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# The scope of genericity in Czech: an experimental study

Bachelor thesis

ANNA WOIDEOVÁ

Vedoucí práce: doc. Mgr. Mojmír Dočekal, Ph.D.

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*To Štěpán*

*"The aspect of the verbal communication is a shared intention."*

Mgr. et Mgr. Michal Tkaczyk, Ph.D.

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**Autor:** Anna Woideová
Filozofická fakulta
Masarykova univerzita
Ústav jazykovědy a baltistiky

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**Author:** Anna Woideová
Faculty of Arts
Masaryk University
Department of linguistics and Baltic studies

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# Anotace

Tato práce se zaměřuje na genericitu v češtině, konkrétně na generické věty se slovesným inflektivním morfémem -va-. Porovnává genericitu s plurakcionalitou a klade si za cíl zjistit, jaký mají generická a plurakcionální slovesa skopus vzhledem k indefinitům. Teoretická část představuje genericitu a plurakcionalitu jako dvě samostatné sémantické kategorie. Experiment pak testuje přijatelnost generických a plurakcionálních sloves v širokoskopálních prostředích u českých mluvčích. Výsledky jsou následně vyhodnoceny pomocí statistické analýzi a potvrzují navrženou hypotézu.

# Abstract

This thesis focuses on genericity in Czech, specifically on generic sentences with the verbal inflectional morpheme -va-. It compares genericity with pluractionality and aims to find out how generic and pluractional verbs scope with respect to indefinites. The theoretical part introduces genericity and pluractionality as two separate semantical categories. The experiment then tests the acceptability of generic and pluractional verbs in wide-scope environments in Czech speakers using acceptability judgment task questioners. The results are then evaluated by means of statistical analyses and confirm the proposed hypothesis.

# Declaration

I hereby declare that the thesis titled **The scope of genericity in Czech: an experimental study** that I have submitted for assessment is entirely my original work, and that no part of it has been taken from the work of others unless explicitly cited and acknowledged within the text of my thesis.

Brno November 30, 2024 .....

Anna Woideová

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A. 1 Items

A. 2 Fillers

# 1 Introduction

In traditional grammars, the Czech inflectional morpheme -va- (děláva**t**) is referred to as iterative or habitual. (Nübler 2017, Karlík 2017) Both iterativity and habituality are considered to be semantical sub-categories of pluractionality. (Bertinetto & Lenci 2012) This implies that sentences containing the morpheme have the same semantic properties as pluractional sentences, described by Kuhn & Aristodemo (2017) and Kuhn (2019). In her manuscript, Hana Filip (2023) offers a broad, profound analysis of the mentioned morpheme and, by precise proving, comes to the proposal suggesting defining morpheme -va- as generic.

Considering the findings of Kuhn & Aristodemo, Kuhn, and Filip, this thesis aims to offer experimental evidence showing the semantical behavior of morpheme -va- in generic contexts, comparing it to the behavior of pluractional sentences. This will lead to whether these two semantical categories in the Czech language should be considered one or taken apart.

In the theoretical chapter, I will first introduce genericity and then focus closely on Filip's observations of morpheme -va-. Then, I will present the theoretical background for pluractionality and proceed with summarizing the analyses of Kuhn & Aristodemo and Kuhn. In the experimental chapter, I will propose the hypothesis and research questions, explain the methodology, introduce materials, and present the results.

# 2 Genericity

The main topic of this thesis is genericity. To proceed with the comprehension experiment, I would like to start with the essential terminology of generic studies. In this section, I will illustrate the differences between generalizations arising from using bare plurals (BPs) and those arising from sentences containing formal genericity markers, which I will concretize concerning the Czech language and its morphology. However, in the beginning, I will specify characterizing genericity which is the main subject of this study. (Leslie & Lerner 2022)

## 2.1 Types of genericity

According to Krifka et al., there is a distinction between two primary varieties of genericity. The first one is called a reference to a kind. We can see this phenomenon in example (1).

