauses which, following Wurmbrand (2001), is a clear indication of the non-restructuring status of these examples.

3.2.2 Dutch

According to Landau (2015), Dutch patterns with English, Russian and Hebrew in disallowing implicit control if the matrix predicate is a non-attitude verb. He advances the following example in support.

(28) **Non-attitude verbs/predicative control: Dutch**

*Er werd begonnen (om) sigaretten te roken.
there was begun (C) cigarettes to smoke
'It was begun to smoke cigarettes.' (Landau 2015: 72, (101))

The native speakers we consulted indeed rejected this example, but they did so for independent reasons, as all of them wanted to replace the complementizer *om* with the preposition *met* 'with' (*Er werd begonnen met sigaretten te roken.* 'It becomes started with cigarettes to smoke').

In order to clarify the acceptability of implicit predicative control, let us first point out that one finds examples in the (linguistic) literature, such as the following one from Bennis & Hoeckstra (1989: 13, (6b)).

(29) Er wordt geprobeerd (om) de deur open te maken.
there is tried for the door open to make
'Someone tries to open the door.'

Furthermore, we asked four native speakers to rate the Dutch translations of some of the English sentences from section 3.1.1, as well as some example sentences we found on the internet. The results (with individual judgments, and arithmetic mean) are the following.

(30) **Non-attitude verbs/predicative control: Dutch**

a. Er werd begonnen (om) de woonkamer op te ruimen.
there was begun C the living.room up to clean
'People begun cleaning the living room.'
3, 4, 3, 4 (mean: 3.5)

b. Er werd geprobeerd om de analyse te begrijpen.
there was tried C the analysis to understand
'People tried to understand the analysis.'
7, 6, 6, 6 (mean: 6.25)

c. Er werd gewaagd (om) haar autoriteit in twijfel te trekken.
there was dared C her authority in doubt to pull.
'People dared question her authority.'
3, 7, 1, 4 (mean: 3,75) (without 'om')
3, 4, 1, 6 (mean: 3,5) (with 'om')

d. Er werd vergeten/(verzuimd) om als collectief te spelen, wat normaliter juist
it was forgotten/missed C as collective to play, what normally just
de sterke kracht is van het team.
the strong power is of this team.
'They forgot/failed to play as a collective, which usually is the strength of this team.'
4, 7, 3, 7 (mean: 5.25)

e. Er werd vermeden vragen te stellen.
it was avoided questions to pose
4, 7, 4, 7 (mean: 5,5)

(31) **attitude verbs/logophoric control: Dutch**

a. Er werd beloofd om het afval op te ruimen.
there was promised C the garbage up to clean
'It was promised to clean up the garbage.'
6, 7, 6 ,7 (mean: 6.5)

b. Er werd aangeboden om de boodschappen te doen.
there was offered C the groceries to do
'It was offered to do the grocery shopping.'
7, 5, 7, 6 (mean: 6,25)

c. Er werd gepland om de keuken te verbouwen.
there was planned C the kitchen to renovate
'It was planned to renovate the kitchen.'
3, 7, 4, 5 (mean: 4.75)

d. Er werd besloten om het land te verlaten.
there was decided C the country to leave
'It was decided to leave the country.'
7,7,6,7 (mean: 6.75)

It has to be mentioned that the variation in acceptability was huge, even for one single item, and that it turned out that aspectual predicates in the context of implicit control were indeed less acceptable than other non-attitude verbs (a tendency that appears to hold for German as well).[5] Yet, despite this variation, Dutch cannot be said to lack implicit predicative control: while some predicates are better than others (e.g., *vermeden* 'to avoid' vs. *waagen* 'to dare'), the relevant cases are generally acceptable (although, admittedly, less so than instances of implicit logophoric control). Dutch, therefore, does not pattern as expected under Landau's generalization.

Again, although there is some overlap between predicates that trigger restructuring and exhaustive control/non-attitude predicates (see, e.g., Grano 2015 for an investigation of this correlation), the relevant cases of implicit predicative control provided in this section cannot be analysed as involving restructuring. First, Dutch lacks Voice restructuring in the sense of Wurmbrand (2015), i.e., long passives are impossible. Second, the examples above show that the presence of the complementizer *om* does not influence the acceptability of implicit predicative control. The presence of the former, combined with the lack of verb raising (Evers 1975) suggest extraposition of a full CP, and thus, no restructuring.

3.2.3 Icelandic

Icelandic, too, does not conform to this generalization, as the following data suggest.

(32) **Icelandic non-attitude verbs with implicit control**

a. Það er reynt að dansa hér.

[5] We hypothesize that this might have to do with a strong(er) tendency of these predicates to undergo restructuring. This would relate to the fact that the infinitival complements of aspectual verbs in Dutch are incompatible with a complementizer and the observation that implicit control tends to be most acceptable if a complementizer is projected, i.e., in non-restructuring contexts (Reed 2014). That this is no bidirectional is suggested by the acceptability of (29), which does not depend on whether or not the complementizer is projected.

it is tried to dance here
'People try/are trying to dance here.' (Sigurðsson 2011: 159, (22b))

b. Það var reynt að hæta að reykja.
it was tried to stop to smoke
'People tried to stop smoking.' (Gaston Rippinger, p.c.)

c. Það var byrjað að byggja upp sviðið.
it was begun to build up the.stage
'People began to assemble the stage.' (Gaston Rippinger, p.c.)

d. Það var byrjað að moka snjóinn.
it was begun to shovel snow
'People began to shovel snow.' (Sigurðsson 1989: 61, (9a))

e. Það var hætt að moka snjóinn.
it was stopped to shovel snow
'People stopped shovelling snow.' (Sigurðsson 1989: 61, (10a))

f. Það var klárað að moka snjóinn.
it was finished to shovel snow
'People finished shovelling snow.' (Sigurðsson 1989: 61, (11a))

As with German and Dutch, the data in (32) cannot be analyzed as instances of restructuring, as Icelandic has been argued in the literature to lack (Voice-)restructuring, i.e., long passives as in, e.g., German, are unacceptable (33) (Sigurðsson 1989).

(33) **Restructuring diagnostics: long passive**

a. Der Schnee wurde versucht wegzuschauffeln. (German)
the.nom snow was tried away.to.shovel

b. *Snjórinn var reyndur að moka. (Icelandic)
the.snow was tried to shovel
'People tried to shovel away the snow.' (Sigurðsson 1989: 60, (7a))

3.2.4 Norwegian

Finally, the following two examples of implicit predicative control were accepted by four native speakers, suggesting that Norwegian, too, defies Landau's generalization.

(34) **Non-attitude verbs/predicative control: Norwegian**

a. Det ble forsøkt å åpne vinduet.
it was tried to open the.window
'People tried to open the window.'

b. Først da ble det stoppet å røyke.
first then was it stopped to smoke
'Only then people stopped smoking.'

3.3 Conclusions

Our cross-linguistic survey showed that while implicit predicative control is indeed unacceptable in English, French, Russian, and Hebrew, this type of control relation is rated acceptable in German, Dutch, Icelandic, and Norwegian. We are thus faced with the task of

explaining why Landau's generalization holds in some, but not in all languages. If we stick to the idea advanced in Landau (2015) that control with non-attitude matrix predicates involves a predication relation, it appears that implicit arguments of passives can enter predication in some, though not in all languages. We will now approach this issue in some greater detail.

4. Two potential ways to account for the split

In this section, we discuss two possibilities of how to account for the fact that implicit predicative control is possible only in some languages. One possibility exploits the assumption that implicit arguments in passives can enter a predication relation in some languages because they are syntactically projected in these languages as a 'strong implicit argument' (SIAs) in the sense of Landau (2010). We will discuss this possibility in section 4.1 and conclude that it is implausible. The second possibility builds on an independent observation, namely that impersonal passives are acceptable in some, but not all languages, and that there appears to be a correlation between languages that allow impersonal passives and ones in which implicit predicative control is acceptable (section 4.2).

4.1 Implicit Arguments and Secondary Predication

Chomsky (1986: 120-121) notes that the unrealized subject of a control infinitive (PRO) can function as the subject of a secondary predicate such as *together* or *angry*, whereas this is not possible, he argues, for the understood agent of a passive (35).[6]

(35) a. It is impossible [PRO to visit me together].
b. It is impossible [for me to be visited (*together)].
c. They expected [PRO to leave the room angry].
d. The room was left (*angry).

The conclusion Chomsky drew from this type of data was that the subject of an infinitival clause is syntactically projected, while the understood agent of a passive is not.

Landau (2010) on the other hand develops an argument that implicit arguments must be syntactically represented. He first argues that Partial Control must be derived in the syntax and then shows that implicit arguments can antecede Partial Control relations. Consequently, implicit arguments must be syntactically represented.

In order to derive that implicit arguments can enter syntactically driven partial control but not syntactically driven secondary predication (while pro/PRO can enter both relations), Landau (2010) postulates two different types of syntactically projected covert arguments, calling them weak and strong implicit arguments (WIA and SIA henceforth). The ontology of implicit arguments he defends in that paper is given in (36). Combined with the generalization in (37) he derives the contrast in (35).

(36) a. *Strong implicit argument (SIA)*
PRO, pro
b. *Weak implicit argument (WIA)*

[6] In this paper, we use the term 'secondary predicate' to refer to depictives exclusively, well-knowing that resultatives are typically considered as secondary predicates, too (see, e.g., Schultze-Berndt & Himmelmann (2004) for discussion and a cross-linguistic investigation).

Passive agent, implicit object

(Landau 2010: 359, (4))

(37) An implicit argument must be *strong* to license a secondary predicate.
(Landau 2010: 359, (4))

To put it differently, only SIAs can saturate predicates.[7] If control in the context of non-attitude predicates reduces to a predication relation, this would entail that in those languages that allow implicit predicative control, the implicit agent of a passive is represented as a SIA. As such, it should also license secondary predicates. In languages where implicit predicative control is infelicitous, this could be because the implicit argument in a passive is a WIA, which should correlate with the inability of the passive agent to function as the subject of a secondary predicate, in line with (37). (In fact, this conclusion is independent from Landau's (2010) ontology of implicit arguments. If control and secondary predication rely on the same mechanism, and the former allows implicit arguments, the latter should, too.)

In order to test the plausibility of this first explanation for the cross-linguistic split in the acceptability of implicit predicative control, we investigated whether there is a correlation between languages that (dis-)allow implicit control in the context of non-attitude predicates, and languages that (dis-)allow secondary predication over the understood agent in passives.

4.1.1 German

As the following examples show, German allows secondary predication over implicit arguments.

(38) a. Der Patient wurde nackt untersucht.
the patient was naked examined
Intended reading: 'The patient was examined and the examiner was naked.'

b. Dieser Brief wurde offensichtlich betrunken geschrieben.
this letter was obviously drunk written
'This letter was obviously written drunk.'

c. Es wurde betrunken/nackt getanzt.
it was drunk/naked danced
'People danced naked/drunk.'

d. dass das Buch nackt gelesen wurde.
that the book naked read became
'that the book was read naked.' (Müller 2008: 257, (3a))

While some speakers rejected the agent-modifying reading of the depictive in (38a), (38b,c) were accepted by all our informants. (38d) is taken from the literature. The reason for the

[7] Syntactically, Landau explains this via the assumption that only arguments can be predicated over and weak implicit arguments are no arguments. In particular, he proposes that weak and strong implicit arguments differ in their feature set as shown in (i). Since it is the D-layer that typically is taken to map an NP predicate to an argument denotation (Longobardi 1994), and WIAs lack this layer, it is expected that they cannot enter a predication relation.

(i) a. Strong implicit argument $=_{def}$ [D, Φ-set] (= pro)
b. Weak implicit arguments $=_{def}$ [Φ-set] (Landau 2010: 378, (60))

unacceptability of (38a) with some speakers could simply be that speakers prefer to relate, if possible, a secondary predicate to an overt argument instead of a covert one. Other factors arguably also play a role (thanks to Jutta Hartmann (p.c.) for pointing this out to us): passives are used to foreground the theme argument. Thus, if an agent modifying element is added, this should be done in such a way that its contribution is of some relevance to the theme. This would account for why (38b) is better than (38a) for some speakers: writing a letter while being drunk has a potential effect on the ultimate form of the letter (which is strengthened in (38b) by the presence of the adverb *obviously*), whereas it is not clear how being naked should affect the examination of the patient. More research is needed to decide between these explanations but the general acceptability of (38b-d) is enough to show that German allows secondary predication to target implicit argument.[8]

Note furthermore, that even though German adjectives are formally indistinguishable from adverbs, the secondary predicates in (38) above are clearly adjectival. Evidence for this comes from a diagnostic developed in Rothstein (2006) who points out that an adverbial use, as it modifies the event, should be compatible with the negation of the adjectival use, i.e., the use that modifies the state the event participant was in during the event. This is illustrated in (39a) for English, where the adverbial and the adjectival form are morphologically different. In (39b), the test is then transferred to German, where there is no morphological difference between adjectives and adverbs.

(39) a. The car was driven drunkenly, but the driver was not drunk.
b. Der Brief wurde betrunken geschrieben, #aber der Autor war nicht betrunken.
the letter was drunk written but the author was not drunk
Literal: 'The letter was written drunk, but the author was sober.'

The continuation in (39b) is infelicitous, suggesting that the first use of *betrunken* 'drunk' is denoting the state the author was in while writing the letter - exactly the interpretation one would expect if it was used as a depictive rather than an adverbial. In fact, all of the modifiers in (38) denote the state the agent was in while carrying out the event.

Further support for the claim that implicit argument modifying predicates are adjectival comes from the following example. On top of selecting an argumental complement PP, the predicate used (*wütend* 'angry, mad') should be incompatible with the manner adverb *carefully* if it was used adverbially, since in this use, it would denote that an action was carried out very emotionally, and aggressively.

(40) Wütend auf die Nachbarn wurden deren Klingeln nachts ganz vorsichtig manipuliert.
angry at the neighbors were their bells at.night fully carefully manipulated
'Angry at the neighbors, their bells were carefully manipulated at night.'

[8] Note that both explanations suggest that the question whether the implicit argument of passives qualifies for modification with a secondary predicate might be hard to answer in languages that lack impersonal passives. This is because the unacceptability of a secondary predicate that targets the implicit agent of a personal passive might simply be blocked by the presence of the overt theme. Only if a secondary predicate is illicit in an impersonal passive one can conclude that something is amiss with the grammatical predication relation, i.e., that the implicit argument cannot function as its subject.

Another type of predicate used in (35) above to show that implicit arguments of passives may not undergo predication is *together*. (41) shows that the German correlate is felicitous in the relevant context.

(41) a. ?Der Mann wurde zusammen/gemeinsam besucht.
the man was together collective visited
Literal: 'The man was visited together.'

b. Das Problem wurde zusammen/gemeinsam besprochen.
the problem was together collective discussed
Literal: 'The problem was discussed together.'

c. Am Abend wurde zusammen/gemeinsam musiziert.
at.the evening was together collective music.made
'People made music together in the evening.'

We thus arrive at the conclusion that in German, the implicit external argument of a passive may function as the subject of a secondary predicate. The acceptability of implicit predicative control would then initially be expected if both phenomena involve a predication relation and the implicit agent in a passive is an SIA.

Before we move on, let us add some comments on the theoretical side. Making the implicit argument of passives a SIA would have a number of negative consequences in other areas of the grammar.[9] For example, it raises the question discussed in Collins (2005) of why

[9] Landau (2010) also concludes that predication requires a subject with a D-feature/a Strong Implicit Argument. Yet, this type of implicit argument (formally, *pro*/*PRO*) is also argued to bind anaphors. It has, however, been pointed out in the literature, that the implicit agent of passives cannot bind anaphors. Schäfer (2012), for example, shows that passives of reflexive predicates in German are restricted to naturally and inherently reflexive predicates, while the passive of a reflexively used naturally disjoint predicate is infelicitous. As Schäfer points out, this restriction is unexpected if the understood agent in a passive could bind in the sense of Principle A of the Binding Theory. Thus, in order to account for the facts involving control and secondary predicates, one would be forced in Landau's typology to classify the implicit argument of passives in such a way that one mispredicts its behavior with respect to binding. An account in which implicit arguments of passives are syntactically unrepresented, and predication does not require syntactic projection appears, therefore, preferable to us. This conclusion becomes even stronger as the crosslinguistic picture is further developed below - there are more languages where the implicit agent of passives i) can be accessed by secondary predicates, ii) where non-attitude verbs allow implicit control iii) but the implicit agent of passives does not antecede anaphors (e.g. Dutch and Norwegian; cf. Schäfer 2012).

A further argument in support of the claim that predication does not require syntactic projection comes from the following, so far unprecedented observation: dispositional middles as in (ia, b), which are generally acknowledged to lack a syntactically projected external argument (Fagan 1992; Ackema and Schoorlemmer 1994, 1995, 2006; Lekakou 2005; Schäfer 2008; Kiparsky 2013, a.o.; though see Stroik 1992, Hoeckstra & Roberts 1993 for a different view) do license secondary predicates (iia, b).

(i) a. Dieses Buch liest sich gut.
this book reads REFL well
'This book reads well.'

b. Hier tanzt es sich gut.
here dances it REFL well
'One can dance well here.'

(ii) a. Dieses Buch liest sich selbst betrunken gut.

movement of the internal argument to SpecTP does not trigger a minimality violation. Although movement to SpecTP is not obligatory (Wurmbrand 2006), Müller (2001, 2016) shows that it must be a possibility. As (42a-c) shows, an unstressed pronoun occupies some position to the left of VoiceP, and can only be preceded by a nominative DP, suggesting that there is a dedicated subject position even in German.

(42) a. dass es der Fritz der Maria gegeben hat.
that it the.nom Fritz the.dat Maria given has
b. dass der Fritz es der Maria gegeben hat.
that the.nom Fritz it the.DAT Maria given has
c. *dass der Fritz der Maria es gegeben hat.
that the.nom Fritz the.dat Maria it given has
'that Fritz has given it to Maria.'

(43) weil der Roman ihr gegeben wurde.
because the.nom novel her.dat given was
'because she was given the novel.'

(43) then shows that in a passive, movement of the nominative theme argument to subject position is possible. If the implicit argument was an SIA, this movement, however, should be blocked.

Another issue for such an analysis is that if the implicit agent of passives was an SIA, it should pattern with other SIAs, such as, e.g., PRO. Yet, while the presence of PRO triggers accusative case on an internal argument (44a), accusative case cannot be retained in the corresponding passive (44b):

(44) a. Peter hofft [PRO den/*der Roman zu lesen].
Peter hopes the.acc/*nom novel to read
'Peter hopes to read the novel.'
b. weil *den/der Roman gelesen wurde.
because the.acc/nom novel read was
'because the novel was read.'

Be this is it may, let us return to our investigation of the question, whether there is a parallel between languages that allow implicit predicative control, and those that allow secondary predication to target the implicit agent of a passive.

4.1.2 Dutch and Norwegian

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this book reads REFL even drunk well
'This book reads well even when you are drunk.'
b. Nackt tanzt es sich besonders gut.
naked dances it REFL particularly well
'One can dance particularly well when naked.'

As the paraphrases suggest, the interpretation of the secondary predicate is really one of a depictive, and not of a (coerced) adverbial. Thus, unless middles have been misanalyzed and do involve a syntactically projected agent, the data in (iia, b) show that predication may target external arguments that are not syntactically represented.

The following data suggest that Dutch allows secondary predication over the implicit argument of passives. The following judgements were provided by Marcel den Dikken (p.c.) (the judgments in (46) were made on a 7-point Likert scale; 1=unacceptable, 7=fully acceptable). Note that the only clearly unacceptable example in (45b) has a human theme DP that arguably provides a more salient subject to the secondary predicate (see the discussion in the last section).

(45) a. Er werde naakt gedanst.
there is naked danced
'People danced naked.'

b. *De patient werd naakt onderzocht.
the patient was naked examined
Intended: 'The patient was examined and the examiner was naked.'

(46) a. De deur werd naakt geopend (6)
the door was naked opened
Literal: 'The door was opened naked.'

b. De kamer werd boos/kwaad verlaten (5)
the room was angry left
'The room was left angry.'

c. De man werd gezamenlijk bezocht (4)
the man was together visited
Literal: 'The man was visited together.'

d. Het probleem werd gezamenlijk besproken/opgelost (6/7)
the problem was together discussed/solved
Literal: 'The problem was discussed/solved together.'

e. Er werd gezamenlijk gemusiceerd (7)
It was together music.made
'People made music together.'

We thus conclude that Dutch allows secondary predication over the understood agent in passives. As discussed in section 3.2.2, Dutch also allows implicit control with non-attitude verbs. In Landau's theory (2010, 2015) this could only be captured if Dutch implicit arguments are projected as strong implicit arguments.

The same appears to hold true for Norwegian, where it is also possibility to predicate over implicit arguments. For some speakers, though, this is again impossible in cases where an overt human theme argument is present, just as we have seen for Dutch and German (data judgments: Terje Lohndal, Inghild Høyem, Ragnhild Eik, p.c.).

(47) a. Det blir danset naken.
there is danced naked
'People danced naked.'

b. */??Pasienten ble undersøkt naken.[10]
the.patient was examined naked

[10] Ragnhild Eik (p.c.) finds that predication over the implicit agent is dispreferred, but possible.

'Intended: The patient was examined and the examiner was naked.'

c. Døren ble åpnet naken.
the.door was opened naked
Literal: 'The door was opened naked.'

d. Rommet ble forlatt *sint/i sinne.
the.room was left angry/in anger
Literal: 'The room was left angry.'

(48) a. ??Mannen ble besøkt sammen.
the.man was visited together
Literal: 'The man was visited together.'

b. Problemet ble diskutert/løst sammen.
the.problem was discussed/solved together
'The problem was discussed/solved together.'

c. Det ble laget musikk sammen/Det ble danset sammen.
there was made music together/there was danced together
'People made music/danced together.'

4.1.3 Icelandic

The standard view in the literature is that secondary predication cannot target the implicit agent of passives in Icelandic (e.g., Jónsson 2009; Sigurðsson 2011, a.o.), see (49).

(49) a. Var hún barin (*fullur)? (Sigurðsson 2011: 157, (17a))
was she hit drunk.Nom.M.SG
Intended: 'Was she hit (by somebody who was drunk)?'

b. *Morgunmatur er alltaf borðaður nakinn.
breakfast.nom is always eaten naked.NOM.M.SG
'Breakfast is always eaten naked.' (Jónsson 2009: 297 (35a))

c. Það var alltaf borðað nakinn.
there is always eaten naked.NOM.M.SG (Jónsson 2009: 297 (35b))
'People always eat naked'.

While (49a, b) were also judged unacceptable by our informant, he found the following examples fully acceptable:

(50) a. Lagið var samið í drykkju.
song was composed in drunkenness
'The song was composed drunk.'

b. Það var dansað í drykkju.
it was danced in drunkenness
'People danced drunk.'

An obvious difference between (49) and (50) is that in (50) the depictive is realized as a PP, while in (49), it is an inflected adjective.[11] One interpretation of these data is that in Icelandic

[11] The adjectives are inflected for nominative, masculine, singular. As Jónsson (2009: 297f.) points out, other feature specifications do not improve the examples.

the implicit agent of passives cannot function as the subject of a secondary predicate. This would mean that the PPs in (50) do not count as real depictive secondary predicates even though they clearly express a property of the implicit agent during the event. Note that this view would already be severely problematic for the initial hypothesis that implicit predicative control is only possible in languages in which secondary predicates can modify the implicit agent of a passive: as we have shown in section 3.2.3, Icelandic does allow implicit predicative control. In other words, even the assumption that the implicit argument of passives is realized as an SIA in some languages, and as a WIA in others could not safe Landau's (2015) analysis of predicative control for Icelandic.

Yet, we believe there to be another, more plausible interpretation of the data in (49). Note that Icelandic adjectival depictives - like all predicative adjectives in Icelandic - inflect for the Gender-, Number-, and Case-features of their overt antecedent. The PP-predicates in (50), on the other hand, are uninflected in this respect. The contrast between (49) and (50) and in particular the ungrammaticality of the adjectival depictives in passives in (49) follows then under the simple assumption that Icelandic adjectives come with unvalued features from the lexicon and the implicit argument of passives cannot value the case- and phi-features. The plausibility of this argument is supported by the observation that in the languages above, predicative adjectives including depictives either do not inflect at all (German, Dutch), or show minimal inflection with a clear default/zero-marked form (Norwegian). Furthermore, we will see below that other languages with fully inflected predicative adjectives also disallow adjectival depictives in passives (Russian, Hebrew). Under this view, implicit agents license depictives, which, however, for language-specific reasons, can only surface as PPs.

4.1.4 English and French

We asked some English native speakers to rate the acceptability of sentences involving secondary predication over the implicit argument of passives. In (51) and (52), we provide the results.

(51) a. The patient was examined naked. (Reading where examiner is naked)[12]
1, 2, 4, 5, 2 (mean: 2,8)
b. The letter was written drunk.
4, 4, 6, 7, 7 (mean: 5,6)
c. The door was opened naked
1, 2, 2, 4, 2 (mean: 2,2)
d. The room was left angry
1, 1, 1, 4, 1 (mean: 1,6)

(52) a. The man was visited together
1, 1, 2, 2, 1 (mean: 1, 4)
b. The problem was discussed/solved together
5, 7, 5, 6, 6 (mean: 5,8)

[12] In addition to the five judgements listed below this example, Kyle Johnson, David Embick, and Jim Wood (p.c.) also judged the relevant reading to be in principle available, although the patient-modifying one clearly is more salient for them.

Note first that English does not make available the best test case for predication over the implicit agent, as it lacks impersonal passives (see the discussion in fn.8). Still, some of the examples above received quite good judgments. Furthermore, the contrast between the good and the bad example seems to exhibit some systematicity. As discussed already for German in section 4.1.1, passives are used to foreground the theme argument. Thus, an agent modifying depictive should be such that its contribution is of some relevance to the theme. While this is clearly the case in (51b) and (52b), the relevance of, e.g., being naked or angry is less straightforward in examples such as (51a), (51c), or (51d).

Note also that, based on example (51d), Chomsky (1986: 120-121) and Landau (2010) claim that the implicit agent in passives cannot be accessed by depictives/secondary predicates. Yet, many other authors have provided counterexamples to this claim (see e.g. Roeper (1987: 297f.); Safir (1987: 589); Baker (1988: 318); Collins (2005: 101f.); Kastner & Zu 2014; see also fn. 3). Further support for this view comes from Müller (2008), who provides the following corpus examples:

(53) a. "We would like to eventually run a shuttle between Radford and Blacksburg. Price's Fork, the main route, is *an awful road to be driven drunk* - all are, but especially that one" he says.
b. Later everyone got very drunk, *volleyball was played naked* in the mud.
c. The sport of Rugby is almost identical to *an ancient Greek ball game, which was played naked*, for an audience composed entirely of elderly aristocrats.
d. "*Recorded naked to be played naked*."

We conclude that in English depictives can be predicated over the implicit argument of passives, at least in principle. But then, if this type of predication relation involving implicit arguments is felicitous, the unavailability of implicit predicative control in English discussed in section 3.1.1 must not be related to the failure of establishing the control relation via predication (as suggested in Landau 2015).

Turning to French, the results are similar to the ones we found in English. We asked our French informants from section 3.1.2 to rate the acceptability of sentences involving the relevant kind of predication. The results are reported below.[13]

(54) a. Le patient a été examiné nu.
the patient was examined naked
'The patient was examined naked.'
7, 7, 7, 7, 7, 7 (mean: 7) (three speakers mentioned the ambiguity)
b. La lettre a sans doute été écrite saoul.
the letter has without doubt been written drunk
'The letter was clearly written drunk.'
3, 6, 5, 4, 7, 3 (mean: 4,65)
c. La porte a été ouverte nu.
the door was opened naked
'The door was opened naked.'

[13] Due to an imprecise design, the judgments in (54a) refer to the reading where the depictive relates to the overt nominative theme. However, three of our consultants explicitly stated that this sentence is ambiguous, i.e., that the depictive can relate to the implicit agent.

3, 2, 4, 4, 2 (mean: 2,5)

d. La porte d'entrée ne doit jamais être ouverte nu.
the front door not should always be opened naked
'The front door should never be opened naked.'
5, 2, 3, 6, 6, 2 (mean: 4)

e. La chambre a été quittée fâché.
the room was left angry
'The room was left angry.'
2, 2, 2, 4, 3, 1 (mean: 2,3)

(55) a. Le candidat a été examiné ensemble.
the applicant was examined together
'The applicant was examined together.'
1, 1, 1, 1, 2, 2 (mean: 1,3)

b. Le problème a été discuté / résolu ensemble.
the problem was discussed/solved together
'The problem was discussed/solved together.'
7, 2[14], 5, 7, 6, 3 (mean: 5)

We, again, see some more and some less acceptable examples, and draw the same conclusions as from the English data: predication over implicit arguments in passives is possible, although restricted (arguably in a similar vein: note that, as in English, examples where the relevance of the depictive to the theme subject is unclear are more degraded).[15] This contrasts with the result from section 3.1.2, that implicit predicative control is impossible in French.

4.1.5 Hebrew and Russian

The situation in Hebrew and Russian is very similar to what we have seen in Icelandic: Adjectival depictives cannot relate to the implicit agent and instead PP-depictives must be used. Note that secondary adjectival predicates must agree in gender and number with their antecedent in Hebrew. In Russian, they are also inflected for gender and number and they either agree with their antecedent in case or appear in instrumental case (see Geist 2010 for a discussion of potential semantic effects that correlate with the agreeing case/instrumental case difference). The ungrammaticality of adjectival depictives in passives can then be assumed to follow from an agreement failure (as we argued already for Icelandic); the implicit argument cannot value the adjective with the relevant features and, therefore, such adjectives are ungrammatical.

The relevant data are illustrated in (56) for Hebrew (Odelia Ahdout, Itamar Kastner, p.c.) and in (57) and (58) for Russian (Masha Polinsky, Olga Borik and Daniil Bondarenko p.c.). Note also the contrast between (56b) and (56c), which shows again that pragmatic factors can

[14] This consultant would rate this sentence with a 4 if 'Le problème sera résolu ensemble, ou pas du tout' (The problem will be solved together or not at all).

[15] The contrast between (54c) and (54d) also seems to show that modality can increase the acceptability of a reading where the depictive predicates over the implicit agent. See Poole (2015) for a related effect in the domain of implicit control into adjuncts.

disfavor predication over the implicit agent. If the passive involves an overt human DP, speakers prefer to relate the depictive to this DP.

(56) a. ha-Sir ha-ze xubar be-hai/be-gilufin/*šiikor/*sikorim (Hebrew)
the-song the-this composed.Passin-high/in-intoxication/drunk.m.sg/drunk.m.pl
'This song was composed high/intoxicated/drunk.'
b. ??be-bet ha-xolim ha-ze nutxu xolim be-erom
in-house.of the-patients the-this operated.Pass.PL patients in-nudity
Intended: 'Patients in this hospital were operated by nude doctors.'
c. ha-misxak soxak (be-erom/*erom/*eromim)
the-game played.Pass in-nudity /nude.m.sg/nude.m.pl
'The game was played nude.'

(57) a. Pacient byl osmotren v golom vide /*golym. (Russian)
the patient was examined in naked state /naked.m.sg.ins
'The patient was examined naked.' (Agent-modifying reading)
b. Verojatno, pis'mo bylo napisano v pjanom vide /*p'janym.
arguably the letter was written in drunk state /drunk.M.S.INS
'The letter was written drunk.'
c. Dver' byla otkrita v golom vide/*golym.
the door was opened in naked state/naked.MASC.M.S.INS
'The door was opened naked.'
d. Komnata byla pokinuta v zlosti.
the room was left in anger
'The room was left angry.'

4.1.6 Conclusions

In section 3.3., we observed that some but not all languages allow implicit predicative control. At the beginning of this section we formulated the hypothesis that this cross-linguistic split correlates with two syntactically different types of implicit arguments (in the sense of Landau 2010): passives allowing implicit predicative control could involve a strong implicit argument, passives that do not allow this type of control involve a weak implicit argument (cf. (36a, b)). An ultimate prediction of this proposal was that only in the former type of language should secondary predicates such as depictives be able to target the implicit external argument.[16]

In this section, we saw that cross-linguistically this prediction was not borne out. All languages investigated allowed either an AP or PP depictive to target the implicit external argument of passives. Even if the PP expressions are taken not to constitute proper depictives,[17] no correlation emerges: while some languages lack both implicit predicative control and adjectival depictives related to implicit agents (Russian, Hebrew), some allow both (German, Dutch Norwegian), and, crucially, others allow only one, but not the other

[16] A similar hypothesis was formulated in Lappin & Shlonsky (1990) who suggest that passives that do and passives that do not allow implicit arguments of passives to be related to depictives have different types of implicit arguments; only the former type is claimed to enter predication.
[17] Lappin & Shlonsky (1990: fn. 11) claim that English adjectival depictives and PP-depictives have to be kept apart as only the latter are licit in nominalisations. See, however, Rothstein (2004: 136, (3)) for a counterexample.

(Icelandic allows implicit control, but not “implicit adjectival depictives”, French and English allow “implicit adjectival depictives” but not implicit predicative control).

We therefore reject the hypothesis that implicit external arguments of passives have different syntactic properties in the languages under investigation.[18] The split observed in section 3.3 must thus find a different explanation (just as we proposed in this section that the acceptability of adjectival depictives in passives depends on their agreement properties, rather than the type of implicit argument predicated over).

In the next section, we will now show that there is an empirically more adequate generalization that could inform an account of the cross-linguistic split: the languages that allow implicit predicative control all license impersonal passives, whereas the languages without implicit predicative control do not. Based on this correlation, we will argue that implicit predicative control necessarily involves impersonal passives, whereas implicit logophoric control may be personal in virtue of a full-fledged pronoun that is associated semantically with the embedded infinitival clause (section 4.3).

4.2 Impersonal Passives of strictly unergative verbs

In this section, we will show that there is a correlation between languages that allow implicit predicative control, and languages that license strict impersonal passives (whereby we mean productive passives of plain unergative predicates that do neither select a DP or a PP complement).

4.2.1 Languages with impersonal passives

As the data below show, the languages that do allow implicit predicative control (the (b)-examples below), i.e., German, Dutch, Icelandic, Norwegian, also allow impersonal passives ((a)-examples).

(58) *German:*

a. Dort wurde dann die ganze Nacht getanzt. (impersonal passive)
there was then the whole night danced
‘People danced all night long.’

b. Es wurde aufgehört zu rauchen. (implicit predicative control)
it was stopped to smoke

[18] Our discussion does not allow any stronger conclusion about whether the implicit argument of passives is syntactically projected as a WIA or is not projected at all. However, at the moment we do not see any argument that implicit external arguments of passives could not be treated as purely semantic entities. Note that this view would not automatically predict that implicit objects should enter predication (they arguably do not as examples such as (10a, b) are unacceptable across languages). There is no a priori reason to assume that implicit external arguments have the same properties as implicit objects even if both are present only at a semantic level. For example, passives involve existential quantification of the external argument variable via a functional passive head PASS that selects a semantically unsaturated complement of type <e,t> (see Bruening 2012). Furthermore, the external argument variable is introduced by a functional projection VoiceP (Kratzer 1996). Neither property holds of implicit objects.

Note also that the main argument provided in Landau (2010) to really support the syntactic projection of implicit arguments (compared to leaving them syntactically unrepresented) is based on the observation that implicit arguments can function as the controller in partial control contexts and the assumption that this type of control can only be treated in the syntax. There are two potential confounds: (i) Landau develops his argument on the basis of implicit experiencers of adjectives and never shows that implicit agents of passives also license partial control. (ii) Pearson (2013, 2016) has recently shown that a purely semantic analysis of partial control is, in fact, possible.

‘People stopped smoking.’

(59) *Dutch:*

a. Er wordt gedanst.
there is danced
‘People danced.’ (Ruys 2010: 143, (4a))

b. Er werd begonnen (om) de woonkamer op te ruimen.
there was begun C the living.room up to clean
‘People begun cleaning the living room.’

(60) *Icelandic:*

a. Í gær var dansað.
yesterday was danced
‘People danced yesterday.’ (Zeanen et al. 1985: 98, (9))

b. Það var byrjað að moka snjóinn.
it was begun to shovel snow
‘People began to shovel snow.’

(61) *Norwegian:*

a. I går ble det danset. (Mohr 2005: 35, (22))
in yesterday was it danced
'Yesterday, people danced.'

b. Først da ble det stoppet å røyke.
first then was it stopped to smoke
‘Only then people stopped smoking.’

4.2.2 Languages without impersonal passives

English was the first languages discussed in section 3 that lacks implicit predicative control; we repeat the example in (62b) to show this. And as is well known, English does not license impersonal passives of unergative verbs such as in (62a).

(62) *English:*

a. *There/it was danced.

b. *It was managed to understand the analysis.

Similarly in French, the second language that lacks implicit predicative control (cf. (63b)) plain unergative predicates such as, e.g., *dance* or *drink* do not allow an impersonal passive as exemplified in (63a).

(63) *French:*

a. *Il a été bu. (Dobrovie-Sorin 1994: 143, (31a))
it has been drunk
ungrammatical as: ‘People drank.’
grammatical as: ‘People drank it, e.g. the wine.’

b. *Il a été commencé à augmenter à nouveau les impôts.
it has been begun to raise again the taxes

'People began to raise the taxes again.'

However, the literature mentions that under certain conditions subjectless passives do seem to be licensed (64) (these and similar examples are discussed in Dobrovie-Sorin 1994; Gaatone 1993, 1994; Hirschbühler & Labelle, ms.).

(64) a. Il a été vendu beaucoup de voitures japonaises l'an passé
it has been sold many of cars japanese the year last
'Many Japanese cars were sold last year.'

b. ?Il a été beaucoup bu hier soir
it has been a.lot drunk yesterday evening
'People drank a lot yesterday evening.'

c. Il sera répondu à chaque lettre.
it will.be answered at every letter
'Every letter will be answered.'

d. Il a été debattu de la question.
it has been discussed of the question
'The question was discussed.'

We believe that the data in (64) do not undermine the correlation between implicit predicative control and impersonal passives. The French examples in (64a, b) are not strict impersonal passives as they are actually passives of transitive verbs. In these examples, the internal argument DP remains in its base position and the subject (EPP) position is occupied by the pronoun *il* 'he'. If this pronoun does not appear, the internal argument must raise to the subject position as shown in (65a, b).

(65) a Trois livres ont été vendus cet après-midi.
three books are sold this afternoon

b Il a été vendu trois livres cet après-midi.
it has been sold three books this afternoon.
'Three books were sold this afternoon.'

Note that the pronoun and not the VP-internal theme triggers verbal agreement in (65b). The pronoun *il* is thus fully specified for phi-features and checks both the EPP in T and values the phi-features on T.

Why then can't the pronoun *il* appear in strict impersonal passives as in (63a)? We can imagine only one reason: *il* is not a true expletive and must always must be interpreted in some way. In its canonical use, *il*, as every pronoun, acts as an argument in theta position and it either refers to an element in the discourse or it is interpreted as a bound variable. In its seemingly expletive use, *il* appears in a non-theta position but it is actually not interpretatively exempt. In order to avoid a violation of the theta criterion (as a pronoun/DP lacking a theta role), *il* needs to associate with another argumental phrase. In (64a-b) and (65b) this associate is an internal argument DP; (64c-d) show that *il* can also be associated with an internal argument PP.[19] We suggest therefore that the full fledged pronoun *il* is

[19] We remain agnostic with respect to how this relation is to be formally established, but we believe this to be orthogonal to the main discussion. What is relevant for us is that strict impersonal passives are not

necessarily interpreted as a semantic argument or as connected to a semantic argument. If no such connection can be established, as in (63a) where no associate is present, only the former option is possible and *il* needs a thematic role on its own. In cases where the verb is (optionally) transitive, *il* is then referential and receives the internal theta-role (the second reading of (63a)). With strictly unergative (uses of) verbs, no theta-role can be assigned to *il*, which thereby violates the theta criterion. Leaving out *il* is no option either in these cases, as this will result in an unchecked EPP, as well as unvalued phi-features on T (see the next section for discussion). In sum, strict impersonal passives in French are either ruled out by the theta criterion (if *il* is present), or for EPP reasons (if *il* is absent).

Hebrew patterns with French in also disallowing impersonal passives of plain unergative predicates (66a). Yet, just as in French, one can find acceptable examples of impersonal passives if an argumental PP occurs inside the VP (66b, c) - we propose that such cases can receive a similar explanation as we have provided above for French: SpecTP is occupied by a pronoun comparable to French *il,* which effectively requires identification via an association relation with a theta-marked element (cf. Shlonsky 1990 for an early account along these lines for postverbal subjects of unaccusative and passive verbs). Unlike in French, however, this pronoun is covert in Hebrew.[20] In (66d), again, we repeat an example from section 3 showing that Hebrew does not allow implicit predicative control.

(66) *Hebrew:*

a. *nehelax le-beit ha-sefer kol yom.
walked.PASS.3MS to-house of-book every day
'It was walked to school every day.' (Lappin & Shlonsky 1993: 5, (1b))

b. Nixtav ʔal-av ba-ʔiton.
wrote.PASS.3MS about-him in-the-paper
'It was written about him in the paper.' (Shlonsky 1990: 273, (21a))

c. Bekarov yuxlat ʔal haxzarat ha-staxim ha-kvusim.
soon will.decide.PASS.3MS on return the-territories the-occupied
'The return of the occupied territories will soon be decided upon.'
(Shlonsky 1990: 273, (21b))

d. *nusa lehavin et ha-nituax
was.tried to.understand ACC the-analysis
'People/someone tried to understand the analysis.'

In Russian, only transitive predicates that lexically encode a resultant state passivize. Since unergative predicates lack an internal argument, passives of unergative predicates are unacceptable (e.g., Babby 1973, Paslawska & van Stechow 2003, Kiparski 2013, Borik 2013, 2014; see (67a)). Although this is the received wisdom in the literature, we came across examples such as (67b) in which, again, the acceptability of an impersonal passive depends

possible in French with and without *il*. Note also that Dobrovie-Sorin 1994 and Gaatone (1993, 1994) provide some more or less marginal examples where *il* associates with adjunct PPs or even some types of adverbials.

[20] We see no other way to account for the difference between (66a) and (66b), as well as the general unacceptability of strict impersonal passives. Naturally, the proposed analysis hinges on the presence of an EPP feature on T in Hebrew. Again, in the absence of such a feature, and the consequent absence of an associate pronoun, the facts surrounding impersonal passives cannot be accommodated: Hebrew should pattern like German.

on the presence of an argumental PP, just as we have seen for French and Hebrew. Again, the explanation for this has to be the presence of a covert pronoun in SpecTP that is associated with the VP-internal PP-complement. For the sake of completeness, (67c) shows that implicit predicative control is illicit in Russian.

(67) *Russian:*

a. *Tut bylo natanzovano. (Irina Krüger, p.c.)
here was danced
'Here, people danced.'

b. Bylo napisano ob ètom v gazete
was written about this in the newspaper
'This was written about in the newspaper.'

c. *Bylo načato/prodolženo/zakončeno
was.SG.NEUT begun.SG.NEUT/continued.SG.NEUT/finished.SG.NEUT
tratit' den'gi na bespoleznye lekarstva.
to.spend money on useless medicines
'*It was begun/continued/finished to spend money on useless medicines.'

We conclude that there is a correlation between the acceptability of impersonal passives of strictly unergative verbs and the acceptability of implicit predicative control. It seems, then, that the availability of the former is a necessary (maybe even: sufficient) condition for the latter. We now turn to an hypothesis about why this should be the case, and why implicit logophoric control is cross-linguistically not restricted in such a way.

4.3 Towards an analysis

We will first concentrate on impersonal passives and submit that whatever rules out impersonal passives in a language is responsible for the unacceptability of implicit predicative control configurations.

In principle, two possible reasons for the lack of impersonal passives come to mind, potentially in combination. First, if the EPP is operative in a language, but the language lacks a true expletive, then impersonal passives are ruled out as a violation of the EPP. If, by contrast, an EPP-language makes a true expletive available, passives of unergative predicates are predicted to be possible (but see the discussion on T's phi-features below). The latter scenario is instantiated by Norwegian, where an expletive must surface in impersonal passives.

(68) I går ble det danset (Norwegian)
in yesterday was it danced
'Yesterday, people danced.'

We conclude that Norwegian *det* is a true expletive that may be inserted to satisfy the EPP, whereas English *it* and French *il* are not - otherwise the latter should exhibit (strict) impersonal passives.

A second hindrance to impersonal passives could be seen in the valuation of the phi-features on T. We assume with Holmberg (2002) that in (68), *det* is fully specified for phi-features and can thus value the features on T. If a language lacks a true expletive or if it

has one that, unlike Norwegian *det*, lacks inherent phi-feature specification, the question is how the features on T get valued.[21] In Ruys (2010), for example, it is argued that in German and Dutch (potential non-EPP languages), the phi-features on T can be valued via a rule of default valuation, given in (69). In languages that lack (69) and a phi-complete expletive the phi-features on T in impersonal passives go unvalued and the derivation crashes.

(69) **Default phi-valuation** (Ruys 2010: 143, (5))
Dutch, Danish, [German (M.P., F.S.)]...have a rule of default valuation [3,sg] and deletion of phi on T. English does not.

In sum, an impersonal passive can fail because either the EPP remains unchecked, or T's phi-features remain unvalued (or both) (English, French, Hebrew, Russian). Languages in which impersonal passives are licit are either EPP-languages that have a suitable expletive (Norwegian), or are non-EPP-languages that have the rule in (69) (German, Dutch, Icelandic).

Turning to implicit control, the question arises why the passivization of subject control *attitude* predicates (i.e. implicit logophoric control) is licit across all of the languages we investigated. In particular, why are these available even in languages that otherwise lack strict impersonal passives (English, French, Hebrew, Russian)? On the surface, the passivized matrix verbs in (71a-d) look like impersonal passives as these verbs lack an internal argument DP that could raise to Spec,TP/receive nominative case and trigger verbal agreement.

(71) a. It was decided to leave the country immediately.
b. Il a été décidé de quitter le pays immédiatement.
it has been decided to leave the country immediately
'People decided to leave the country immediately.'
c. huxlat/tuxnan/huvtax le'hitkadem ba-proyekt.
was.decided/was.planned/was.promised to.move.forward in.the-project
'It was decided/planned/promised to move forward with the project.'
d. Bylo zaplanirovano/obeščano obnovit' zdanie.
was.SG.NEUT planned.SG.NEUT/promised.SG.NEUT to.renovate building
'It was planned/promised to renovate the building.'

We claim that French holds the key to this puzzle. Recall from the preceding section that French *il* can check the EPP, value the phi-features on T, and license "impersonal" passives if it can associate with a theta-marked VP-internal element. So far we have discussed two types of associates: DP-arguments and PP-arguments. It is thus reasonable to assume that the same happens in cases such as (71b), except that in this case the associate is the infinitival complement clause. In other words, instances of implicit logophoric control in French are really "personal" passives in the sense that an overt DP, a full-fledged pronoun associated with the infinitival complement, functions as the structural subject. A parallel analysis accounts for the acceptability of the English example in (71a) (see, e.g., Stroik 1996

[21] This is the case with expletives taken from the locative domain such as Dutch *er* or English *there* (e.g. Richards and Biberauer 2005).

for a proper implementation of such an analysis).[22] We suggest that Hebrew (71c) and Russian (71d) work exactly the same, the sole difference being that the associate pronoun in Spec,TP remains covert, just as we have seen in the "exceptional" instances of impersonal passives in section 4.2.2.[23]

Note that the existence of such associative pronouns is not unheard of, but rather well-documented cross-linguistically. The most well-known use of such pronouns is, in fact, the one where it associates with a complement clause, as discussed in, e.g., Bennis (1986) (see also Zaring 1994, Vikner 1995, Müller 1995, Stroik 1996 a.o.). This use is illustrated in (72) for German.

(72) Mehrmals schon hat Peter (es) versprochen, den Roman zu lesen.
multiple.times already has Peter it promised the novel to read
'Peter has promised to read the novel multiple times already.'

Building on extraction data, Bennis (1986) argues that in German or Dutch, the associative pronoun occupies an argument position, while the infinitival clause is extraposed and behaves as an adjunct. The function of the pronoun, then, is to link the extraposed clause to the complement position. The details of this process are irrelevant here. What is important for our purposes is that (72) can be passivized as either a plain impersonal passive (73a), or as a passive involving the pronoun *es*. (73b) qualifies as a personal passive in so far as the object pronoun *es* from (72) functions as a subject pronoun that is associated with the embedded CP.

(73) a. Mehrmals schon wurde versprochen, den Roman zu lesen.
multiple.times already was promised the novel to read
b. Mehrmals schon wurde es versprochen, den Roman zu lesen.
multiple.times already was promised the novel to read
'It has been promised to read the novel multiple times already.'

This latter point is supported by the contrast to impersonal passives, where the pronoun *es* may not surface ((74); e.g. Grewendorf 1989, Fanselow 1991, Haider 1987, 1990), i.e., German *es* does not act as a true expletive.

(74) Mehrmals schon wurde (*es) in der alten Fabrik getanzt und gefeiert.
multiple.times already was it in the old factory danced and celebrated

[22] While the French pronoun *il* can also be associated with DPs and PPs, this is not possible with English *it*, which only appears with CP-associates. We could imagine that in the case of PPs, the availability of pseudo-passives in English plays a role. We must leave the important question for future research why languages differ with respect to the type of category the pronoun can associate with.

[23] Such a covert pronoun has been argued to be present also in other cases of sentential complementation, such as the ones in (i) (Shlonsky 1990).

(i) a. Nidme l-i še-ha-šemeš šokʔat.
seem-ms to-me that-the-sun sinking-sf
'It seems to me that the sun is sinking.'
b. Barur še-hi balšanit tova.
clear-ms that-she linguist good
'It is clear that she is a good linguist.' (Shlonsky 1990: 272: (20a,b))

‘Multiple times already there was dancing and celebrating in the old factory.’

It has to be added that the distribution of associative *it* plausibly differs across languages. While in German, it occurs rather freely in cases of extraposition, it can barely occur in object position in English, independently of whether the complement clause is finite or not (75a,b) (see Rothstein 2004 for the discussion of some exceptions). Yet, non-referential *it* that associates with a complement clause felicitously appears in the corresponding passives (75c,d).

(75) a. He decided (?*it) that he should end his career.
b. He decided (?*it) to end his career.
c. It was decided that he should end his career.
d. It was decided to end the career.

Since sentential arguments in English are licit in complement position, but can occur as subjects for only some speakers (Lohndal 2014), we suggest that the insertion of an associative pronoun provides a grammatical mechanism to rescue structures in which sentential arguments would have to occur in subject position, i.e., cases of passivization where the complement clause is the sole internal argument of a transitive predicate. No such mechanism is required if the sentence occurs in complement position in the active, such that for economy reasons, no associative pronoun is inserted there. The proposed analysis accounts for the fact that implicit logophoric control is cross-linguistically available, since via the presence of the associative pronoun, the result of passivizing a subject control attitude predicate is essentially a “personal” passive, i.e., a fully-fledged pronoun occurs in SpecTP, preventing a violation of the EPP, and valuing the phi-features on T.[24]

This leads us to the final question: If implicit logophoric control can involve a personal passive (due to the presence of an associative pronoun), what blocks the same mechanism from applying in implicit predicative control in English, French, Hebrew and Russian, i.e., why are the examples in (76) ill-formed, which involve passivized *non-attitude* matrix verbs?

(76) a. *It was tried to understand the analysis.
b. *Il a été essayé de comprendre l'analyse
it has been tried to comprehend the.analysis
‘People tried to understand the analysis.’
c. *hufsak/nusa/niskax le’hitkadem ba-proyekt.
was.stopped/was.tried/was.forgotten to.move.forward in.the-project
‘*It was stopped/tried/forgotten to move forward with the project.’
d. *Bylo poprobovano ponjat analiz.
was.NEUT.SG tried.NEUT.SG to.understand analysis

[24] This discussion suggests also that van Urk’s (2014) analysis of implicit control must be incorrect. For him, it is crucial that the *it* which surfaces in licit cases of implicit control can satisfy the EPP, but does not value the phi-features on T. The latter are instead valued by the implicit argument which is projected as a WIA. One issue for his account is that phi-deficiency is typically not attributed to *it*-type expletives (see, e.g., Cardinaletti 1990, Ruys 2010), so that the *it* should value the phi-features on T and block implicit control. Furthermore, his proposal that the WIA can value T predicts that impersonal passives of unergative verbs should be grammatical in English. How to derive the Revised Visser’s Generalization instead we have to leave for future research.

‘People/someone tried to understand the analysis.’

In the last sections we collected evidence that i) the type of control involved in (76) (predicative control) is not per se incompatible with implicit arguments as the counterparts of (76) are grammatical in the other languages of our sample and ii) that the implicit arguments of passives in the languages listed in (76a-d) are not excluded from predication as they license depictives. We also established the correlation that the languages in (76a-d) are exactly those languages in our sample that disallow strict impersonal passives. Building on this correlation, we suggest that implicit control with non-attitude verbs can only be realized as an impersonal passive. This in turn means that the problem with (76a-d) must be the associative pronoun (which is overt in (76a, b), and covert, but, by assumption, present in (76c-d)): We suggest then that associative pronouns cannot associate with the complement clause of non-attitude predicates. A solution to this problem requires a deep understanding of associative pronouns and the difference between the complement clauses of attitude and non-attitude verbs which is clearly beyond the scope of this paper. We nevertheless want to provide some motivation for the above explanation.

On the empirical side, attitude predicates have the tendency in German to allow the presence of an associative pronoun in cases of extraposition (both in the active and in the passive, see (77a/a’-b/b’)), whereas non-attitude predicates render such associative pronouns either fully unacceptable, or at least degraded (78a/a’-b/b’).[25] The data in (79a) vs. (79b-d) show that the same holds in Icelandic (Anton Karl Ingason, p.c.; recall from (75) that object *it* is rather restricted in English anyway).

(77) a. Ich habe (?es) versprochen, das Kinderzimmer aufzuräumen.
i have it promised the playroom to.tidy.up
‘I promised to tidy up the playroom.’

a’. weil (?es) versprochen wurde, das Kinderzimmer aufzuräumen.
because it promised was the play.room to.tidy.up
‘because it was promised to tidy up the playroom.’

b. Ich habe (?es) beschlossen, das Land zu verlassen.
i have it decided the country to leave
‘I decided to leave the country.’

b’ weil (?es) beschlossen wurde, das Land zu verlassen.
because it decided was the country to leave
‘because it was decided to leave the country.’

(78) a. Ich habe (*es) angefangen, das Kinderzimmer aufzuräumen.
i have it begun the playroom to.tidy.up
‘I began to tidy up the playroom.’

[25] We are aware of one exception to this generalization in German: the predicate *wagen* ‘dare’ is a non-attitude predicate, but allows *it* in object position (i). Yet, unlike all other non-attitude predicates, *wagen* seems to even prefer the presence of this pronoun over its absence.

(i) Hans hat ?(es) gewagt, den Bürgermeister zu beleidigen.
John has it dared the mayor to insult
‘John dared to insult the major’

a'. weil (*es) angefangen wurde, das Kinderzimmer aufzuräumen.
because it begun was the playroom to.tidy.up
'because people began to tidy up the playroom.'

b. Ich habe (??es) versucht, das Land zu verlassen.
i have it tried the country to leave
'I tried to leave the country.'

b'. weil (??es) versucht wurde, das Land zu verlassen.
because it tried was the country to leave
'because people tried to leave the country.'

(79) a. Þeir ákváðu (Það) að PRO heimsækja Ólaf.
they.MASC.NOM decided (it.ACC) to visit Olaf.ACC
'They decided to visit Olaf.'

b. Haraldur byrjaði (*Það) að senda henni bréf.
Harold.NOM began it.ACC to send her.DAT letters.ACC
'Harold began to send her letters.'

c. Jón þorði (??því) að fara úr landi.
John dared it to go from country
'John dared to leave the country.'

d. Jón reyndi (?það) að fara úr landi.
John tried it to leave from country
'John tried to leave the country.'

One possible way to handle this split is to relate it to the size of the infinitival complement. Recall from section 2 that Landau (2015) treats the complement of attitude predicates as a CP and propositional, whereas the complement of non-attitude predicates is just a FinP denoting a property (see also Reed 2014 for the claim that control infinitives differ in size, although her classification is different from the one proposed in Landau). We could either follow a suggestion in Stroik (1996) that associative pronouns originate in the specifier of the CP of the embedded clause, in which case the absence of *it* in the context of non-attitude verbs would find a purely syntactic explanation (no CP-layer is present). Alternatively, a more semantic explanation could be worth exploring. Assume an associative pronoun can only be associated with a saturated predicate, then it is expected not to surface in the context of predicative control, where the infinitival complement denotes a property. An explanation for this semantic restriction could be found in Rothstein's (2004) theory of predication. She argues that the subject of a predicate may not itself be an open predicate: "Assuming that saturatedness (or unsaturatedness) is a property that a category either does or does not have, we expect those categories which are canonical predicates and thus unsaturated, not to be subjects" (Rothstein 2004: 55). This, however, would be exactly the situation in implicit predicative control if the associate clause must be interpreted in the surface position of the associative pronoun.[26] Leaving the choice between the two possible explanations open for

[26] See in that regard also the following contrast (Meg Zellers, p.c.) where (ia) involves a non-attitude matrix verb and (ib) an attitude matrix verb:

(i) a. *To solve this problem was tried several times already.
b. ?To raise the taxes was decided yesterday.

the moment, it is important to stress that under either alternative, the associate pronoun cannot surface in the context of predicative control, so that passivizing a non-attitude subject control-predicate would effectively lead to an impersonal passive, which, as we have seen, are not acceptable in exactly those languages that block implicit predicative control.

5. Conclusions

In this paper, we have shown that implicit logophoric control, where the passivized verb is an attitude predicate, is possible across an array of different languages. By contrast, implicit predicative control, where the passivized verb is non-attitudinal, is possible in some languages (German, Dutch, Norwegian, Icelandic), and impossible in others (English, Russian, Hebrew, French). This cross-linguistic split is a problem for the generalization proposed in Landau (2015) according to which implicit predicative control should always be unacceptable.

We showed that this empirical split does not correlate with a language's ability to predicate over implicit arguments. Against general assumptions in the literature, we provided evidence that implicit agents of passive sentences license secondary predication across languages (although there are restrictions that are, so far, not fully understood). We concluded based on this observation that the ungrammaticality of implicit predicative control is not due to a failed control relation (pace Landau 2015).

Although the acceptability of implicit predicative control did not correlate with the possibility of predicating over implicit arguments, we showed there to be a correlation with the availability of strict impersonal passives: only those languages in our language set that have impersonal passives of plain unergative verbs allow implicit predicative control. In order to capture this correlation, we proposed that the passive of a non-attitude subject control predicate fails at the formal syntactic level for the same reason as ordinary impersonal passives, either because T's phi-features remain unvalued or the EPP is unchecked (or both). Passives of attitude subject-control predicates, by contrast are personal via the insertion of an associative pronoun which satisfies the EPP and/or values the phi-features on T. As a consequence, implicit logophoric control is correctly predicted to be available across languages. This mechanism of inserting an associative pronoun is not available in predicative control, which might either be due to syntactic reasons (i.e., the CP-layer introducing the pronoun is missing in predicative control), or semantic reasons (the associative pronoun in subject position can not be associated with properties, since open predicates make bad subjects (Rothstein 2004)). We left the choice between the two possibilities for future research. We are confident, however, to have shown that the unacceptability of implicit predicative control is not due to a failed control relation (pace Landau 2015) but to whatever factor rules out impersonal passives in a language, as this is what passivization of a subject-control non-attitude predicate would lead to.

Obviously, many questions remained unanswered, in particular where (and how exactly) the associate-pronoun is introduced into the syntactic structure; whether the complement clause is extraposed, and what exactly the semantic relation is between the associate-pronoun and its associate. We also did not go into the question of how to account for van Urk's Revised Visser's Generalization. Yet, if our analysis, where the associative pronoun functions as the subject and values the phi-features of T, is on the right track, it must be that the RVG has to find a different explanation from the one provided in van Urk

(2013), where T in implicit control structures is valued by a syntactically projected (weak) implicit argument.

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