Restrictions on the generic interpretation of dedicated impersonal pronouns

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1 Introduction

• **Central topic:** the semantic restrictions observable for sentences containing generically interpreted dedicated impersonal pronouns

Dedicated impersonal pronouns: pronouns, like English one, French on, or German man, that are either exclusively or predominantly used to make a general statement about a (subgroup of) humans (see, e.g., Siewierska 2011; Cabredo Hofherr 2015)

- **Focus:** generically used English *one* and German man^1 (≈ 'people [of a certain group] in general') (*Note:* For reasons of space, the accompanying poster only presents the English data, although English *one* is less commonly used and more marked (at least in American English) than German man.)
- Data to be accounted for: the contrasts in (1) and (2) are puzzling given our current understanding of how the generic interpretation of dedicated impersonal pronouns arises^{2,3}
 - (1) a. #Man isst Karotten. #'One eats carrots.'
 - b. **Menschen** essen Karotten. '**Humans** eat carrots.'
- (2) a. Man isst {#eine Karotte / #Karotten}.

 'One eats {#a carrot / #carrots}.'
 - b. In Norwegen isst **man** {#eine Karotte / Karotten}. 'In Norway, **one** eats {#a carrot / carrots}'
 - c. Man isst {eine Karotte / Karotten} zum Frühstück.'One eats {a carrot / carrots} for breakfast.'

Upshot: the contrasts in (1) and (2) reveal that the acceptability of sentences with generically used dedicated impersonal pronouns depends on the following two factors

- 1. the presence of linguistic material (other than the impersonal pronoun) that provides content for the restrictor of the covert relational generic operator *Gen*
- 2. the specific quantificational structure that arises as a result of how Gen is restricted

¹While English *one* only has a generic use, French *on*, German *man*, and a number of other dedicated impersonal pronouns also have an existential use, and some even have a non-impersonal referential use (e.g., Cabredo Hofherr 2015; Fenger 2018). The present findings—if they apply to the generic use of a dedicated impersonal pronoun of a given language—are not intended to extend to any other potential use of that pronoun.

²The current investigation is restricted to sentences without overt modals or modal constructions since these are known to make any sentence with a generically used dedicated impersonal pronoun fully acceptable: #'One eats carrots.' vs. 'One has to eat carrots.'

³An anonymous reviewer informs me that the Italian *si*-impersonal (see, e.g., Chierchia 1995) is grammatical in the equivalent of (2-a), but patterns with German and English for (2-b) and (2-c). Further work is needed to investigate this potential contrast and its implications.

2 Background and source of the puzzle

- Current consensus: the generic interpretation of an impersonal pronoun arises whenever the variable x contributed by the pronoun is bound by a covert generic operator Gen (e.g., Condoravdi 1989; Chierchia 1995; Moltmann 2006, 2010, 2012; Malamud 2012, 2013; Zobel 2014, 2017)
 - (3) a. Man arbeitet sonntags nicht.

'One doesn't work on Sundays.'

 $(\approx$ People in general do not work on Sundays.)

- b. Gen x [x doesn't work on Sundays]
- **Origin of** *Gen*: the generically used pronoun requires the presence of the operator, but the operator is introduced independently (e.g., Chierchia 1995; D'Alessandro and Alexiadou 2002)
- Pros and cons of the analysis:
 - * **Pro:** correctly captures the type of quantification involved in the generic use: quasi-universal quantification allowing for exceptions (see, e.g., Krifka et al. 1995; Mari et al. 2013)
 - ⇒ the sentences in (3-a) are true even if there are people who work on Sundays (e.g., doctors, nurses, train conductors); they are legitimate exceptions
 - * Con: offers no insight on the contrast between impersonal pronouns and bare plurals in (1)
 - ⇒ both could be given equally admissible formal analyses⁴
 - (4) a. #Man isst Karotten.

#One eats carrots.

Gen x [x eats carrots]

b. **Humans** eat carrots.

Gen x [x is human] [x eats carrots]

Questions:

- Why is (3-a) acceptable but (2-a)/(4-a) unacceptable?
- Why has adding adverbials to (2-a)/(4-a) an effect on their acceptability?
- Why do different adverbials affect (2-a)/(4-a) differently?

3 The contrast in (1)

• Moltmann (2006, 2010): certain sentences with *one* are unacceptable, while corresponding generic sentences with other DPs are fine (e.g., *the typical person*, *people*)

(5) a. **#One** has parents.

(vs. **The typical person** has parents.)

b. **#One** has a nose.

(vs. **The typical person** has a nose.)

c. #One breathes.

(vs. The typical person breathes.)

- **Moltmann's proposal:** generic *one* contributes *first-person-oriented content* (i.e., speaker / judge / perspective-sensitive content)
- ⇒ the sentences in (5) are odd because they cannot express generalizations on the basis of a speaker's actual or simulated personal experience

⁴Dedicated impersonal pronouns are known to be restricted to quantifying over human individuals. So, one might even propose that *both* (1-a) and (1-b) should receive the formalization provided for (1-b) in (4-b).

• Criticism of Moltmann's proposal:

(see also Zobel 2014)

- If the sentences in (5) cannot express a speaker's personal experience, why can they be part of complex sentences?⁵
 - (6) Whether one has parents, one parent or no parent at all, we are all equal.⁶
- The oddness of (1-a)/(2-a) should also be due to them being unusable to express a speaker's personal experience. Why has adding adverbials to these sentences an effect on their acceptability?

• Alternative proposal:

(4-a) and (5) are unacceptable because the linguistic material in these sentences fails to signal the tripartite quantificational structure that is needed to motivate the assumption of *Gen*

- ⇒ Boneh and Doron (2013:179): the restrictor for Gen must be given explicitly
- \Rightarrow the sentences in (4-a) and (5) lack a potential restrictor for Gen
- \Rightarrow man and one contribute an individual variable x but do not provide any descriptive material

(7) a. #Man isst Karotten.

#One eats carrots. Gen x [???] [x eats carrots]

b. #Man hat Eltern.

#One has parents. Gen x [???] [x has parents]

- **In contrast:** bare plurals (and definite singulars) contribute their explicit, nominal content to the restrictor of *Gen*, see (4-b)
- **Support:** the sentences in (7) become completely acceptable as soon as an adverbial is added that can fill the empty restrictor (e.g., a frame PP, an *as*-phrase, or any free adjunct; see Stump 1985; Fabricius-Hansen and Haug 2012; Zobel 2018)⁷
 - (8) a. In Norwegen isst **man** Karotten.

In Norway, **one** eats carrots. Gen x [x is in Norway] [x eats carrots]

b. Als Mensch hat man Eltern.

As a human, **one** has parents. Gen x [x is human] [x has parents]

- ⇒ similar interpretation to bare plural generic sentences
- **Necessary assumption:** for this proposal to be on the right track, the restriction to humans observed for impersonal pronouns cannot be part of their truth-conditional denotation
 - $\Rightarrow x$ must be restricted to humans in another fashion
- ⇒ **Possibility:** presuppositional morphosyntactic [+human] feature (cf. Malamud 2013)

In short: The restrictor of *Gen* must be filled by explicit material in order for the presence of *Gen* to be motivated, and dedicated impersonal pronouns do not provide any descriptive content to fill it.

⁵Moltmann notes this as well and, as a result, abandons the question which predicates are incompatible with generic *one*. However, her analysis still suggests that any oddness that is observed must be in violation of the first-person-orientation she describes.

⁶https://www.wya.net/press-release/one-big-family-we-are-all-equal-and-all-fall-under-the-wya-family/(last access: April 5, 2021)

⁷Hence, the formalization of the acceptable sentence in (3), where *Gen* is restrictorless, cannot be correct.

4 The contrast in (2)

- **Remaining puzzle:** What is behind the contrast between (2-b) and (2-c)?
 - \Rightarrow Examples (2-b) and (2-c) both provide explicit content for the restrictor of *Gen*.
- ⇒ Why is there a contrast with respect to the indefinite objects?
 - (2) b. In Norwegen isst **man** {#eine Karotte / Karotten}.
 - 'In Norway, **one** eats {#a carrot / carrots}'
 - c. Man isst {eine Karotte / Karotten} zum Frühstück.
 - 'One eats {a carrot / carrots} for breakfast.'
- Proposal: this contrast is related to a well-known contrast observed with habitual sentences
- \Rightarrow certain habitual sentences (with proper names as subjects) only allow for bare plural objects while others also allow for indefinite singular DPs⁸
- (9) a. **Mia** isst {#eine Karotte / Karotten}.
 - 'Mia eats {#a carrot / carrots}.
 - b. Mia isst {eine Karotte / Karotten} zum Frühstück.
 - 'Mia eats {a carrot / carrots} for breakfast.'

• Two types of habituals:

(e.g., Rimell 2004; Boneh and Doron 2013, a.o.)

- * non-quantificational habituals, like (9-a), involve a habitual operator *Hab* that expresses iteration over events
- * quantificational habituals, like (9-b), involve a generic operator Gen (motivated by the adverbial zum Frühstück 'for breakfast') that quantifies over situations
- The **contrast in (9)** with respect to the indefinite singular objects arises since Mia cannot eat the same carrot multiple times: (see Rimell 2004; Boneh and Doron 2013)
 - (10) a. (9-a) with an indefinite singular object:

$$\exists x [\operatorname{carrot}(x) \& \operatorname{Hab} e[\operatorname{eat}(x)(\operatorname{Mia})(e)]]$$

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b. (9-b) with an indefinite singular object:

Gen
$$s[breakfast(Mia)(s)][\exists x[carrot(x) \& \exists e[e \text{ in } s \& eat(x)(Mia)(e)]]]$$

- \Rightarrow only the bare plural is acceptable in (9-a) because there cannot be a (single) carrot that features in all eating events of the interation expressed by Hab^{10}
- \Rightarrow the indefinite singular object is acceptable in (9-b) because *Gen* scopes over \exists : for each breakfast situation, there is a different carrot that Mia eats

⁸The interpretation of a bare proper name never involves *Gen*, so a name cannot be used to motivate the presence of *Gen*.

⁹I assume that *Gen* is a covert adverb-of-frequency-like element that can bind individuals and situations, following Krifka et al. (1995). For a recent overview of adverbs of frequency, see, e.g., Hinterwimmer 2020.

¹⁰An anonymous reviewer notes that this description suggests that '#Mia reads a book' / '#Mia liest ein Buch' should not be odd since reading the same book multiple times is possible. Rimell (2004), whose observations I report here, already reports that read patterns with eat with respect to indefinite singular objects. As an acceptable example of a non-quantificational habitual with an indefinite singular object, she gives 'Mary drives a Toyota'. The exact predictions of Rimell's proposal (and also Boneh and Doron's proposal) for the semantics of Hab are not fully clear to me at this point. Crucially, though, '#One reads a book' / '#Man liest ein Buch' seem to be equally bad to the habituals with a proper name in subject position, so the parallelism still stands.

- Accounting for (2-b) vs. (2-c):
 - 1. the generic operator restricted by *in Norwegen* 'in Norway' in (2-b) does not contribute quantification over situations
 - (11) (2-b) with an indefinite singular object: Gen $x[\text{in-Norway}(x)][\exists y[\text{carrot}(y) \& \text{Hab } e[\text{eat}(y)(x)(e)]]]$
 - ⇒ (2-b) involves Gen, Hab, and the verb eat, which blocks an indefinite singular object
 - 2. the generic operator restricted by *zum Frühstück* 'for breakfast' in (2-c) does contribute quantification over individuals and situations
 - (12) (2-c) with an indefinite singular object: Gen $s, x[\text{breakfast}(x)(s)][\exists y[\text{carrot}(y) \& \exists e[e \text{ in } s \& \text{eat}(y)(x)(e)]]]$
 - \Rightarrow (2-c) involves only *Gen*, and hence does not block an indefinite singular object

In short: Adverbials that motivate the presence of *Gen* in sentences with impersonal *manlone* may lead to quantification over individuals, as in (2-b), or quantification over individuals and situations, as in (2-c). The resulting quantificational structure determines which types of object DP are acceptable.