(1) a. The potato was first cultivated in South America.
b. Potatoes were introduced into Ireland by the end of the 17th century.
c. Irish economy became dependent upon the potato.

In none of these sentences does the NP denote or designate some particular potato or group of potatoes. This generic refers to a kind, not an individual or an object. These NPs (potatoes, potato) are called *kind-referring,* their opposites are *object-referring NPs.* The predication raised by *kind-referring NP* is *kind prediction.*

The second variety expresses some general property, a generalization over sets of particular events or facts. In this case, the generalization can be created over a set of individual episodes that are repeated regularly over time, creating a habit—a generalization over events (2a). Or the generalization can be based on the single properties of individuals who create a set (2b).

(2) a. John drinks a coffee after lunch.
b. A potato contains vitamin C, amino acids, protein, and thiamine.

These sentences are called *characterizing sentences* or, since they express generalization, *generic sentences*. Characterizing sentences juxtapose *particular sentences expressing* statements about specific events or facts about individual objects.

Kind-referring NPs and characterizing sentences can occur together in the same sentence (3a, b).

(3) a. Potatoes are served whole or mashed as a cooked vegetable.
b. The potato is highly digestible.

We can see that the subjects of these sentences are kind-referring NPs. From the meaning of the whole clause, generalization arises over the properties of individuals of the same kind. (Krifka 1995)

## 2.2 The generic diagnoses

Since formal markers are not always present, and genericity mainly arises from sentences' semantical properties, I will introduce Krifka et al.'s five diagnostic tests for recognizing different varieties of generic sentences and distinguishing them from particular (non-generic) sentences.

### 2.2.1 First test

The first test aims to differentiate between characterizing and particular sentences by combining the sentence with an adverb of regularity or habituality, e.g., *usually* or *typically.* Suppose there is a slight change of meaning in the resulting sentence the original sentence is characterizing. With a particular sentence as a foundation for this test, the change of meaning is more crucial when adding the mentioned adverb. With a characterizing sentence, the adverb explicitly specifies the information about possible exceptions. At the opposite site, the adverb in a particular sentence makes a general rule from a specific event.

(4) a. A lion has a bushy tail.
b. A lion usually has a bushy tail.

(5) a. A lion stood in front of my tent.
b. A lion usually stood in front of my tent.

### 2.2.2 The second test

This test identifies the correct types of NPs used as kind-referring terms. The argument states that some specific predicates can be filled only with kind-referring NPs. These subject arguments are, for example, *die out*, *be extinct*, and then object arguments like *invent* or *exterminate*. Thus, the kind-referring interpretation is prioritized over the object-referring ones with general terms used as NP. According to Krifka, predicates favoring a kind-referring interpretation of an argument are called *kind predicates*. The possible candidates for kind-referring arguments are definite singular NPs (6a), bare

plural NPs (6b), and bare singular NPs (6c). All three of them are successfully passing the test. On the other hand, indefinite singular NPs (6d) do not pass. In this case, an exception exists for a taxonomic reading of these indefinite singular NPs (6e); they are acceptable.

(6) a. The lion will become extinct soon.
b. Lions will become extinct soon.
c. Bronze was invented as early as 3000 B.C.
d.* A lion will become extinct soon. (nontaxonomic)
e. A (certain) lion (namely the Berber lion) will become extinct soon. (taxonomic)

### 2.2.3 The third test

The other test helps us to differentiate between object-referring NPs and kind-referring NPs. To form kind-referring NPs, only noun or nominal constituent semantically connected to well-established kind can be used. In Carlson's example, we see the difference between well-established kind of Coke bottles and not well-established kind of green bottles.

(7) a. The Coke bottle has a narrow neck.
b. ?The green bottle has a narrow neck.

There is a kind-denoting generic meaning in a sentence (7a). Still, in example (7b), we can't be sure about a kind-denoting generic interpretation because there can be many different shapes of green bottles. However, the sentence can have a generic reading in a characterizing sense when we think about a specific bottle and its property, which is a narrow neck.

The test shows that even when we stick up the rules based on the second test and we use, for example, bare plural or bare singular to compose the NP, there is a possibility that the NP has an object-referring reading. Next, examples (8) show that bare plurals or bare singulars that do not refer to well-established kinds correspond more likely with indefinite singular NPs than with definite NPs.

(8) a. A green bottle (usually) has a narrow neck.
b. Green bottles (usually) have a narrow neck.
c. Gold which is hammered flat (usually) is opaque.

### 2.2.4 The fourth test

This test distinguishes characterizing sentences from particular sentences. The corresponding distinction is between stative and nonstative (dynamic) sentences. Typically, characterizing sentences include a stative predicate, whereas particular sentences include a nonstative predicate. If there are linguistic forms with an existing exclusion of stative predicate (e.g., *John is weighing 175 pounds.), then there is a typical exclusion of characterizing interpretation as well. Thus, when we transform a characterizing sentence into a progressive one, we probably lose its generic character.

(9) a. The Italian drinks wine with his dinner.
b. An Italian drinks wine with his dinner.
c. Italians drink wine with their dinner.
d. Luigi drinks wine with his dinner.

(10) a. The Italian is drinking wine with his dinner.
b. An Italian is drinking wine with his dinner.
c. Italians are drinking wine with their dinner.
d. Luigi is drinking wine with his dinner.

The examples show that there is available characterizing reading in (9), which sentences in (10) don't have.

### 2.2.5 The fifth test

The last test differentiates between characterizing and particular sentences by considering the distinction between accidental and essential properties of NPs. In Dahl's (1975) terminology, there is a distinction between "descriptive" and "normative" generalizations.

(11) a'. The madrigal is popular.
a''. The madrigal is polyphonic.
b'. Madrigals are popular.
b''. Madrigals are polyphonic.
c'. ?A madrigal is popular.
c''. A madrigal is polyphonic.

The property of being popular is more likely accidental, whereas being polyphonic is essential in the case of madrigals, as shown in the example above. There is a contrast between sentences expressing an accidental property and an essential one. From examples (11c') and (11c''), we can observe again that indefinite singular NPs cannot have kind-referring reading; the exception is their taxonomic reading.

## 2.3 Characterizing genericity

The CHARACTERIZING GENERICITY is a feature of a whole sentence arising from the relation between the meanings of the subject NP/DP and VP. An entailment of a connection between characterizing property and a kind is to be seen, and the characterizing property can be found in both the kind and its individual member. (Filip 2023)

To illustrate the difference between these two concepts, some examples are given below:

(12) KIND REFERENCE
a. Dinosaurs are extinct.
b. Contact lenses were invented in Czechoslovakia.
c. The kakapo is an endangered animal species.

(13) CHARACTERIZING GENERICITY
a. Tables have four legs.
b. Cats moew.
c. Lucy has ballet classes on Tuesdays.

Characterizing genericity apart from kind reference is tolerant to exceptions. If only one dinosaur were alive, the sentence “Dinosaurs are extinct” would be false. But it is possible to say that: “Tables have four legs.” even when we can be one hundred percent sure that not all of the tables have four legs because there are tables with one leg, three legs, and other amounts of legs. It is not a low number of tables having a different amount of less than four. However, even when this exception exists, generalization is possible, and the sentence is true.

Besides the tolerance to the exceptions, there are two other essential properties of characterizing genericity. Generic sentences are aspectually stative. Thus, their truth is independent of any specific episodes and situations. The other feature is the possession of an intensional import. Whereas the truth of extensionally quantified sentences depends on accidental facts in a given context, the characterizing sentence can be a true event without any inductive evidence. (Filip 2023)

Some agreement exists among the linguistics field that prototypically characterizing genericity arises from bare generics (e.g., “Birds fly.”) containing kind reference in a characterizing sentence without overt quantifiers, modal expressions, or qualifiers. (Filip, 2023) Thus, it is to be seen here that kind reference and characterizing genericity can co-occur next to each other. See examples (2a) and (2b), where the subjects are kind denoting terms.

What cannot co-occur is characterizing genericity with episodic sentences because they fundamentally oppose each other. Episodic sentences are not spatiotemporally independent and describe particular situations, conditions, and facts. However, they can serve as descriptions of experiences that are a base for generalizations, so when we witness some particular barking dogs, we can presuppose that dogs generally bark. (Filip 2023)

## 2.4 Possible expressions of characterizing genericity

In English, the generic meaning can be expressed by several grammatic forms: bare plurals (e.g., "dogs have fur"), bare singulars (e.g., "dog has fur"), and definite singulars (e.g., "the dog has fur"). (Krifka 1995) Nevertheless, these forms can also express meanings other than generic ones. Fortunately, English is not the only language, and genericity can be expressed by other means in other languages. Some languages have formally marked generic meanings, such as Spanish or the topic of this study, Czech.

### 2.4.1 Bare plurals

As already written, the bare plural form can express both generic and existential reading. Interestingly, the property is not held by a noun phrase but most likely arises from the nature of the VP. The examples above show that the subjects are the same apart from VPs.

(14) GENERIC
Dogs are easily trained.

(15) EXISTENTIAL
Dogs are sick.

To explain this VP dependence, Carlson came up with the ontological classification of entities into two groups: stages and individuals, whereas individuals have two subtypes of spatiotemporally bounded *objects* (e.g., you, me, John) and unique individuals, *kinds,* that don't have any spatiotemporal boundaries and are realized by objects. (Farkas 2022)

Another distinction that is to be made is a differentiating between predicates applying to kinds (e.g., widespread, extinct), individuals (e.g., to be intelligent, to be tall), and at last stages (e.g., sick, available). (Farkas 2022)

After taking into account this classification, the bare plural with a generic meaning can be described as a combination of a kind with a kind-level predicate for KIND REFERENCE and a combination of a kind with an individual-level predicate for CHARACTERIZING GENERICITY. A combination of a kind with a stage-level predicate expresses the EXISTENTIAL meaning. The difference between existential and generic meaning arises from the relation between BP and VP. (Farkas 2022)

### 2.4.2 Genericity marking

According to Dahl (1993), languages can be divided into three groups from this account if we focus on grammatical marking of genericity. There is a tendency for minimal marking in the majority of languages. The generics in such languages often lack tense-aspectual marking, or there is the least possibility of tense-aspectual marking.

(16) I smoke a pipe.
(17) I am smoking a pipe.

In examples (16) and (17), we can see a difference between no overt tense-aspectual marking in generic sentences (16) and added a suffix and an auxiliary in number (17) for expression of progressive meaning. However, genericity is not the only case of this tendency. There are other types of sentences tending to have zero or minimal aspect-tense markers, such as historical present used as narrative in English. (Dahl 1993)

Despite this tendency, some exceptional languages show a possible possession of property of overtly marked genericity. These languages can be divided into two groups. In a few cases, one with a possible but not mandatory grammatical marking of genericity made by adding an auxiliary, a nonbound particle (or adverb), or an affix.

(18) Q: What your brother DO right now?
A: He WRITE letters.

(19) Q: What your brother usually DO after breakfast?
A: He WRITE letters. CZ: Psává dopisy. SWE: Han brukar skriva brev.

(20) My brother works at the office.
Q: What kind of work he DO?
A: He WRITE letters. CZ: Píše dopisy. SWE: Han skriver brev.

In the examples above, we have three different contexts. Example (18) has a progressive meaning. Examples (19) and (20) have no drastic difference in meaning. However, in some languages, they differ in terms of tense-aspect marking. In example (19), the so-called iterative suffix -vá- is possible in Czech to express the habituality of

the event of writing letters. The same does the Swedish auxiliary *brukar*. These markers have a function similar to English; they tell us information about some regularly happening events, but they also let us know that there is a possible exception. From the answer "Psává dopisy," we can see that my brother usually writes letters at his job, but the days when he does something else exist. (Dahl 1993) Other overtly syntactically marked genericity exists in Hebrew. The generic sentences in Hebrew are marked with pronominal copula called Pron. (Greenberg 2001)

Finally, there are some languages for which some grammatical markings are mandatory to express generic meaning. In Isekiri, Wolof, Maori, and West Greenlandic Eskimo, such markings are found even in prototypical generic sentences like example (21).

(21) (Q: What kind of sound do cats make?) They MEOW.

These languages obligatorily use preverbal particles, adverbs often, alternative nominalization, or iterative suffixes to express genericity. However, they are not only generic contexts in which these markings are used.

### 2.4.3 Genericity in Czech

In the Czech language, genericity can be expressed by bare singulars (22) for kind referring genericity and bare plurals in combination with imperfectives (23) for characterized genericity. However, both of these nominal forms can have non-generic meanings. If we want to secure the generic meaning, a verbal morpheme -va- in VP is in place (24).

(22) Šavlozubý tygr je vyhynulý.
*Saber-toothed cat is extinct.*

(23) Psi štěkají.
*Dogs bark.*

(24) Psi po večeři štěkávají.
*Dogs (usually) bark after dinner.*

Czech imperfectives can have both generic and episodic readings depending on the context (Filip 2023). See the comparison of (25) and (26) below.

(25) Context: The utterer is in the middle of wedding feast preparations and comments on the situation.

Kuchaři vaří.
*Chefs are cooking.*

EPISODIC

(26) Context: The utterer is teaching a child about various professions without any presence of chefs.

Kuchaři vaří.
Chefs cook.

GENERIC

On the other hand, Czech imperfective stems with applied generic morpheme -va- exclude the episodic reading (27). The morpheme applies to two types of imperfective stems: primary imperfective and secondary imperfective. (Filip 2023)

(27) Děti bývají nemocné.
*Children tend to be sick.*

The morpheme -va- is an example of a formal marker of genericity. Similar formal markers of genericity are present in other Slavic languages. However, these generic morphemes are productive only in West Slavic languages (Czech, Slovak, and less frequently in Polish). The usage of generic forms with a morpheme -va- is present in various types of speech and is also reported among children during language acquisition. (Filip 2023)

To close this chapter, I am presenting Hana's Filip theoretical summarization of semantic properties of the Czech generic marker -va-: "The generic morpheme *-va-* expresses an indeterminate *ceteris paribus* condition, in addition to contributing the generic quantificational force to the meaning of sentences. Depending on the context, it conveys the inference that the speaker is either (i) certain that there are exceptions to the expressed generalization (certainty inference) or (ii) uncertain for lack of sufficient information whether all exceptions can be categorically excluded (ignorance inference)." (Filip 2023, 64)

# 3 Pluractionality

In this chapter, I will introduce pluractionality as a counterpart of genericity. First, I will present a brief theoretical background and essential terminology. Then, I will summarize the two studies: Jeremy Kuhn and Valentina Aristodemo's Pluractionality, Iconicity, and Scope in French Sign Language and Jeremy Kuhn's Pluractionality and Distributive Number.

## 3.1 Theoretical background

Pluractionality is a plurality of an event. The event plurality can be distributed across time, space, or participants. (Kuhn 2019) According to this matter, we differentiate several types of pluractionality. For this thesis, I will point out two of them: iterativity and habituality.

Iterativity is characterized as a plurality where a pluralization of a micro event results in one macro event. (e.g., John knocked on the door.) It can also be said that iterativity is an event-internal pluractionality. (Bybee et al., 1994) Habituality, then, is an event-external pluractionality where the pluralization of an event creates a characterizing property of an individual. (Bertinetto & Lenci 2012)

The overt pluractional marking is present in some spoken languages (e.g., Pomo, Klamath, The Moru-Mardi Languages). (Cusic 1981) The familiar verbal pluractional inflection is reduplication, which applies to the whole verb or a part of it. (Kuhn & Aristodemo 2017)

(28) a. **Hausa:** kiraa → kirkiraa (keep on calling/call many people)
b. **Pomo:** quo → quoquot (cough up)
c. **Dyirbal:** balgan → balbalgan (hit too much)
d. **Yokuts:** simwiyi → simimwiyi (keep on drizzling)

(P. Newman 2012, Moshinsky 1974, Dixon 1972, S. S. Newman 1944 cited in Kuhn & Aristodemo 2017)

Reduplication can describe various types of plurality distribution. In some languages, the pluractional markers do not require a specific dimension. In other languages, they require one of the specific dimensions: participants, time, and space. (Kuhn & Aristodemo 2017)

Figure 1 illustrates the possible readings of pluractional markers. Along the y-axis, $\theta$ indicates participants, and time is along the x-axis.

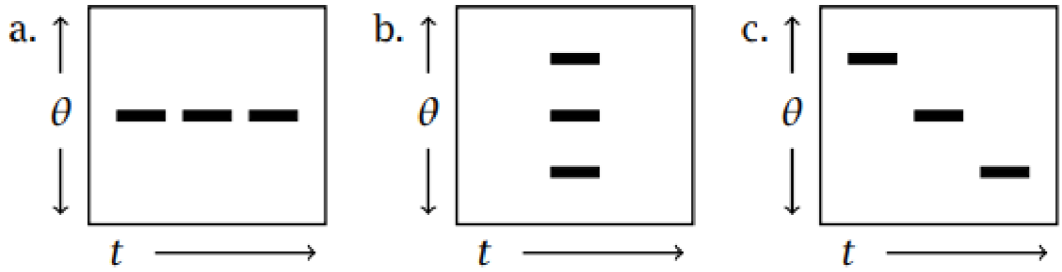


**Figure 1 Range of potential distribution (Kuhn & Aristodemo 2017)**

## 3.2 Studies of Kuhn & Aristodemo (2017) and Kuhn (2019) as a pedestal for the experiment

The studies of Kuhn & Aristodemo (2017) and Kuhn (2019) offer a broader insight into the pluractionality of sign languages, namely American Sign Language (ASL) and Langue des signes française (LSF), which nicely illustrates an overt pluractional morphology because it has a good visibility in sign languages by their nature.

In LSF, there are two pluractional markers. Both of them are a kind of reduplication: /-rep/ is a full reduplication of the exact same motion expressing the verb, and /-alt/ is the alternating motion of two hands. These verbal inflections are productive; they appear in both agreeing and non-agreeing verbs and in verbs having a variety of phonological forms. According to these properties, this verbal inflection cannot be attributed to the nominal plural marking. (Kuhn & Aristodemo 2017)

These two reduplications each have their own distribution. Distribution over time is caused by /-rep/, and distribution over participants is a property of /-alt/. An inflection of the verb FORGET illustrates this.

(29) (OFTEN) ONE PERSON FORGET-rep ONE WORD.
'One person often forgot one word.'

(30) ONE PERSON FORGET-alt SEVERAL WORDS.
'One person forgot several words.'

(Kuhn & Aristodemo 2017)

After the characterization of pluractionality in sign languages, Kuhn and Aristodemo proceed with the idea of plurality operators and plurality filters. **Pluralizing operators**: "pluralize the meaning of an event by summing distinct events that appear in the predicate." On the other hand, **plurality filters** "check that an event consists of a plurality of sub-events, but do not themselves sum together the constituent sub-events." As plurality operators are considered distributive quantifiers like English *every week* or *each*. Pluractional markers like English *repeatedly* or /-rep/ and /-alt/ in LSF are considered plurality filters. (Kuhn & Aristodemo 2017)

Kuhn (2019) presents examples of the operations created by pluralizing operators and plurality filters :

(31) *a. Pluralizing operators sum together the objects in a set*
{a, b, c} → {a, b, c, a ