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On the subject-orientation of the dispositional middle construction

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Abstract: This article argues against the claim that the dispositional middle construction is always subject-oriented, by discussing dispositional constructions in Japanese and impersonal middle constructions formed with the causative verb *lassen* ‘let’ in German. In Japanese, the disposition is ascribed not to the nominative subject, but to an object. In German, nominative subjects are not required. This suggests that subject orientedness is not inherent but arises from the properties of independently existing constructions that are interpreted as dispositional. In English and German, an intransitive or a reflexive construction derived from its transitive variant is employed as a canonical middle construction. In these cases, the accusative argument becomes a nominative subject by applying specific grammatical operations; thus, the expression of a subject becomes obligatory. In contrast, a potential construction is interpreted as dispositional in Japanese in which case the disposition is typically ascribed to the object with nominative case, which is almost obligatory in Japanese. It follows that the target of the disposition in middle constructions is a grammatically “highlighted” event participant, as in the case of root modals.

Keywords: dispositional middle construction; impersonal *let*-middle; Japanese; subject-orientedness

1 Introduction

Lekakou (2005: 99) identifies the following essential properties of dispositional middle construction (see Ackema and Schoorlemmer 2017 for further discussion).

- (1) a. The understood object is ascribed a dispositional property.
- b. An otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.
- c. The agent is syntactically suppressed and receives an arbitrary interpretation.

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The sentences in (2) meet these conditions and are called canonical middle constructions (henceforth CM), following Pitteroff (2014, 2015). CMs in (2) express a certain property inherent in the internal argument *the book* of the predicate *read* and are interpreted as “this book is such that anyone can read it with ease.”

- (2) a. *This book reads easily.*
 b. *Das Buch liest sich leicht.* (German)
 the book reads REFL easily
 c. *Dit boek leest gemakkelijk.* (Dutch)
 this book reads easily
 d. *Afto to vivlio diavazete efkola.*
 this the book read.NACT.3SG easily
 (Greek: Lekakou 2005: 13)
 ‘This book reads easily.’

Note here that the dispositional generics expressed in CMs are differentiated from the habitual generics in (3) (see especially Lekakou 2005).

- (3) a. *John goes to school on foot.*
 (Lekakou 2005: 88)
 b. *Peter raucht vor dem Schlafengehen eine Zigarette.*
 Peter smokes before the going.to.bed a cigarette
 ‘Before going to bed, Peter smokes a cigarette.’
 (German: Pitteroff 2015: 8)

The former “can be true in the absence of any event denoted by the verb” (Lekakou 2005: 88), whereas the latter “assert the existence of a pattern of regularly recurring events” (p. 88). Lekakou (2005) points out that passives in English belong to the latter category; thus, the sentence sequence in (4a) is not contradictory. Pitteroff (2015) also gives the German example (4b), which clearly shows that German CMs are true even if the event denoted by the verb does not occur.

- (4) a. *This book reads easily, but it isn’t easily read.*
 (Lekakou 2005: 94)
 b. *Dieser Berg besteigt sich leicht. Leider hat es noch nie*
 this mountain climbs REFL easily unfortunately has it yet never
 jemand versucht.
 somebody tried.
 ‘This mountain can be climbed easily. But no one has ever tried to do it.’
 (Pitteroff 2015: 8)

The fact that in CMs a certain property inherent in the internal argument is expressed can be shown by the following contrast.

- (5) *This car drives well...*
 a. ... *because the suspension is engineered well.*
 b. ?? ... *because we’re driving on smooth pavement.*
 Dowty (2000)

The sentence sequence in (5a) is felicitous, because it asserts that the fact that “the car drives well” is attributed to an inherent property of the subject, namely, the suspension, whereas the sentence sequence in (5b) is not, as it asserts that this fact is not due to a certain inherent property of the subject, but because of an external factor, namely, the pavement. Lekakou (2005), thus, argued that dispositional middles express an “in virtue of” generalization about the understood object, and that dispositional middles are obligatorily subject-oriented.

In this article, it is argued that the subject-orientation is not inherent in dispositional middle constructions by discussing dispositional middles in Japanese, as in (6a), and impersonal middles in German formed from the causative verb *lassen* ‘let’ (henceforth ILMs), as in (6b).

- (6) a. *Kodomo-ni-mo kono-koohee-ga nom-e-ru.*
 children-DAT-also this-coffee-NOM drink-POT-PRS
 ‘This coffee is such that even children can drink it.’
- b. *Diesem Argument lässt (*es) sich nicht widersprechen.*
 this argument-DAT lets it REFL not contradict
 (Höhle 1978: 63)
 ‘This argument is such that nobody can contradict it.’

In (6a), an inherent property of an object marked with nominative *ga* is expressed. The sentence in (6b) is impersonal in that there is no grammatical subject,¹ but

1 As will be shown in Section 2, German and Dutch have another type of impersonal middle construction as illustrated in (i) and (ii). Note that in (i) and (ii), an expletive pronoun *es* and *het* ‘it’, respectively, is obligatory in embedded clauses, which indicates that such an expletive is not a place holder like *es* ‘it’ in (iii). This fact clearly shows that the expletive pronoun in (i) and (ii) functions as a subject. In the following, this type of middle construction is called intransitive middle construction.

- (i) *Ich denke, dass *(es) sich angenehm auf diesem Stuhl sitzt.*
 I think that it REFL comfortably on this chair sits
- (ii) *Ik denk dat *(het) lekker in deze stoel zit.*
 I think that it comfortably in this chair sits
 ‘I think that this chair is comfortable to sit in.’
- (iii) *Es kamen drei Personen.*
 it came-PL three persons
 ‘There came three persons.’

In addition, as will be pointed out in Section 2, German and Dutch have “personal” dispositional construction with the causative verb *lassen* ‘let’ and *laten* ‘let’, as in (iv) and (v). Fagan (1992) and Pitteroff (2014) suggest that in ILMs and *let*-middles, the causative verb *lassen* ‘let’ is the source of the generic semantics.

expresses an inherent property of the dative argument *diesem Argument* ‘this argument’, such that nobody can contradict it.

The rest of this article is organized as follows. After reviewing the discussion in favor of the subject-orientedness of the dispositional middle construction in Section 2, Japanese middle constructions, of the type illustrated in (6a), are considered in Section 3. In Japanese middle constructions, a disposition is ascribed to a non-subject argument. Section 4 deals with ILMs in German, such as (6b). This section examines why ILMs are possible in German and argues further that the DP to which a disposition is ascribed in ILMs is context-dependent when there is more than one referential DP in the construction. Section 5 aims at a correct generalization of the target of the disposition in middle construction. Such targets are determined by the property of the independently existing construction, which is interpreted as dispositional. Finally, Section 6 concludes the article.

2 The subject-orientation in dispositional middles

Before discussing relevant data, this section is concerned with the background of the claim that the dispositional middle construction is always subject-oriented.

In the literature, it is often pointed out that there is no dispositional middle construction *per se*, but it is deemed to constitute a “notional category” (Condoravdi 1989: 16) and be “parasitic on independently existing structures” (Lekakou 2005: 50). That is, the middle construction is not a grammatical construction, but a dispositional interpretation of certain sentences. Languages differ in the constructions interpreted as CMs. English and German employ an intransitive or a reflexive construction derived from its transitive variant. Thus, CMs in both languages are similar to anticausative constructions. Representative examples of anticausatives in both languages are given in (7a) and (7b), respectively.

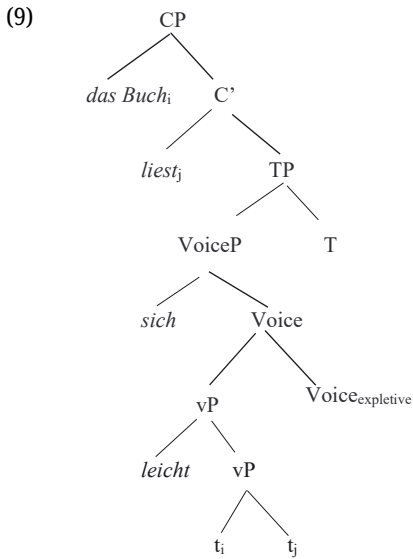
- (7) a. *The door opened suddenly.*
 b. *Die Tür öffnete sich plötzlich.*
 the door opened REFL suddenly
 ‘The door opened suddenly.’

Both in (7a) and (7b), as well as in the CMs in (2a) and (2b), which are repeated here as (8a) and (8b), the internal argument of the predicate, *open* and *read*, respectively, becomes a subject.

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- (iv) *Das Buch lässt sich leicht lesen.*
 the book lets REFL easily read
- (v) *Het boek laat zich gemakkelijk lezen.*
 the book lets REFL easily read
 ‘This book reads easily.’

- (8) a. *This book reads easily.*
 b. *Das Buch liest sich leicht.*
 the book reads REFL easily
 ‘This book reads easily.’

The difference between both languages lies in the fact that in the German anti-causative (7b), a semantically empty reflexive pronoun *sich* ‘itself’ appears. Schäfer (2008) argues that this type of reflexive pronoun is projected in the specifier of Voice and calls such a Voice an expletive Voice. In this case no agent role is introduced by Voice.² A semantically empty reflexive pronoun also appears in German CMs like (8b), so that German CMs involve an expletive Voice. Following Schäfer (2008), CM in (8b) is given the syntactic structure represented in (9).



English CMs, such as (8a), employ an intransitive construction derived from its transitive variant. In contrast, in Greek, a passive construction marked with an imperfective aspect can be counted as a CM. Again, there is no grammatical

² Kratzer (1996) assumes that the functional head Voice introduces the external argument. When the specifier of Voice is filled with a semantically empty reflexive, the resulting construction is agentless. Following Bruening (2013), Legate (2014), and Alexiadou et al. (2014, 2015), I assume that passives are different from sentences with an expletive Voice such as (7a) and (8b) in that the former embed a Voice which introduces an external argument variable, but does not instantiate it. The external argument variable is then existentially bound by the passive head. See also Section 4.

category of the dispositional middle in Greek, and the middle is parasitic on generic passives (Lekakou 2005: 16).³ Hence, the dispositional middle in Greek does not involve an expletive Voice, in contrast with CMs in German, and a *by*-phrase is licensed in Greek CMs, provided that the complement of the preposition refers to arbitrary or generic agent or initiator such as *pedia* ‘children’ or *enilikus* ‘adults’.⁴

- (10) a. *Afto to psomi kovete efkola akoma ki apo pedia.*
 this the bread cut.NACT.3SG easily still and by children
 ‘This bread can be cut easily even by children.’
- b. *Afto to vivlio diavazete akoma ki apo enilikus.*
 this the book read.NACT.3SG still and by adults
 ‘This book can be read even by adults.’
 (Condoravdi 1989: 25)

Non-canonical middle constructions also exist in other languages. For example, dispositional middle constructions can be formed with the causative verb *lassen* ‘let’ in German or *laten* ‘let’ in Dutch, as shown in (11a) and (11b), respectively. Such a dispositional middle construction is called a “*let*-middle” (Fagan 1992; Pitteroff 2014, 2015). *Let*-middles ascribe a dispositional property to the embedded object, which is realized as a grammatical subject, similar to CMs.

- (11) a. *Das Buch lässt sich leicht lesen.* (German)
 the book lets REFL easily read
- b. *Het boek laat zich gemakkelijk lezen.* (Dutch)
 the book lets REFL easily read
 ‘This book reads easily.’

3 To be more precise, CMs in Greek are parasitic on the non-active construction, which is marked with a mediopassive suffix. In addition to a passive, this construction is interpreted as a reflexive (i) or as an anticausative (ii). A CM in Greek is, thus, one of the interpretations of the non-active construction.

- (i) *O Janis plithike.*
 the John washed.NACT
 ‘John washed.’
 (Alexiadou 2018: 15)
- (ii) *I supa kegete.*
 the soup burns.NACT
 ‘The soup is burning.’
 (Alexiadou 2018: 14)

4 As pointed out in Footnote 2, the external argument is existentially bound in passives. In contrast, the external argument in CMs in Greek is generically interpreted.

Pitteroff (2014, 2015) argues that in German *let*-middles, a semantically empty reflexive pronoun *sich* ‘itself’ appears in the specifier of Voice of the matrix causative predicate *lassen* ‘let’. Recalling the analysis of the anticausative (7b) and the CM (8b) in German, this type of Voice is called an expletive Voice (Schäfer 2008). Thus, the agentive external argument of this matrix causative predicate *lassen* ‘let’ cannot be projected, in precisely the same way as in the anticausative (7b) and CM (8b). Notably, however, *let*-middles embed one more Voice head, whose external argument is not projected in its specifier again, but is optionally realized by a *by*-phrase, as seen in (12a), similar to passives in (12b). This lower Voice is passive, although it does not select a past participle, in contrast with passives. Accordingly, the internal argument of the embedded predicate becomes the subject.⁵

5 An anonymous reviewer asks how the analysis of CMs and *let*-middles in German can be applied to both English and Dutch CMs on the one hand, where a semantically empty reflexive pronoun does not appear, and Dutch *let*-middles on the other hand, where a reflexive must be projected. For the first question, following Schäfer (2008), I assume that an expletive Voice is also projected in Dutch CM, based on the assumption that Voice is responsible for the transitive morphology as well. As is shown in (i), given the transitive-intransitive alternation with a stem change such as *leggen* ‘lay’ versus *liggen* ‘lie’, the transitive variant must be used in the Dutch CM. The specifier position in this expletive Voice is not filled, though. See Lekokou and Pitteroff (2018) for the discussion about Schäfer’s analysis.

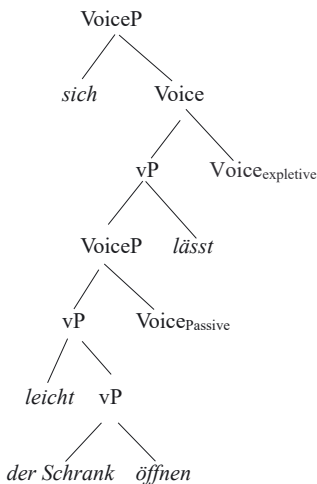
- (i) *Dit tapijt legt/*ligt gemakkelijk.*
 this carpet lays/lies easily
 ‘This carpet is such that one can lay it easily.’

For *let*-middles in Dutch, I assume that the subject of the *let*-middle is base-generated as the external argument of the matrix causative verb *laten* ‘let’ and that a thematic reflexive pronoun *zich* is projected as an internal argument of the embedded predicate (see Oya 2017). According to this view, a semantically empty reflexive does not appear in *let*-middles in Dutch, as such a reflexive is not productively used in anticausative constructions in Dutch. The agent of the causative predicate *laten* ‘let’ is, then, not projected due to an expletive Voice, but because another argument, which is coreferential with the reflexive, is base-generated as the external argument. This syntactic structure derives the fact that the subject of *let*-middles in Dutch may correspond to the indirect object of the embedded double object verb, whereas the subject of *let*-middles in German must correspond to the direct object of the embedded predicate, as the contrast between (ii) and (iii) shows.

- (ii) *De ruimte laat zich geen plaats geven op een “realistische” landkaart.*
 the room lets REFL no place-DO give on a realistic map
[\[https://openaccess.leidenuniv.nl/bitstream/handle/1887/19933/01.pdf?sequence=22\]](https://openaccess.leidenuniv.nl/bitstream/handle/1887/19933/01.pdf?sequence=22)
- (iii) **Der Raum lässt sich auf einer „realistischen“ Landkarte keinen Platz geben.*
 the room lets REFL on a realistic map no-ACC place give
 ‘The room cannot give a place on a “realistic” map.’

Pitteroff (2015: 57) gives the *let*-middle in (12c) the syntactic structure (12d).⁶

- (12) a. *Das Buch lässt sich von kleinen Kindern gut lesen.*
 the book lets REFL by small children well read
 ‘The book can be read easily by small children.’
 (Pitteroff 2014: 47)
- b. *Das Buch wird von kleinen Kindern gelesen.*
 the book is.PASS by small children read
 ‘This book is read by small children.’
- c. *Der Schrank lässt sich leicht öffnen.*
 the closet lets REFL easily open
- d.



In sum, both CMs and *let*-middles are dispositional interpretations of independently existing constructions in which the external argument is not projected in its canonical position, that is, the specifier of Voice. Languages differ as to the type of Voice involved in dispositional middles. For example, CMs in German employ an expletive Voice head, whereas CMs in Greek contain a passive Voice. Additionally, *let*-middles in German involve both an expletive and a passive Voice. According to Lekakou (2005), the

Both in German and in Dutch, the indirect object of *geven* and *geben* ‘give’ bears an inherent case, so that this object as such cannot become the subject in *let*-middles in both languages. This is the case in German, as expected in (iii). In contrast, the argument corresponding to the indirect object of *geven* ‘give’ stands as the subject of the *let*-middle in Dutch as in (i), which shows that this argument is not promoted to the subject, but is base-generated.

⁶ For the simplicity, TP and CP are omitted in (12d).

fact that the external argument is not projected in its canonical position is obligatory in dispositional middles, as they describe a disposition to the internal argument of the (embedded) predicate, and dispositional semantics, in general, is directed to the grammatical subject.

This nominative-subject-orientation of the dispositional middles is also observed in other European languages, as exemplified in (13). All of these sentences employ reflexive constructions, similar to CM in German (8b).

- (13) a. *Le grec se traduit facilement.*
 the Greek REFL translate easily
 ‘Greek translates easily.’
 (French: Fellbaum and Zribi-Hertz 1989: 23)
- b. *Questo vestito si lava facilmente.*
 this suit REFL washes easily
 ‘This suit washes easily.’
 (Italian: Cinque 1988: 559)
- c. *Te koszule piorą się łatwo.*
 these shirts wash REFL easily
 ‘These shirts wash easily.’
 (Polish: Bondaruk 2015: 46)
- d. *Ovaj članak se lako čita.*
 this article REFL easily reads
 ‘This article reads easily.’
 (Serbo-Croatian: Marelj 2004: 3)
- e. *Tahle košile se dobře žehlí.*
 this shirt REFL well irons
 ‘It is easy to iron the shirt.’
 (Czech: Medová 2009: 22)

Lekakou (2005) analyzes the dispositional semantics in middles in parallel with the semantics of root modals. Brennan (1993) claims that root modals associate properties, that is, the denotation of VP, with the subject, whereas epistemic modals are applied to propositions; thus, the “in virtue of” phrase is compatible only with root modals, as shown in (14), but not with epistemic modals in (15). In (14), the “in virtue of” adverbials relate both the ability to sing arias and the disposition to listen to anything to the grammatical subject *Joan*. Brennan (1993) thus concludes that root modals exhibit subject orientedness.

- (14) a. *Joan can sing arias in virtue of her natural ability.*
 b. *In virtue of her patience, Joan will listen to anything.*

- (15) a. **In virtue of being a graduate student, Joan may be intelligent.*
 b. **In virtue of winning a Guggenheim, Joan must be intelligent.*
 (Brennan 1993, cited from Lekakou 2005: 80)

Lekakou (2005) observes the common behavior between root modals and dispositional middles with respect to the “in virtue of” adverbials and claims that dispositional middles are subject-oriented, just like root modals.

This insight opens up a new analysis of intransitive middle constructions like (16), which are another type of non-canonical dispositional middles found in German and Dutch.

- (16) a. *Auf diesem Stuhl sitzt es sich angenehm.* (German)
 on this chair sits it REFL comfortably
 b. *Het zit lekker in deze stoel.* (Dutch)
 it sits comfortably in this chair
 ‘This chair is comfortable to sit in.’
 Ackema and Schoorlemmer (2017)

Intransitive middle constructions like (16) are formed from unergative verbs, and these constructions in German feature a semantically empty reflexive pronoun *sich* ‘itself’ again, whereas such a reflexive does not occur in Dutch. Lekakou and Pitteroff (2018) claim that intransitive middle constructions ascribe a dispositional description to the grammatical subject, that is, *es* ‘it’ in German and *het* ‘it’ in Dutch. They further argue that the pronominal subject in (16) is associated with the event; thus, the disposition in intransitive middle constructions is ascribed to an event. According to this analysis, the pronominal subject in intransitive middles is not an expletive, and more importantly, intransitive middle constructions are subject-oriented, similar to CMs and *let*-middles. They further claim that the prepositional phrases *auf diesem Stuhl* ‘on this chair’ in (16a) and *in deze stoel* ‘in this chair’ in (16b) restrict the generalization expressed in intransitive middles. This view of PPs in intransitive middles is remarkably different from that of Fagan (1992) and Broekhuis et al. (2015). These authors claim that intransitive middles attribute a property to a prepositional object. Broekhuis et al. (2015) claim that the subject *het* ‘it’ in (16b) is associated with the PP and that the intransitive middle construction in (16b) ascribes a disposition to the DP *deze stoel* ‘this chair’ inside the PP. According to this view then, intransitive middle constructions are not directly subject-oriented.

In this section, the following three points have been confirmed. First, CMs in English, German, and Greek, as well as *let*-middles in German, are dispositional interpretations of independently existing constructions such as anticausatives, passives, and causatives. In CMs and *let*-middles, the external argument of the (embedded) predicate is not projected in its canonical position, and the internal argument becomes a subject. Second, the claim for the subject-orientation of dispositional middles by Lekakou (2005) comes from a syntactic and semantic

parallel between dispositional middles and root modals. Third, there is a difference of opinion as to which element the disposition is ascribed in intransitive middle constructions. I return to the second point in Section 5 and the third point in Section 4.

3 Dispositional middle constructions in Japanese⁷

This section is concerned with Japanese dispositional middle constructions (henceforth JMs). Some representative examples of JMs are given in (17).⁸

- (17) a. *Kodomo-ni-mo kono-koohee-ga nom-e-ru.* (= 6a)
 children-DAT-also this-coffee-NOM drink-POT-PRS
 ‘This coffee is such that even children can drink it.’
- b. *Kono-kinoko-wa tabe-rare-ru.*
 this-mushroom-TOP eat-POT-PRS
 ‘This mushroom is such that one can eat it.’
 (Nakau 1991: 61)
- c. *Kono-hon-wa kantanni honyaku-dekiru.*
 this-book-TOP easily translation-can
 ‘This book is such that one can do a translation of it easily.’
 (Abe 1991: 85)

⁷ This section contains a major revision of Oya (2019).

⁸ In (17b) and (17c), the internal argument is topicalized and encoded with the topic marker *wa*. As any phrase can be topicalized in Japanese, it may be unclear which grammatical status the topicalized phrase originally has. JMs without a topic marker are normally awkward, but those within an embedded clause do not need a topic marker. Hence, if necessary, I add a noun like *koto* ‘that’ to JMs in the following examples in order to explicate the grammatical relationship. In addition, one may consider the following examples to be JMs as well.

- (i) *Kono-pen-ga yoku kak-eru (koto)*
 this-pen-NOM well write-POT that
 ‘This pen writes well.’
- (ii) *Kono-heya-ga yoku nemur-eru (koto)*
 this-room-NOM well sleep-POT that
 ‘We can sleep well in this room.’

In these cases, the nominative marked DP is not an argument of the predicate, but a dispositional property of this DP is expressed. In (i), the nominative marked DP is an adjunct taking the role of an instrument, and in (ii), the nominative-marked DP is a locative adjunct. In this article, I cannot discuss cases like (i) and (ii). Thus, I restrict the discussion to cases in which an inherent property of the argument of the predicate is expressed.

In (17a) and (17b), the potential suffix *-e* or *-(r)are* is added to the transitive verbal stem. This suffix can also express the ability of the predicate's external argument, as seen in (18). This suggests that JMs are one of the interpretations of the potential construction.

- (18) a. *Kare-ga oyog-e-ru (koto)*
 he-NOM swim-POT-PRS that
 '(that) he can swim.'
- b. *Boku-ga kare-no seikou-o sinzi-rare-ru (koto)*
 I-NOM his-GEN success-ACC believe-POT-PRS that
 '(that) I can believe in his success.'

The sentences in (17) are dispositional middles. They meet the conditions for the middle construction stated in (1), which are repeated here as (19).

- (19) a. The understood object is ascribed a dispositional property.
 b. An otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.
 c. The agent is syntactically suppressed and receives an arbitrary interpretation.

First, in (17a), for example, a dispositional generic statement about the internal argument of the predicate is expressed, which is explicated by the following pair.

- (20) *Kodomo-ni-mo kono-kooiii-ga nom-e-ru (koto)*
 children-DAT-also this-coffee-NOM drink-POT-PRS that
 '(that) this coffee is such that even children can drink it.'
- a. *Kahweinresu dakara.*
 caffein-less because
 'because it is caffein-less.'
- b. *??Totemo nodo-ga kawai-te iru-kara.*
 very throat-NOM thirsty be-because
 'Because the children are very thirsty.'

The because-sentence in (20a) mentions an inherent property of the object *kono-kooiii* 'this coffee' of the predicate *nomu* 'drink'; it is, thus, compatible with JM in (17a), whereas the because-sentence in (20b) denotes a temporal property of the external argument of the predicate *nomu* 'drink' and cannot be a correct sequence of JM in (17a). Hence, JM in (17a) expresses an "in virtue of" generalization about the object. Second, the sentences in (17) do not denote the actual events. This is verified by the fact that the sentence in (17a) is truthfully uttered even if there is no occurrence of the event denoted by the predicate, as shown in the sentence sequence in (21). The

second sentence in (21) explicates that the event denoted in JM (17a) has not yet occurred.

- (21) *Kodomo-ni-mo kono-koohii-ga nom-e-ru. Mada dare-mo*
 children-DAT-also this-coffee-NOM drink-POT-PRS yet anybody-also
non-de i-nai-kedo.
 drunk be-not-though
 ‘This coffee is such that even children can drink it. Nobody has drunk it yet, though.’

Additionally, in (17), the predicate is stativized by adding a potential suffix *-e* or *-(r)are*. Third, in (17), the external argument is interpreted as arbitrary, even if it is realized by *kodomo* ‘children’ with a dative case, as in (17a).⁹ Notably, the external argument with the dative case can be added to JMs (17b, c) as well, provided that such argument refers to arbitrary or generic persons such as *ningen* ‘humans’ or *gakusei* ‘students’.

- (22) a. *Kono-kinoko-ga ningen-ni tabe-rare-ru (koto)*
 this-mushroom-NOM humans-DAT eat-POT-PRS that
 ‘(that) this mushroom is such that humans can eat it.’
 b. *Kono-hon-ga gakusei-ni-mo kantanni honyaku-dekiru (koto)*
 this-book-NOM students-DAT-also easily translation-can that
 ‘(that) this book is such that even students can do a translation of it easily.’

As stated above, JMs are typically constructed by adding a potential suffix *-e* or *-(r)are* to the transitive verbal stem (Nakau 1991; Teramura 1982). The suffix *-e* is used when the predicate stem ends with a consonant, whereas the suffix *-(r)are* is used when the predicate stem ends with a vowel. In (17a), for example, the suffix *-e* is added to the predicate *nom-u* ‘drink’. The direct internal argument of this predicate *kono-koohii* ‘this coffee’ is realized with nominative case *ga*. In (17b), the suffix *-(r)are* is added to the predicate *tabe-ru* ‘eat’. Notably, in (17b), the predicate form *tabe-rare-ru* is morphologically not differentiated from that in the passive sentence (23a).¹⁰ It may, then, follow that JMs are “parasitic” to passive sentences, just like Greek CMs. However, they are not

9 If the dative-marked argument contains an individual person like in (i), the sentence does not express an ‘in virtue of’ generalizations about the internal argument any more, but an ‘in virtue of’ generalization about the agent *boku* ‘I’.

(i) *Kono-hon-ga boku-ni yom-e-ru.*
 this-book-NOM I-DAT read-POT-PRS
 ‘I can read this book.’

10 In (23a), the past form *-ta* is used to clarify a passive meaning.

always morphologically identical, because the passive form of the predicate *nom-u* ‘drink’ is not *nom-e-ru*, as stated in JM (17a), but *nom-are-ru*, as in (23b).

- (23) a. *Kinoko-ga tabe-rare-ta.*
 mushroom-NOM eat-PASS-PST
 ‘The mushroom was eaten.’
 b. *Kono-paatii-de-wa biiru-ga takusan nom-are-ru.*
 this-party-on-TOP beer-NOM much drink-PASS-PRS
 ‘Much beer will be drunk on this party.’

In JMs, such as (17), by adding a potential suffix to the predicate, the transitive case array “nominative – accusative” is changed to “dative – nominative”. This case pattern is observed in passive constructions formed from ditransitive verbs like *okuru* ‘send’ as well. (24b) is the passive sentence corresponding to the active sentence in (24a).

- (24) a. *Tomodati-ga kare-ni okane-o oku-ru.*
 friend-NOM he-DAT money-ACC send-PRS
 ‘The friend will send him money.’
 b. *Kare-ni okane-ga oku-rare-ru.*
 he-DAT money-NOM send-PASS-PRS
 ‘He will be sent money.’

Note that in (24b) the indirect object *kare* ‘he’ retains the dative case, whereas in JMs, such as (22a), repeated here as (25a), the dative argument corresponds to the nominative argument in the transitive sentence in (25b). This fact also suggests that JMs are not passive constructions.

- (25) a. *Kono-kinoko-ga ningen-ni tabe-rare-ru (koto) (= 22a)*
 this-mushroom-NOM humans-DAT eat-POT-PRS that
 ‘(that) this mushroom is such that humans can eat it.’
 b. *Ningen-ga kono-kinoko-o tabe-ru (koto)*
 humans-NOM this-mushroom-ACC eat-PRS that
 ‘(that) humans eat this mushroom.’

Furthermore, if JMs were parasitic to passives, a *by*-phrase, *ni-yotte*, could be expected to be licensed. As shown in (26a), a *by*-phrase optionally appears in the passive sentence formed with the verb *nomu* ‘drink’. However, the dative phrase in JM (17a) cannot be exchanged with a corresponding *by*-phrase, as the contrast in (26b) shows.

- (26) a. *(Sono-kodomo-ni yotte) kono-koohii-ga nom-are-ta.*
 the-child-by this-coffee-NOM drink-PASS-PST
 ‘This coffee was drunk by the child.’

- b. {*Kodomo-ni* / **Kodomo-ni yotte*} *kono-koohee-ga nom-e-ru (koto)*
 children-DAT/ children-by this-coffee-NOM drink-POT-PRS that
 '(that) this coffee is such that children can drink it.'

These facts clearly show that JMs are parasitic to potential constructions, that is, a JM is a dispositional interpretation of potential constructions. Aside from adding a potential suffix *-e* or *-(r)are* to the transitive verbal stem, JMs can be formed with a compound comprising an eventive noun such as *honyaku* 'translation' in (17c) and a potential verb *dekiru* 'can' (Abe 1991) as well. The JM in (17c) is repeated here as (27).

- (27) *Kono-hon-wa kantanni honyaku-dekiru.*
 this-book-TOP easily translation-can
 'This book is such that one can do a translation of it easily.'

Notably, *dekiru* 'can' is a suppletion of the potential form of the transitive verb *suru* 'do'. *Honyaku-dekiru* 'can translate' in (27) is thus a suppletion of the potential form of the transitive verb *honyaku-suru* 'do a translation'.¹¹

As stated above, in JMs such as (17a), the internal argument is assigned nominative case with *ga*, whereas the external argument can be realized with dative case *ni*. The former fact may suggest that JMs are dispositional middles about the subject, similar to CMs and *let*-middles. However, the following two facts show that the nominative-marked argument in JMs remains a grammatical object. First, the nominative-marked argument in JMs behaves in the same way as the direct object with respect to *koto* 'fact, thing', formally a noun. As the contrast between (28a) and (28b) shows, the noun *koto* 'fact, thing' can only be added to the object referring to a human, not to the subject, as Kishimoto (2004) points out. More importantly, this restriction is applied only to the "surface" object, as the noun *koto* 'fact, thing' cannot be added to the subject in the passive (28c).¹²

- (28) a. *John-ga Mary-no-koto-o damasi-ta.*
 John-NOM Mary-GEN-fact-ACC deceive-PST
 'John deceived Mary.'

¹¹ The form *suru* + potential suffix *-e* or *-(r)are* is not possible.

¹² Two anonymous reviewers predict that unaccusatives with the noun *koto* 'fact' are unacceptable, just like passives. As shown in (i), this is indeed the case.

- (i) **Ano seizika-no-koto-ga taore-ta/sin-da.*
 that stateman-GEN-fact-NOM fall-PST/die-PST
 'That stateman fell/died.'

- b. **John-no-koto-ga Mary-o damasi-ta.*
 John-GEN-fact-NOM Mary-ACC deceive-PST
 (Kishimoto 2004: 113)
 **Mary-no-koto-ga John-ni-yotte damas-are-ta.*
 Mary-GEN-fact-NOM John-by deceive-PASS-PST
 ‘Mary was deceived by John.’
 (Kishimoto 2004: 114)

The point here is that this formal noun *koto* ‘fact, thing’ can be attached to the nominative-marked argument in JM (29b), just as to the accusative-marked argument in the corresponding transitive sentence (29a). This shows that the nominative argument in JM (29b) is a grammatical object on the surface.

- (29) a. *Wareware-ga ano-seizika-no-koto-o sonkei/sinyoo/keibetu-suru.*
 we-NOM that-stateman-GEN-fact-ACC respect/trust/despise-do
 ‘We respect/trust/despise that stateman.’
 b. *Ano-seizika-no-koto-ga sonkei/sinyoo/keibetu-dekiru (koto)*
 that-stateman-GEN-fact-NOM respect/trust/despise-can that
 ‘(that) that stateman is such that one can respect/trust/despise her/him.’

Second, Kishimoto (2004) points out that the so-called “double-o” constraint (Harada 1973) can be used as a diagnostic for objecthood. In Japanese, double occurrences of an accusative-marked argument are prohibited. As seen in (30), the transitive light verb *suru* ‘do’ allows either *Mootuaruto* ‘Mozart’ or *enso* ‘play’ to be marked with an accusative, but not both at the same time.

- (30) a. *John-ga mootuaruto-no ensoo-o si-ta.*
 John-NOM Mozart-GEN play-ACC do-PST
 ‘John played Mozart.’
 b. *John-ga mootuaruto-o ensoo-si-ta.*
 John-NOM Mozart-ACC play-do-PST
 ‘John played Mozart.’
 c. **John-ga mootuaruto-o ensoo-o si-ta.*
 John-NOM Mozart-ACC play-ACC do-PST
 ‘John played Mozart.’
 (Kishimoto 2004: 115)

Notably, the transitive light verb *suru* ‘do’ permits either the DP *kono-nihongo* ‘this Japanese’ or the eventive DP *honyaku* ‘translation’ to be marked with an accusative, but not both at the same time, similar to (30).

- (31) a. *John-ga kono-nihongo-no honyaku-o si-ta.*
 John-NOM this-Japanese-GEN translation-ACC do-PST
 ‘John did a translation of this Japanese.’

- b. *John-ga kono-nihongo-o honyaku-si-ta.*
 John-NOM this-Japanese-ACC translation-do-PST
 ‘John translated this Japanese.’
- c. **John-ga kono-nihongo-o honyaku-o si-ta.*
 John-NOM this-Japanese-ACC translation-ACC do-PST
 ‘John translated this Japanese.’

As shown in (32a) and (32b), either the DP *kono-nihongo* ‘this Japanese’ or the eventive DP *honyaku* ‘translation’ can be encoded by the nominative case and the target of the dispositional description, respectively. However, it is not possible to mark both arguments with the nominative case in the same clause, as shown in (32c).