5 Other ways to signal a tripartite structure

- **So far:** effect of frame PPs (e.g., *in Norway*), free adjuncts (e.g., *as/als*-phrases), and iterative adverbials (e.g., *for breakfast*).
- \Rightarrow further example of an iterative adverbial in (3)/(13)
 - (13) a. **Man** arbeitet sonntags nicht.

One doesn't work on Sundays.

b. Gen s, x[on-Sunday(x)(s)][$\neg \exists e [e \text{ in } s \& \text{work}(x)(e)]$] (cf. the fragment in (3-b))

- Further signals 'inside' the clause: Sentences with manner adverbials and contrastive focus (indicated by upper case) can also signal an underlying tripartite structure via their non-trivial focus-background-structure (see, e.g., Krifka et al. 1995); this is sketched (very roughly) below.¹¹
 - (14) a. Man liest ein Gedicht ??(laut).

'One reads a poem ??(loudly).'

- b. Gen $s, x[\exists e[e \text{ in } s \& \text{ read-a-poem}(x)(e)]][\exists e[e \text{ in } s \& \text{ reads-the-poem}(x)(e) \& \text{ loud}(e)]]$
- (15) a. Man ISST eine Karotte.

'One EATS a carrot.'

b. Gen $s, x \exists e[e \text{ in } s \& \text{ does-something-with-a-carrot}(x)(e)] \exists e[e \text{ in } s \& \text{ eats-the-carrot}(x)(e)]]$

¹¹In this *Gen* resembles adverbs of quantification. Just as for adverbs of quantification, the question how the restrictor and scope are built from the content of the sentence is still under debate, though the choice of content for the restrictor seems to depend both on syntactic and semantic factors, see von Fintel 1994; Hinterwimmer 2020.

- Complex clauses: all clauses with *man/one* are acceptable in *if/when*-clauses that restrict *Gen*, even if they are unacceptable as stand-alone sentences (see criticism of Moltmann's proposal above)
 - (16) Wenn man {eine Karotte / Karotten} isst, macht man ein Knackgeräusch. 'If/when one eats {a carrot / carrots}, one produces a crunching sound.'
- Still to be investigated in detail: the effect of overt modals and modal constructions
- ⇒ requires further investigation of how modals and *Gen* interact (see Zobel 2014 for discussion)

6 Conclusion

• Why is (3-a) acceptable but (2-a)/(4-a) unacceptable?

Answer: (3-a) contains an iterative adverbial that provides content for the restrictor of Gen; (2-a)/(4-a) (with neutral prosody) contains no explicit material that can provide content for the restrictor of Gen. Hence, the generic operator Gen, which is needed to interpret the dedicated impersonal pronoun, is only motivated in (3-a) but not in (2-a)/(4-a).

• Why has adding adverbials to (2-a)/(4-a) an effect on their acceptability?

Answer: Adding a frame PP or an interative adverbial has the effect of adding explicit material that can provide content for the restrictor of *Gen*, which motivates its presence and, thus, ensures the availability of the generic use of the impersonal pronoun.

• Why do different adverbials affect (2-a)/(4-a) differently?

Answer: Adverbials may differ in the type of content that they contribute to the restrictor of *Gen*. If this content does not motivate quantification over situations, a habitual interpretation of the main predicate can only be derived via *Hab*. Depending on the main verb, *Hab* is not compatible with indefinite singular objects, though.

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