- (32) a. *Kantanni kono-nihongo-ga honyaku-dekiru (koto)*
 easily this-Japanese-NOM translation-can that
 ‘(that) this Japanese is such that one can translate it easily.’
- b. *Kantanni kono-nihongo-no honyaku-ga dekiru (koto)*
 easily this-Japanese-GEN translation-NOM can that
 ‘(that) the translation of this Japanese is such that one can do it easily.’
- c. **Kantanni kono-nihongo-ga honyaku-ga dekiru (koto)*
 easily this-Japanese-NOM translation-NOM can that
 ‘(that) this Japanese is such that one can do a translation of it easily.’

This comes from the fact that in (32c) the same constraint is applied as in (31c), that is, the “double-o” constraint. It follows that the nominative-marked argument in JMs (32a) and (32b) is not the subject, but an object. An anonymous reviewer suggests that it is necessary to show that the “double-o” constraint applied in (31c) and (32c) does not simply result from a general haplology effect, but is syntactic in nature. Hiraiwa (2010) claims that this constraint is applied to a phase. He points out that the “double-o constraint” is not enforced if the two accusative objects are separated by scrambling, as in (33b).

- (33) a. ??*Ken-ga genti-de ninen* [_{VP} *Navajo-go-o kenkyuu-o si-ta*].
 Ken-NOM field-on two-years Navajo-language-ACC study-ACC do-PST
 ‘Ken studied Navajo for two years at the local communities.’
 (Hiraiwa 2010: 735)
- b. *Navajo-go-o_i Ken-ga genti-de ninen* [_{VP} *t_i kenkyuu-o si-ta*].
 Navajo-language-ACC Ken-NOM field-on two-years study-ACC do-PST
 ‘Ken studied Navajo for two years at the local communities.’
 (Hiraiwa 2010: 735)
- c. ??*Navajo-go-o_i kenkyuu-o_j Ken-ga genti-de ninen* [_{VP} *t_i t_j si-ta*].
 Navajo-language-ACC study-ACC Ken-NOM field-on two-years do-PST
 ‘Ken studied Navajo for two years at the local communities.’
 (Hiraiwa 2010: 736)

Under the assumption that case values are assigned by *v* and *T* and that *vP* and *CP* are phases, Hiraiwa (2010) claims that the “double-o constraint” stems from the fact that the structural accusative case cannot be valued multiple times within a single Spell-Out domain, that is, the complement of *v* (= *VP*) and the complement of *CP* (= *TP*). In (33a), for example, both accusative-marked objects, *Navajo-go-o* ‘Navajo language’ and *kenkyuu-o* ‘study’, are located in *VP*, which is a single Spell-Out domain; thus, this sentence is ruled out, as was seen in (30c) and (31c). However, if one of the accusative objects is moved from the Spell-Out domain, the resulting constructions are licensed. By scrambling in (33b), an accusative object is moved out of *VP* and goes to the edge of *TP*; thus, each phase (*vP* and *CP*) contains only one accusative case value, which is realized by each object. However, if both accusative objects are scrambled and moved to *TP*, as in (33c), they are spelled out at the same phase again and, thus, are not possible.¹³ What is important here is that the “double-ga” violation in (32c), repeated here as (34a), is rescued by scrambling one of the nominative objects, as seen in (34b). Additionally, the multiple scrambling of the nominative argument in (34c) is ruled out, just like in (33c). It follows that (33a) and (34a) involve the same syntactic configuration; in particular, the *DP* with a nominative case in *JMs* is an object.¹⁴

- (34) a. **Kantanni kono-nihongo-ga honyaku-ga dekiru (koto)* (=32c)
 easily this-Japanese-NOM translation-NOM can that
 ‘(that) this Japanese is such that one can do a translation of it easily.’
- b. *Kono-nihongo-ga kantanni honyaku-ga dekiru (koto)*
 this-Japanese-NOM easily translation-NOM can that
 ‘(that) this Japanese is such that one can do a translation of it easily.’
- c. ??*Kono-nihongo-ga honyaku-ga kantanni dekiru (koto)*
 this-Japanese-NOM translation-NOM easily can that
 ‘(that) this Japanese is such that one can do a translation of it easily.’

In the examples of *JMs* so far, a dispositional ascription is not assigned to the grammatical subject (pace Lekakou 2005), but the grammatical object marked with a nominative case. One may, then, suggest that the target of the dispositional middle, in general, should be the argument with nominative case. A new question, then, arises as to whether this is always the case in *JMs*. Before discussing this further, I consider

¹³ Hiraiwa (2010) points out that the “double-o” constraint is salvaged by clefting, suppressing of case at *PF*, ellipsis, relativization and topicalization as well. He shows that multiple occurrences of the accusative case within a single Spell-Out domain are avoided by these operations, as is the case by scrambling.

¹⁴ Furthermore, the fact that both accusative object and nominative object are subject to the same restriction indicates that case is morphologically realized at *PF*, as is claimed by Hiraiwa (2010).

the grammatical status of the dative argument in JMs. I claim that the dative-marked argument in JMs is a grammatical subject based on the honorification pattern. As seen in (35), the honorification form *o-V-ni naru* targets the subject, but not the object in transitive predicates like *homeru* ‘praise’.

- (35) a. *Kimura-sensei-ga John-o o-home-ni-nat-ta.*
 Kimura-teacher-NOM John-ACC praise-HON-PST
 ‘Prof. Kimura praised John.’
 b. **John-ga Kimura-sensei-o o-home-ni-nat-ta.*
 John-NOM Kimura-teacher-ACC praise-HON-PST
 ‘John praised Prof. Kimura.’
 (Kishimoto 2004: 110)

The JM in (36), where the dative-marked argument *gonenpai-no-katagata-ni* ‘senior citizens’ is targeted by the honorification form *o-V-ni naru*, is acceptable, which shows that the dative argument should be regarded as the subject.

- (36) *Gonenpai-no katagata-ni kono-sumaho-ga kantanni*
 senior-GEN people-DAT this-smartphone-NOM easily
o-tukai-ninar-e-ru (koto)
 HON-USE-HON-POT-PRS that
 ‘(that) this smartphone handles easily for senior persons.’

In contrast, if the honorific form *o-V-ni naru* targets the nominative-marked argument, as in (37), the sentence is not possible, which shows that the nominative argument in JMs is not a subject.¹⁵

- (37) **Gakusei-ni ano-sensei-ga o-maneki-ninar-e-ru (koto)*
 students-DAT that-teacher-NOM HON-INVITE-HON-POT-PRS that
 ‘(that) that teacher is such that students can invite him.’

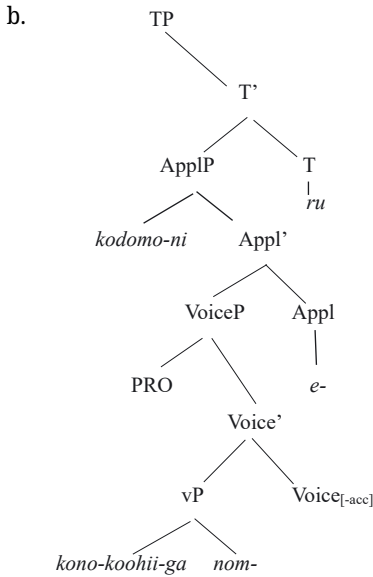
In short, in JMs, the external argument is syntactically projected and can be realized by a dative subject. This fact shows again that JMs are not passives, since in passives, the external argument can be realized by an adjunct.¹⁶

Following Ura (1999: 242), I assume that the potential suffix *-e* or *-(r)are* in JMs provides an applicative projection and takes a transitive verb as its complement. This suffix further absorbs the accusative case of the transitive verb and assigns inherent dative case to the specifier. JM (38a) is then represented as (38b).

¹⁵ I thank an anonymous reviewer for suggesting that the honorification test with *o-V-ni* should be applied to the nominative DP as well.

¹⁶ I thank an anonymous reviewer for this clarification of the difference between JMs and passives.

- (38) a. *Kodomo-ni kono-koohii-ga nom-e-ru (koto)*
 children-DAT this-coffee-NOM drink-POT- (that)
 ‘(that) this coffee is such that children can drink it.’



The dative DP *kodomo-ni* ‘the children’ in (38b) enters into both an EPP-feature and a ϕ -feature checking relation with T, thereby qualified as the subject.¹⁷ As this subject *kodomo-ni* ‘the children’ bears inherent case, T licenses the nominative case of the object DP *kono-koohii* ‘this coffee’, after the potential suffix absorbs accusative case, which can be assigned by a transitive verb like *nomu* ‘drink’.¹⁸

17 It is assumed here that the subject-honorification involves a ϕ -feature agreement. In addition, Ura (1999) assumes a sP projection, instead of ApplP, to be more precise. If the dative subject does not occur as in (i), it is reasonable to assume that PRO_{arb} appears in the specifier position.

- (i) [_{SP} PRO_{arb} [_{VP} *Kono-sumaho-ga kantanni tuka-e-ru (koto)*]]
 this-smartphone-NOM easily use-POT-PRS that
 ‘(that) this smartphone handles easily.’

18 More accurately, Ura (1999) claims that the potential suffix *optionally* absorbs accusative case of the predicate. When the potential morpheme does not absorb the accusative case, the syntactic structure for (ii) is derived. In (ii) an ability of the external argument *kono-kodomo* ‘this child’ is expressed.

- (ii) [_{SP} *Kono-kodomo-ga* [_{VP} *koohii-o nom-e-ru*]]
 this-child-NOM coffee-ACC drink-POT-PRS
 ‘This child can drink coffee.’

Similar to JM_s, in German and Dutch *let*-middle and Greek CM_s, the external argument of the (embedded) predicate can be realized by a *by*-phrase, as they are parasitic to passives.¹⁹

- (39) a. *Das Buch lässt sich von kleinen Kindern gut lesen.*
 the book lets REFL by small children well read
 ‘The book can be read easily by small children.’
 (Pitteroff 2014: 47)
- b. *Dit probleem laat zich door schoolkinderen niet makkelijk oplossen.*
 this problem lets REFL by schoolchildren not easily solve
 ‘This problem cannot easily be solved by schoolchildren.’
 Ackema and Schoorlemmer (2017)
- c. *Afto to provlima linete akomi ki apo anoitus.*
 this the problem solve.NACT.3SG. even and by fools
 ‘This problem can be solved even by fools.’
 (Lekakou 2005: 20)

In contrast, in both German and Dutch CM_s, a *by*-phrase is never possible, as shown in (40).

- (40) a. *Das Buch liest sich (*von kleinen Kindern) gut.*
 the book reads REFL by small children well
 ‘The book reads well (by small children).’
 (Pitteroff 2014: 46)
- b. *Dit boek leest niet makkelijk (*door schoolkinderen).*
 this book reads not easily by schoolchildren
 ‘This book does not read easily (by school children).’
 Ackema and Schoorlemmer (2017)

¹⁹ As has been pointed out in Footnote 4 concerning CM_s in Greek, the DP in the *by*-phrase in *let*-middles should be generic again, such as ‘small children’. If the DP refers to a specific person, the *let*-middles are degraded.

- (i) **Das Buch lässt sich von mir beschaffen.*
 the book lets REFL by me organize
 ‘The book can be organized by me.’
 (Huber 1980, cited from Pitteroff 2014: 47)
- (ii) *Het boek laat zich gemakkelijk lezen door een kind/?*het kind.*
 the book lets REFL easily read by a child/ the child
 ‘The book can easily be read by a child/the child.’
 (Everaert 1986: 144)

Notably, an adverb is not necessary in JMs, the same as in *let*-middles and Greek CMs.

- (41) a. *Kono-kinoko-ga tabe-rare-ru (koto)*
 this-mushroom-NOM eat-POT-PRS that
 ‘(that) this mushroom is such that one can eat it.’
- b. *Kodomo-ni-mo kono-yama-ga nobor-e-ru (koto)*
 children-DAT-also this-mountain-NOM climb-POT-PRS that
 ‘(that) this mountain is such that even children can climb it.’
- c. *Gonenpai-no katagata-ni-mo kono-sumaho-ga tukaw-e-ru (koto)*
 senior-GEN people-DAT-also this-smartphone-NOM use-POT-PRS that
 ‘(that) this smartphone is such that even senior persons can handle it.’
- (42) a. *Diese Wurzel lässt sich essen.*
 this root lets REFL eat
 ‘This root is such that one can eat it.’
 (German: Pitteroff 2014: 211)
- b. *Dieses Problem lässt sich (leicht) lösen.*
 this problem lets REFL easily solve
 ‘This problem is such that one can solve it (easily).’
 (German: Pitteroff 2014: 49)
- c. *Afta ta manitaria trogonde.*
 these the mushrooms eat.NACT.3PL
 ‘These mushrooms are such that one can eat them.’
 (Greek: Lekakou 2005: 144)
- d. *To nero edo pinete.*
 the water-NOM here drink.NACT.3SG
 ‘The water is such that one can drink it.’
 (Greek: Lekakou 2005: 143)

It follows that JMs provide evidence for the correlation between the non-obligatoriness of an adverb and the possibility of the realization of the external argument, as is argued by Lekakou (2005, 2006). She claims that in both German and Dutch CMs, an adverb is necessary, unlike in the case of Greek CMs, as shown in (43), because it helps recover the implicit agent, through identifying the experiencer of the adverb.

- (43) a. **Das Buch liest sich.* (German)
 the book reads REFL
- b. **Dit boek leest.* (Dutch)
 this book reads
 (Lekakou 2005: 143)

As seen in (41), in JMs, an adverb is not required, as the agent is projected syntactically and can be realized as a dative subject.²⁰

Pitteroff (2014) further points out that in German *let*-middles, an agent-oriented adverb like *behutsam* ‘cautiously’ or *vorsichtig* ‘carefully’ is licensed. Pitterdorff provides the following examples from the Internet.

- (44) a. *Diese Angst lässt sich behutsam abbauen.*
 this fear lets REFL cautiously off.build
 ‘This fear is such that one can cautiously reduce it.’
- b. *Gelangt ein Fremdkörper ins Auge [...] lässt [er] sich vorsichtig mit einem Tuch [...] entfernen.*
 ends.up a foreign.body in-the eye lets it REFL carefully
 with a cloth remove
 ‘If a foreign object ends up in the eye, it can be carefully removed with a cloth.’
 (Pitteroff 2014: 198)

Notably, these agent-oriented adverbs are not licensed in CMs.

- (45) a. **Diese Angst baut sich behutsam ab.*
 this fear builds REFL cautiously off
 ‘This fear can be cautiously reduced.’
- b. **Ein Fremdkörper entfernt sich vorsichtig mit einem Tuch.*
 a foreign-body removes REFL carefully with a cloth
 ‘A foreign object can be carefully removed with a cloth.’

It is, then, expected that the *let*-middles in (44) can be reproduced with the JMs. This expectation is borne out, for example, in (46).

²⁰ This correlation is also pointed out by Fábregas and Putnam (2014) with respect to middle constructions in north Germanic languages.

- (i) *Denne typen hus gjenoppbugges av alle.* (Norwegian)
 this type house again.up.build.PASS by all
- (ii) *Den här boken är lättläst (*av alla).* (Swedish)
 this here book.the is easily.read by all

In (i), a dispositional interpretation is assigned to the so-called s-passive sentence, and a *by*-phrase is allowed. In this case an adverb such as *easily* is not required. In (ii), a dispositional interpretation is produced by a participle construction, in which a *by*-phrase is not allowed and, thus, an adverb *lätt* ‘easily’ cannot drop.

- (46) a. *Kono-huan-ga sintyooni torinozok-e-ru (koto)*
 this-fear-NOM cautiously off.build-POT-PRS that
 '(that) this fear is such that one can cautiously reduce it.'
- b. *Kono-ibutu-ga tyuuibukaku taoru-de torinozok-e-ru (koto)*
 this-foreign.object-NOM carefully towel-INST remove-POT-PRS that
 '(that) this foreign object is such that one can remove it carefully with a cloth.'

I now return to the question of whether JMs always ascribe a dispositional property to the argument with the nominative case, as in (47). It should be recalled that this nominative argument exhibits the properties of an object.

- (47) a. *Kodomo-ni-mo kono-kohii-ga nom-e-ru. (= 6a)*
 children-DAT-also this-coffee-NOM drink-POT-PRS
 'This coffee is such that even children can drink it.'
- b. *Kono-kinoko-ga tabe-rare-ru (koto)*
 this-mushroom-NOM eat-POT-PRS that
 '(that) this mushroom is such that one can eat it.'

If so, the target of the disposition in middle constructions, in general, is not the subject, as Lekakou (2005) argues, but the argument with nominative case. It is certainly true that in many cases, the target of disposition in JMs is the nominative-marked argument. However, in some cases, an inherent property of the dative argument marked with *ni* is described, for example, (48a) and (48b), and JM in (48c) ascribes a disposition to the comitative argument with *to*.

- (48) a. *Ano-sensei-ni itudemo aw-e-ru (koto)*
 that-professor-DAT always meet-POT-PRS that
 '(that) that professor is such that one can always meet her/him.'
- b. *Anoyoona-gakusei-ni tan'i-ga atae-rare-nai (koto)*
 such-student-DAT credit-NOM award-POT-NEG that
 '(that) that student is such that one cannot award a credit to her/him.'
- c. *Ano-sensei-to araso-e-nai (koto)*
 that-professor-COM quarrel-POT-NEG that
 '(that) that professor is such that one cannot quarrel with her/him.'

In (48a) the dative argument is selected by the verb *awu* 'meet', and in (48b), by the verb *ataeru* 'give', whereas in (48c) the comitative argument is selected by the verb *arasowu* 'quarrel' (Teramura 1982: 266). The following facts support the view that all sentences in (48) are dispositional. First, they are true even if the event denoted by the verbal phrase does not occur. For example, sentence (49b) negates the occurrence of the event denoted by the preceding JM (49a). Second, the fact that the JM in (49a)

can be followed by (49c) suggests that (49a) expresses an “in virtue of” generalization about the referent of the dative argument *ano-sensei* ‘that professor’. In addition, the because-sentence in (49d) indicates an “in virtue of” generalization about the referent of the comitative argument *ano-sensei* ‘that professor’ in JM (48c).

- (49) a. [*Ano-sensei-ni itudemo aw-e-ru koto*] *wa matigai-nai.*
 that-professor-DAT always meet-POT-PRS that TOP error-not
 ‘It is no doubt that the professor is such that one can always meet her/him.’
- b. *Mada dare-mo aw-ta-koto nai-kedo.*
 yet nobody-even meet-PST-that not-though
 ‘Nobody has met her/him, though.’
- c. *Sensei-wa itumo hima-dakara.*
 professor-TOP always time-because
 ‘Because the professor always has lot of time.’
- d. *Yosan-o motte-iru kara.*
 budget-ACC has-be because
 ‘Because the professor has a budget.’

Furthermore, the fact that the honorification form *o-V-ni naru* targets the first dative argument, *gokazoku-no-katagata* ‘family members’ in (50a), *sensei-gata* ‘professors’ in (50b), and *senpai-gata* ‘seniors’ in (50c), shows that these dative arguments are subjects, as is the case in the JM in (51) with the nominative object.

- (50) a. *Gokazoku-no-katagata-ni-(mo) ano-kanzya-ni o-awi-ninar-e-nai*
 family-GEN-members-DAT-even that-patient-DAT HON-meet-HON-POT-NEG
 (*koto*)
 that
 ‘(that) that patient is such that even family members cannot meet her/him.’
- b. *Sensei-gata-ni anoyoona-gakusei-ni tan’i-ga*
 professors-PL-DAT such-student-DAT credit-NOM
o-atae-ninar-e-nai (koto)
 HON-give-HON-POT-NEG that
 ‘that student is such that professors cannot award a credit to her/him.’
- c. *Senpai-gata-ni ano-sensei-to o-araso-i-ninar-e-nai (koto)*
 senior-PL-DAT that-professor-COM HON-quarrel-HON-POT-NEG that
 ‘(that) the professor is such that seniors cannot quarrel with her/him.’
- (51) *Gonenpai-no-katagata-ni kono-sumaho-ga kantanni o-tukai-*
 senior-GEN-people-DAT this-smartphone-NOM easily HON-use-
ninar-e-ru (koto) (= 36)
 HON-POT-PRS that
 ‘(that) this smartphone handles easily for senior persons.’

Accordingly, the sentences without nominative cases in (48) are JMs as well. It follows that it is not correct to postulate that JMs always ascribe a dispositional property to the argument in the nominative case.

One may consider that the dative case *ni* in (48a) and (48b), repeated here as (52a) and (52b), cannot be altered to the nominative *ga*, because the dative in (52a) and (52b) is inherent.

- (52) a. *Ano-sensei-ni itudemo aw-e-ru (koto)*
 that- professor-DAT always meet-POT-PRS that
 ‘(that) that professor is such that one can always meet her/him.’
- b. *Anoyoona-gakusei-ni tan’i-ga atae-rare-nai (koto)*
 such-student-DAT credit-NOM award-POT-NEG that
 ‘(that) that student is such that one cannot award a credit to her/him.’

The dative argument in (52a) with the predicate *awu* ‘meet’ cannot be, indeed, changed to normative in the passive, as seen in (53a). However, the dative argument in (52b) is changed to the nominative subject in the passive, as shown in (53b), suggesting that the dative argument in (52b) bears structural case. Hence, the dative-orientedness in JMs (52a) and (52b) is unrelated to the distinction between structural and inherent cases.

- (53) a. **Ano-sensei-ga aw-are-ta.*
 that-professor-NOM meet-PASS-PST
 intended: ‘That professor was met.’
- b. *Ano-gakusei-ga tan’i-o atae-rare-ta.*
 that-student-NOM credit-ACC give-PASS-PST
 ‘That student was credited.’

In short, in JMs, the dispositional target is neither the subject, nor the argument with the nominative case, as is true of both German and Greek CMs and *let*-middles, such as (54). JMs ascribe a dispositional description to an object within vP.

- (54) a. *This book reads easily.* (= 2a)
- b. *Das Buch liest sich leicht.* (= 2b)
 the book reads REFL easily
- c. *Afto to vivlio diavazete efkola.* (= 2d)
 this the book read.NACT.3SG easily
- d. *Das Buch lässt sich leicht lesen.* (= 11a)
 the book lets REFL easily read
 ‘This book reads easily.’

In this section, I considered JMs and claimed the following two points: First, JMs ascribe a dispositional description not to the grammatical subject, as Lekakou (2005) argues for CMs in English, German, Dutch, French, and Greek, but to an object. Second, the

external argument in JMs is syntactically projected, and an adverb such as *easily* is not necessary, similar to Greek CMs and German *let*-middles, where a passive structure is employed and thus an implicit agent is involved. Accordingly, JMs support the claim by Lekakou (2005, 2006) that such an adverb is required in both German and English CMs in order to reconstruct an understood agent interpretatively.

4 Impersonal *let*-middles in German

After establishing that the target of dispositional middles, in general, is not always the nominative subject, it is no wonder that ILMs like (55a), which lack a nominative subject, ascribe a dispositional property as well. In (55a) an inherent property is assigned to the dative argument *diesem Argument* ‘this argument’, which is explained by the contrast between (55b) and (55c).

- (55) a. *Diesem Argument lässt (*es) sich nicht widersprechen.* (= 6b)
 this argument-DAT lets it REFL not contradict
 ‘This argument is such that one cannot contradict it.’
- b. *weil es auf wissenschaftlichen Experimenten basiert.*
 because it on scientific experiments bases
 ‘because it is based on scientific experiments.’
- c. *Weil die Gegner sowieso diskussionsunfähig sind.*
 because the opponents anyway discussion.incapable are
 ‘because the opponents are anyway incapable of discussion.’

The ‘because’-sentence (55b) describes an inherent property of the dative object *diesem Argument* ‘this argument’ and is, thus, compatible with the ILM. However, the ‘because’-sentence (55c) is not an appropriate sequence of impersonal *let* middle in (55a), as (55c) denotes a disposition of the opponents in the discussion, which is not an inherent property of the dative argument. In addition, ILM in (56a) ascribes a dispositional property to DP *Karl* in the prepositional object headed by *mit* ‘with’, and ILM in (56b) ascribes a property to the same DP *Karl* in the adjunct headed by *mit* ‘with’.

- (56) a. *Mit Karl lässt *(es) sich gut auskommen.*
 with Karl lets it REFL well get-on-with
 ‘Karl is such a person that one can get on well with him.’
 (Höhle 1978: 63)
- b. *Mit Karl lässt (es) sich angenehm leben.*
 with Karl lets it REFL comfortably live
 ‘Karl is such a person that one can live with him comfortably.’
 (Höhle 1978: 63)

- c. *Auf diesem Stuhl sitzt *(es) sich angenehm.* (=16a)
 on this chair sits it REFL comfortably
 ‘This chair is comfortable to sit in.’

Notably, in ILMs, an expletive pronoun *es* ‘it’ is not allowed if the embedded predicate combines with a lexically determined argument, that is, a dative-marked argument like (55a) or a prepositional object like (55b), whereas the expletive pronoun *es* ‘it’ is optional if the ILM occurs with an adjunct like (56b). ILMs are thus strongly contrasted with intransitive middles like (56c) in which an expletive pronoun *es* ‘it’ cannot be dropped.

In this section, first, I discuss why the nominative subject is not necessary in ILMs, unlike in intransitive middles like (56c). Then, I point out that ILMs and intransitive middles without an event participant can denote a disposition of the event *per se*, whereas intransitive middles and ILMs with an event participant ascribe a disposition to this event participant. Finally, I claim that the target of disposition in ILMs is determined by discourse when there is more than one DP in a sentence.

In German, it is possible to construct impersonal passives from unergative verbs like *arbeiten* ‘work’ or *tanzen* ‘dance’, as seen in (57). The expletive subject *es* ‘it’ is not licensed in impersonal passives in German.²¹ In Dutch, only the non-nominal expletive *er* ‘there’ is possible, whereas the nominal one *het* ‘it’ is not. Assuming that a finite T must check its uninterpretable ϕ -features (Chomsky 1995), Ruys (2010) proposes that the “default ϕ -valuation” stated in (58) is applied in (57) (see Schäfer 2012 for detailed discussion).

- (57) a. *Hier wird *(es) gearbeitet/getanzt.*
 here is.PASS it worked/danced
 b. *Er/*Het wordt gewerkt/gedanst.*
 there/it is.PASS worked/danced
 ‘There is a working/dancing.’

- (58) Default ϕ -valuation
 Dutch, Danish (, ...) have a rule of default valuation [3, sg] and deletion of ϕ on T.

²¹ The pronoun *es* ‘it’ at the beginning of the sentence in (i) is not an expletive “subject”, but a place holder that is necessary in V2 clauses.

- (i) *Es wurde gestern getanzt.*
 it was.PASS yesterday danced
 ‘There was a dancing yesterday.’

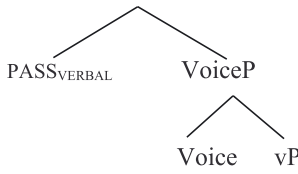
In languages such as Dutch, Danish, and German, where an impersonal passive is licensed, the default ϕ -valuation takes place if there is no nominal category that should agree with T and be assigned a nominative case. That is, the impersonal passive sentences in (57) are rescued by the default ϕ -valuation in (58), and the finite passive auxiliary in (57) bears a default third-person singular agreement marking. Apart from impersonal passives, the default ϕ -valuation in (58) is applied to the following constructions in German with the experiencer argument taking dative or accusative case as well.

- (59) a. *Mir ist kalt/warm.*
 me-DAT is cold/warm
 'I am cold/warm.'
 b. *Mich friert.*
 me-ACC freezes
 'I am freezing.'

Notably, in case of predicates like *kalt* 'cold' or *warm* 'warm', the experiencer argument cannot be missing for the default ϕ -valuation to be applied. This is the case for the predicate *frieren* 'freeze' as well. Without an experiencer argument, the expletive pronoun *es* 'it' is mandatory. This expletive, then, agrees with T.

- (60) a. *Ist *(es) hier zu warm?*
 is it here too warm
 'Is here too warm?'
 (Lernerz 1992: 104)
 b. *Hier ist *(es) kalt.*
 Here is it cold
 'Here is cold.'
 (Pütz 1975: 1)
 c. *Dort friert *(es) nachts.*
 there freezes it at-night
 'It freezes there at night.'

Following Bruening (2013), Legate (2014), and Alexiadou et al. (2014, 2015), I assume that $PASS_{\text{VERBAL}}$ is present in verbal passives like (57). The $PASS_{\text{VERBAL}}$ head embeds a Voice which introduces an external argument variable, but does not instantiate it, since this embedded Voice lacks a specifier, as is represented in (61a). The external argument variable is existentially bound by the passive head due to the semantics represented in (61b).

- (61) a. 
- (Alexiadou et al. 2014: 132)
- b. $\llbracket \text{PASS} \rrbracket = \lambda f_{\langle e, st \rangle} \lambda e. \exists x: f(x, e)$
 (Alexiadou et al. 2015: 128)

That is to say, the external argument in the passive is not syntactically projected, but introduced semantically.²² It follows that the difference between impersonal passives (57) and experiencer constructions (59), which are rescued by the default φ -agreement in (58), on the one hand, and ambient constructions (60), to which the default φ -agreement cannot be applied and the expletive pronoun is necessary, on the other hand, consists in the fact that former semantically or syntactically contains an (implicit) non-nominative argument. When there is no semantic argument, an expletive subject must appear.²³ The default φ -valuation stated in (58) should then be revised as follows, especially for German.

- (62) Default φ -valuation (revised):
 German has a rule of default valuation [3, sg] and deletion of φ on T, as long as there is an (implicit) non-nominative argument.

This revised default φ -valuation is also applied to state passives like (63a) and so-called *sein-zu* 'be to' constructions like (63b). Notably, a *by*-phrase in (63a) and (63b) specifies an implicit, that is, existentially bound agent in both sentences, just like in the impersonal passive (63c).

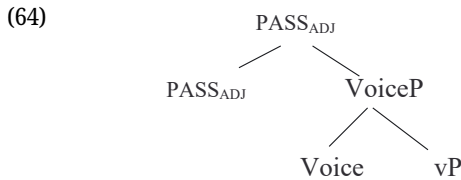
- (63) a. *Für Arbeit ist von mir gesorgt.* (state passive)
 for work is by me taken.care
 'I have taken care of work.'
 (Brinker 1971: 71)

²² A *by*-phrase in the passive can be adjoined to the specifier-less VoiceP in (61a) and saturates then the external argument variable.

²³ This may be due to the avoidance of empty predication, that is, every predicate must have at least an argument.

- b. *In französischen Restaurants ist ab sofort von niemandem mehr*
 in French restaurants is immediately by nobody more
zu rauchen. (*sein-zu* ‘to-be’ construction)
 to smoke
 ‘Nobody may smoke in French restaurants immediately.’
 (Demske-Neumann 1994: 258)
- c. *Von mir wurde nicht gelacht.*
 by me was.PASS not laughed
 ‘I did not laugh.’
 (Schäfer 2012: 230)

Following Bruening (2014), Alexiadou et al. (2014) claim that $PASS_{ADJ}$ exists in state passives like (63a), as represented in (64).²⁴ Note that $PASS_{ADJ}$ head also selects a Voice projection without a specifier and introduces an external argument variable, but does not instantiate it, in the same way as $PASS_{VERBAL}$ in (61a). The $PASS_{ADJ}$ changes the category and stativizes the event denoted by vP, though.



(Alexiadou et al. 2014: 132)

According to this view, a *by*-phrase or an instrumental phrase can be licensed in state passives, as these phrases require the category Voice (Bruening 2013).²⁵ It is also

²⁴ In the case of state passives like (63a), Alexiadou et al. (2015) introduce a different Voice, which is similar to the Middle Voice in Greek. An important motivation for this claim lies in the fact that the reflexive interpretation is excluded in verbal passives, whereas such an interpretation is possible in state passives. This is clearly demonstrated in German, as in verbal passives, the auxiliary *werden* ‘become’ is used, as seen in (i), whereas the predicate *sein* ‘be’ is used in state passives, as in (ii).

- (i) *Das Kind wird gewaschen.* ^{OUT}reflexive interpretation
 the child is.PASS washed
- (ii) *Das Kind ist gewaschen.* ^{OK}reflexive interpretation
 the child is washed

Such a reflexive interpretation is allowed in sentences with Middle Voice in Greek, which is realized by non-active morphology in Greek, see Footnote 3. This differentiation of Voice is not important here, though.

²⁵ It has often been pointed out that in state passives in German neither a *by*-phrase nor an instrumental phrase is licensed. However, recent literature on state passives has revealed that they

assumed that the combination of Passive, Voice, and *v* in (61a) and (64) is spelled out as the past participle in German, which is selected by the passive auxiliary *werden* ‘become’ in (57) and the copula *sein* ‘be’ in (63a). An instrumental phrase headed by the preposition *mit* ‘with’ and an agent-oriented adverb like *vorsichtig* ‘carefully’ are licensed in *sein-zu* ‘be to’ constructions, as shown in (65); thus, it is safe to say that $\text{PASS}_{\text{VERBAL}}$ represented in (61a) is present in *sein-zu* ‘be to’ constructions as well.

- (65) a. *Der Karton ist leicht mit der Schere zu schneiden.*
 the box is easily with the scissor to cut
 ‘The box can be cut with scissors easily.’
 b. *Das Gerät ist vorsichtig zu bewegen.*
 the instrument is carefully to move
 ‘The instrument must be moved carefully.’

The passive effect in (63b) and (65) is attributed to *zu* ‘to’ (see Haider 1984; Holl 2010), because the following present participle constructions without *sein* ‘be’ are interpreted as passive.

are possible (see Alexiadou et al. 2015; Gehrke 2015; Maienborn 2007; Maienborn et al. 2016.). The following examples are clearly state passives, since the predicate *sein* ‘be’ is used in German state passives, as has been pointed out in Footnote 24.

- (i) *Die Zeichnung ist von einem Kind angefertigt.*
 the painting is by a child made
 ‘The painting is made by a child.’
 (Maienborn 2007: 97)
- (ii) *Der Brief ist mit roter Tinte geschrieben.*
 the letter is with red ink written
 ‘The letter was written with red ink.’
 (Maienborn 2007: 97)

However, these phrases are not freely allowed in state passives. Gehrke (2015) claims that in state passives in German, verbal predicates are not instantiated temporarily by Tense/Aspect and remain in the kind domain. Hence, state passives in (i) and (ii) with event kind modifiers are licensed, in contrast with those in (iii) and (iv) with event token modifiers.

- (iii) **Die Zeichnung ist von einem blonden Kind angefertigt.*
 the painting is by a blond child made
 ‘The painting is made by a blond child.’
- (iv) **Der Brief ist mit der roten Tinte geschrieben.*
 the letter is with the red ink written
 ‘The letter was written with the red ink.’
 (Gehrke 2015: 904)

- (66) a. *der leicht mit der Schere zu schneidende Karton*
 the easily with the scissor to cutting box
 ‘the box which can be cut with the scissors easily’
- b. *das vorsichtig zu bewegendes Gerät*
 the carefully to moving instrument
 ‘the instrument which must be moved carefully’

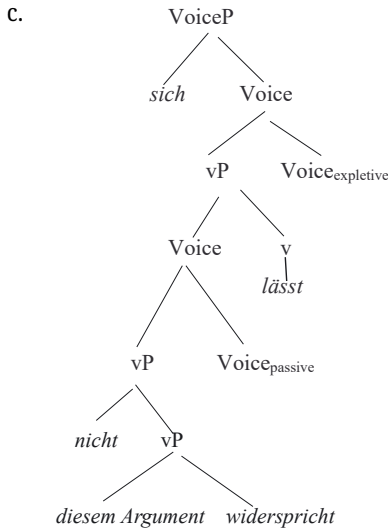
In short, $PASS_{\text{VERBAL}}$ in (61a) are selected both by the passive auxiliary *werden* ‘become’ in verbal passives and the auxiliary *sein* ‘be’ in *sein-zu* ‘be-to’ constructions, whereas the $PASS_{\text{ADJ}}$ in (64) is selected by the copula *sein* ‘be’ in state passives. It is also assumed that both heads guarantee the applicability of the default ϕ -valuation stated in (62).

Returning to ILMs, Pitteroff (2014) provides a syntactic analysis of this construction. He shows that there are two Voices in ILMs, just as in *let*-middles, as already mentioned in Section 2: the higher one is provided by the causative predicate *lassen* ‘let’, but the specifier of this Voice is occupied by a semantically empty reflexive *sich*. The upper Voice is, thus, an expletive Voice. This expletive Voice selects the lower Voice, which is a passive one, although the passive Voice in ILMs does not select a past participle, as is the case with *let*-middles. The existence of a passive Voice is verified again by the fact that a *by*-phrase is licensed in ILMs, as shown in (67a). ILM (67b) is represented as (67c), in which CP and TP are omitted.²⁶

- (67) a. *Diesem Argument lässt sich sogar von Experten nicht widersprechen.*
 this argument-DAT lets REFL even by experts not contradict
 ‘This argument is such that even experts cannot contradict it.’
- b. *Diesem Argument lässt sich nicht widersprechen.*
 this argument-DAT lets REFL not contradict
 ‘One cannot contradict this argument.’

²⁶ As is the case in *let*-middles (see Footnote 19), the external argument variable in the lower passive Voice in ILMs is *generally* interpreted. $\text{Voice}_{\text{passive}}$ in (67c) is thus different from $PASS_{\text{VERBAL}}$ in (61a) in that the external argument variable in the latter is *existentially* bound. Note further in this respect that ILM in (i) is excluded.

(i) **Diesem Argument lässt sich von diesem Experten nicht widersprechen.*
 this argument-DAT lets REFL by this expert not contradict



In ILMs, a passive Voice with an implicit (generic) argument is included, and the default ϕ -valuation in (62) is applied to ILMs as well. This is why ILMs without the expletive pronoun *es* 'it' are possible in German. In contrast, intransitive middles involve no passive structure, which is indicated by the fact that the intransitive middle in (68a) does not tolerate a *by*-phrase, in contrast with the corresponding ILM (68b).²⁷

27 As already stated, in ILMs with an adjunct phrase like (68b), an expletive pronoun *es* 'it' optionally appears. It is not clear when and why the expletive pronoun *es* 'it' is licensed in ILMs with an adjunct. Pitteroff (2014: 268) suggests that the expletive *es* 'it' is obligatory when the adjunct is adjoined in the VP provided below, which is confirmed by the topicalization of this VP.

- (i) *Im Meer schwimmen hat *(es) sich schon immer gut lassen.*
 in-the sea swim has it REFL already always well let
 'It has always been nice to swim in the sea.'

However, the following examples from the Internet suggest that the situation is more complex.

- (ii) *In Geld schwimmen lässt sich zwar auch im SPA des Hotel de Rome nicht.*
 in money swim lets REFL indeed also in-the SPA the hotel-GEN de Rome not
 'One cannot swim in money even in the spa at the Hotel de Rome.'
 (<http://www.sellawie.com/hotel-de-rome-die-sichere-bank-unter-den-luxushotels/>)
- (iii) *(Aus der Nationalmannschaft bin ich zurückgetreten, um freie Tage zu erleben, wie jetzt während des Deutschland-Cups,) denn auf allen*
 from the national-team am I resigned in-order free days to
 experience as now during the Germany-Cup-GEN for on all

- (68) a. **Auf Teppichboden tanzt es sich nur von geübten Tänzern gut.*
 on carpeted-floor dances it REFL only by experienced dancers well
 ‘Only experienced dancers can dance well on carpeted floor.’
- b. *Auf Teppichboden lässt (es) sich nur von geübten Tänzern gut tanzen.*
 on carpeted-floor lets it REFL only by experienced dancers
 well dance
 (Pitteroff 2014: 268)

Following Pitteroff (2014), the syntactic structure of the intransitive middle (69a), for example, is provided in (69b).²⁸ Note here that the nominal subject *es* ‘it’ is required, in order to agree with T and be assigned a nominative case.

- (69) a. *Auf diesem Stuhl sitzt es sich angenehm.* (= 16a)
 on this chair sits it REFL comfortably
 ‘This chair is comfortable to sit in.’

Hochzeiten tanzen lässt sich nicht.
 weddings dance lets REFL not

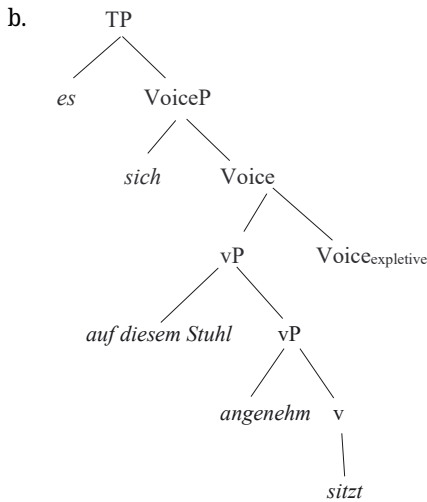
‘(I resigned from the national team, in order to experience free time, just as I am doing now during the German Cup.) For one cannot be everywhere at once.’

(<https://baernerbaer.ch/sport/am-stock-fast-wie-ruotsalainen-an-der-gitarre-auf-claptonsspuren/>)

- (iv) *Nachts ungestört schlafen lässt sich nur mit Ohrstöpseln.* (Die Wände sind papierdünn, man hört die Nachbarn in der nächsten Koje atmen.)
 nights undisturbed sleep lets REFL only with ear-plugs (The walls are paper-thin one hears the neighbors in the next bed breath)
 ‘At night, one can sleep undisturbed only with ear plugs. (The walls are paper thin, and you hear the neighbors in the next bed breathe.)’
 (<https://www.tagesspiegel.de/gesellschaft/segeltoern-vor-maine-bei-sonnenuntergang-ist-das-glueck-vollkommen/25010896.html>)

It seems that in (ii)–(iv) the expletive *es* ‘it’ is not necessary because the topicalized VP complex can be considered a conceptual unit. This is especially suggested by Example (iii) with the idiom *auf allen Hochzeiten tanzen* ‘dance at all weddings’, meaning ‘to (want to) be in on everything’. A further investigation is necessary.

28 Whereas Pitteroff (2014) suggests that the expletive pronoun *es* ‘it’ in intransitive middles is merged in TP, as in (69b), Lekakou and Pitteroff (2018) introduce the functional projection DISP(position) between T and Voice, as well as assume that the expletive is merged in the specifier of DISP. This functional projection is responsible for the dispositional semantics. The question as to where the expletive pronoun in ILMs is merged exactly is beyond the scope of this article.



The next question is to which element a dispositional property is ascribed in intransitive middles and ILMs. Lekakou and Pitteroff (2018) provide novel examples of intransitive middles, such as (70), where there is no DP to which a dispositional property can be assigned.

- (70) a. *Ohne Decke schläft es sich angenehm.*
 without blanket sleeps it REFL comfortably
 ‘One sleeps well without blanket.’
- b. *Nachts schreibt es sich am besten.*
 at.night writes it REFL best
 ‘One writes best at night.’
- c. *Aufgeregt singt es sich schlecht.*
 nervous sings it REFL badly
 ‘One does not sing well when nervous.’

Lekakou and Pitteroff (2018) claim that intransitive middles ascribe a dispositional property to the denoted event, rather than to an event participant, as was pointed out in Section 2. According to them, in intransitive middles, the subject *es* ‘it’ is associated with the event denoted by the VP. Hence, the subject *es* ‘it’ in intransitive middles is not semantically expletive. Moreover, the subject *es* ‘it’ in intransitive middles is not associated with the PP or adjunct of a different category in (70), as claimed by Broekhuis et al. (2015), because there is no referential expression in the adjuncts. Lekakou and Pitteroff (2018) also suggest that the dative argument *einem Obdachlosen* ‘a homeless person’ in (71a), the adjunct *in dieser Disko* ‘in this disco’ in (71b), and the conditional sentence in (71c)

are required to properly restrict the generalization denoted by intransitive middles. Without these arguments or modifiers, the sentences would be uninterpretable.

- (71) a. *Einem Obdachlosen hilft es sich leicht.*
 a homeless.person.DAT helps it REFL easily
 ‘Helping a homeless person is easy.’
- b. *Es tanzt sich in dieser Disko besonders gut.*
 it dances REFL in this disco particularly well
 ‘One can dance particularly well in this disco.’
- c. *Wenn man schlecht geschlafen hat, lernt es sich schlecht.*
 if one badly slept has studies it REFL badly
 ‘When one hasn’t slept well, studying is difficult.’

I will now examine this analysis by comparing ILMs and intransitive middles. First, ILMs without a DP are allowed, similar to intransitive middles in (70). It follows that ILMs can ascribe a dispositional property to the denoted event as well.

- (72) a. *Aufgeregt lässt (es) sich schlecht singen.*
 nervous lets it REFL badly sing
 ‘One does not sing well when nervous.’
- b. *Nachts lässt (es) sich am besten schreiben.*
 at-night lets it REFL best write
 ‘One writes best at night.’

The expletive subject *es* ‘it’ is not required in ILMs (72). Accordingly, on the one hand, it is suggested that the disposition to the event cannot be attributed to the obligatory appearance of the expletive subject *es* ‘it’, but rather to the fact that there is no individual participant in the denoted event. On the other hand, given examples like (70) without a referential expression, it is not appropriate to assume that the expletive *es* ‘it’ in intransitive middles is associated with an adjunct, as correctly claimed by Lekakou and Pitteroff (2018). Instead, it is suggested that the expletive *es* ‘it’ is necessary in order to establish agreement with T.²⁹ Next, we consider the following examples.

²⁹ The fact that an expletive is inserted to agree with T is indicated by the distribution of the expletive in Dutch. In intransitive middles, only a nominal expletive *het* ‘it’ is allowed, whereas a locational one *er* ‘there’ is not, as shown in (i).

- (i) *Het/*Er zit lekker in deze stoel.*
 it/there sits comfortably in this chair
 ‘This chair is comfortable to sit in.’

- (73) a. *Nackt schläft es sich auf diesem Bett nicht angenehm,*
 naked sleeps it REFL on this bed not comfortably
- b. *Nackt lässt (es) sich auf diesem Bett nicht angenehm schlafen,*
 naked lets it REFL on this bed not comfortably sleep
 ‘One cannot sleep well on this bed while naked,’
- c. *weil die Matratze weh tut.*
 because the mattress hurts
 ‘because the mattress hurts.’

Both the intransitive middle in (73a) and the ILM in (73b) can be followed by the because-sentence (73c), which explains why the bed has a property that makes it uncomfortable for one to sleep on it naked. As far as the because-sentence indicates the “in virtue of” generalization expressed in the preceding intransitive middle and the ILM, it follows that intransitive middles and ILMs with an event participant like *das Bett* ‘the bed’ as in (73a), (73b) can be interpreted as ascribing the disposition to the event participant. In contrast, if there is no event participant in these constructions, as in (70) and (72), the middle constructions denote the disposition to the event *per se*.

The next question is to which event participant the disposition is ascribed if ILMs contain more than one event participant.

- (74) *Über das Problem lässt sich nicht in der Sauna nachdenken,*
 on the problem lets REFL not in the sauna reflect
 ‘One cannot reflect on the problem in the sauna.’
- a. *weil es dort zu heiß ist.*
 because it there too hot is
 ‘because it is too hot there.’
- b. *weil es (= das Problem) zu schwierig ist.*
 because it (= the problem) too difficult is
 ‘because the problem is too difficult.’

The ILM in (74) contains two referential event participants, *das Problem* ‘the problem’ and *die Sauna* ‘the sauna’, and is compatible with both because-sentences (74a) and (74b). The former is interpreted as explaining why the sauna has the property that does not allow thinking about the problem in there. In this case, the ILM is interpreted as denoting the dispositional property of the sauna. In contrast, the because-sentence in (74b) explains why the problem bears the feature such that thinking about it is not possible in the sauna. The ILM is deemed to ascribe a property of the problem in this case. It is, thus, possible for the ILM in (74) to ascribe a dispositional property both to the event participant *die Sauna* ‘the sauna’ and to the event participant *das Problem* ‘the problem’. It is, then, suggested that discourse can determine the DP to which the disposition expressed by ILMs is ascribed. In the

following two examples from DeReKo, the same predicate *nachdenken* ‘reflect’ and its prepositional argument *über* ‘on’ are used.³⁰

- (75) a. (*Philosophische Fragen und daraus resultierende Irrtümer*
philosophical questions and that-from resulting fallacies
gibt es wie Sand in der Wüste.)
are there as sand in the desert
Am besten lässt sich darüber in den großen Ferien nachdenken.
best lets REFL that-on in the big vacation reflect
‘(Philosophical questions and fallacies resulting from such questions are found as sand in the desert.) It is best to reflect on these in the big vacation.’
(P13/JUN.02074 Die Presse, 15.06.2013, S. 27)
- b. (*Nicht nur gärtnernde Wesen kennen das Glück, mit den*
not only gardening people know the happiness with the
Händen etwas Nützliches, Schöpferisches und zugleich
hands something useful creative and at-the-same-time
Beglückendes zu tun.) *Zudem: Beim handwerkenden Tun lässt*
delighting to do furthermore at-the hand-working doing lets
sich trefflich über dieses und jenes nachdenken.
REFL excellently on this and that reflect
‘(Gardening people know not only the happiness to do something useful, creative, and delighting with the hands.) Furthermore, they can reflect on this and that excellently while hand-working.’
(NZZ10/MAI.03304 Neue Zürcher Zeitung, 27.05.2010, S. 50)

In ILM (75a), the complement of the prepositional argument headed by *über* ‘on’ is represented by *da-*, which is used in German if the referent of the complement of the preposition has already been mentioned in previous discourse. *Da-* in (75a) refers to the DP *philosophische Fragen und daraus resultierende Irrtümer* ‘philosophical questions and fallacies resulting from such questions’, that is, the entities introduced in the immediately preceding main sentence. This DP can, then, be interpreted as the topic of the ILM.³¹ The ILM ascribes a disposition to this DP. This is confirmed by the compatibility of the PP headed by *wegen*

30 DeReKo (= Deutsches Referenzkorpus) is the largest archive of contemporary written German, which is provided by *Institut für Deutsche Sprache* (= Institute for German language).

31 This is shown by the fact that the DP can be extended by *jedenfalls* ‘at any rate’.

- (i) *Am besten lässt sich [darüber jedenfalls] in den großen Ferien nachdenken.*
best lets REFL on-that at-any-rate in the big vacation reflect

As shown in (ii), the particle *jedenfalls* ‘at any rate’ marks the aboutness-topic.

'because of' in (76a), which explicates a property of this topic, in the same way as the PP *because of* in (76b) specifies an inherent property of the subject *this car*. In contrast, the ILM in (75b) is interpreted as expressing a dispositional property about the hand-working action, which is again mentioned in the preceding discourse and interpreted as the topic of the ILM.³² The same PP headed by *wegen* 'because of' used in (76a) cannot be thus inserted in the ILM (75b), as shown in (76c).

- (76) a. *Am besten lässt sich darüber {wegen der Komplexität
best lets REFL that-on because-of the complexity-GEN
der Fragen} in den großen Ferien nachdenken.*
the questions-GEN in the big vacation reflect
- b. Because of the location of the transmission and steering wheel, this car shifts best with the right hand.
(Stroik 1995: 167)
- c. *Beim handwerkenden Tun lässt sich {*wegen der Komplexität
at-the hand-working doing lets REFL because-of the complexity-GEN
der Fragen} trefflich über dieses und jenes nachdenken.*
the questions-GEN excellently on this and that reflect

In conclusion, both intransitive middles and ILMs can be interpreted as ascribing a dispositional property to the denoted event if there is no event participant; however, if an event participant is present in intransitive middles and ILMs, for example, a referential object in adjuncts, they can ascribe a dispositional property to it, as claimed by Fagan (1992) and Broekhuis et al. (2015). Moreover, the discourse determines the event participant to which a dispositional property is ascribed if ILMs contain more than one event participant. This section confirmed further, based on the ILMs, that the dispositional middle construction is not always subject oriented.

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- (ii) *Ich erzähle dir etwas über Paul. [Paul jedenfalls] wird morgen mithelfen.*
I tell you something about Paul Paul at-any-rate will tomorrow help
'I tell you something about Paul. Paul will help tomorrow.'
(Frey 2004: 176)

³² This is shown again by the fact that the PP can be modified by *jedenfalls* 'at any rate' in the context (75b).

- (i) *[Beim handwerkenden Tun jedenfalls] lässt sich trefflich über dieses und jenes
at-the hand-working doing at-any-rate lets REFL excellently on this and that
nachdenken.*
reflect

5 Toward a correct generalization

In Section 4, it was shown that both intransitive middles and ILMs with an adjunct phrase like *auf diesem Stuhl* ‘on this chair’, as in (77a) and (77b), respectively, can be interpreted as denoting a dispositional property to the referential expression *dieser Stuhl* ‘this chair’, as claimed by Fagan (1992) and Broekhuis et al. (2015).

- (77) a. *Auf diesem Stuhl sitzt es sich angenehm.* (=16a)
 on this chair sits it REFL comfortably
 b. *Auf diesem Stuhl lässt (es) sich angenehm sitzen.*
 on this chair lets it REFL comfortably sit
 ‘This chair is comfortable to sit in.’

Lekakou and Pitteroff (2018) argue that the subject pronoun *es* ‘it’ in intransitive middles like (77a) is always associated with the event denoted by the VP, and intransitive middles thus ascribe a disposition to this event. Their analysis is based on the assumption that the dispositional middle is subject oriented. However, as shown above, this assumption is contradicted by the observations made about JMs and ILMs, as in (77b). This section considers this subject orientation in the dispositional middle construction.

As already pointed out in Section 2, Lekakou (2005) discusses dispositional semantics in parallel with root modals. Brennan (1993) points out that the “in virtue of” phrase is compatible only with root modals, but not with epistemic ones, as shown in (78). In (78a), the “in virtue of” adverbials relate the ability to sing arias to the grammatical subject *Joan*. In contrast, with epistemic modals, the “in virtue of” adverbials cannot relate the disposition of being intelligent to the subject *Joan* in (78b). Brennan (1993) thus concludes that root modals exhibit subject-orientedness.

- (78) a. *Joan can sing arias in virtue of her natural ability.*
 b. **In virtue of being a graduate student, Joan may be intelligent.*
 (Brennan 1993, cited from Lekakou 2005: 80)

Lekakou (2005) analyzes dispositional middles based on the “in virtue of” adverbials and claims that dispositional middles are subject oriented as well. However, root modals are not always subject oriented, as Hackl (1998) points out.

- (79) a. *It can rain hard here.*
 b. *A lot of people can jump in this pool.*

In (79a), the root modal ascribes the ability not to the weather-it, but to the locational adjunct *here*; in (79b), the root modal is interpreted as ascribing the ability not to the subject *a lot of people*, but to the DP *this pool*. Hacquard (2010: 92) claims that root modality is “centered around the event described by the VP and its participants.”

Hacquard (2010: 92) suggests further that “in most cases, the main participant is the subject, and hence properties of the subject are highlighted. In other cases, however, the location or properties of other participants of the event are more relevant.” I argue that this claim can also be applied to dispositional middle construction. That is, the disposition in middle constructions is ascribed to an event participant with some “highlight.” For example, English and German CMs employ an intransitive or a reflexive construction, in which the accusative argument becomes the subject. Greek CMs use passive constructions, in which the accusative is changed to the subject as well. In these cases, the subject is obligatorily “highlighted” by the grammatical operations, and the disposition to the subject is expressed. In other words, the subject-orientation in CMs in these languages stems from the property of the independent construction on which the middle construction is “parasitic.” In contrast, in JMs, the external argument is syntactically projected, and the case frame is altered as a result of adding a potential morpheme. In this case, the disposition is not directed to the subject, but to an object. This object is typically “highlighted” by the nominative case, which appears almost obligatorily in Japanese sentences (see Kishimoto 2017).³³ In addition, in ILMs with more than one event participant like (80), the discourse can “highlight” the participant to which the disposition is ascribed.³⁴

- (80) *Über das Problem lässt sich nicht in der Sauna nachdenken.*(= 74)
 on the problem lets REFL not in the sauna reflect
 ‘One cannot reflect on the problem in the sauna.’

In sum, the entity to which the disposition is ascribed in the middle construction is determined by the construction which is interpreted as dispositional in a given language. This is the event participant, which is “highlighted” in the construction, and the subject-orientedness in the middle construction should be considered along this line. If there is no event participant, the disposition is ascribed to the only referential entity, that is, the event itself, as long as a given language allows such an impersonal middle.

³³ This is known as a “nominative-case constraint,” that is, that a tensed clause must have a least one nominative argument (Shibatani 1978).

³⁴ An anonymous reviewer suggests that in examples like (i), which were provided in Footnote 27, the disposition is ascribed to a topicalized VP.

- (i) *Im Meer schwimmen hat *(es) sich schon immer gut lassen.*
 in-the sea swim has it REFL already always well let
 ‘It has always been nice to swim in the sea.’
 (Pitteroff 2014: 268)

In this case, the target of the disposition could be “highlighted” by discourse as well.

In concluding this section, Condoravdi (1989) and van Oosten (1977) may be worth mentioning. Condoravdi (1989) gives the CM in (81a) the semantic representation (81b), where *G* is a generic operator and *e* is a variable for the event argument.

- (81) a. This bread cuts smoothly.
 b. $G [e: \text{bread } (x), \text{cut } (e), \text{Patient } (e, x)] [\text{smooth } (e)]$

Condoravdi (1989) is correct in arguing that dispositional middles express a generic quantification over events, as is clear in cases without an event participant. In addition, according to (81b), CM (81a) is true if an event of cutting the bread progresses smoothly. In other words, in (81a), “the object *bread* determines the temporal structure of the cutting events” (Condoravdi 1989: 18). This claim should also be understood based on the construction employed as a dispositional construction. English CMs employ an intransitive construction derived from a transitive one with an Incremental Theme (see also Lekakou 2005: 172–182); thus, foregrounding “the temporal structure” in them. By comparison, a JM is a dispositional interpretation of potential constructions; thus, “the temporal structure” plays no significant role. Van Oosten (1977) suggests that the subject in English CMs must be “responsible” for the event denoted by the verb and somehow be agentive, because the “responsibility” is one of the semantic ingredients of the agentive subject. However, as the target of the disposition is not always the grammatical subject, it is not appropriate to assume the “responsibility” in the middle construction in general. Rather, such a “responsibility” is reduced to dispositional semantics, that is, some property inherent in the target of the disposition, which enables the action denoted by the verb, as claimed by Lekakou (2005: 170–173).

6 Concluding remarks

It is often claimed that dispositional middle constructions are always subject oriented (Lekakou 2005; Lekakou and Pitteroff 2018). This article argued that the subject-orientedness is not inherent in dispositional middle constructions, based on dispositional constructions in Japanese and impersonal middle constructions formed with the causative predicate *lassen* ‘let’ in German. The subject-orientation comes from the syntactic property of the independently existing construction, which is interpreted as dispositional. In the constructions on which CMs in English, German, and Greek are “parasitic,” that is, intransitive, reflexive, and passive ones, the external argument is syntactically removed; consequently, the internal argument is expressly altered to the nominative subject by grammatical operations. Thus, the disposition of the subject is expressed obligatorily. In contrast, in Japanese dispositional middle constructions, the external argument remains a subject in syntax, and

the case frame is altered as a result of adding a potential morpheme. In this case, the disposition is not directed to the subject, but typically to the argument corresponding to a direct object with a nominative case, which is almost obligatory in Japanese sentences. It follows that the event participant to which the disposition is ascribed in the middle construction is the grammatically “highlighted” one, as in the case of root modals discussed by Hacquard (2010).

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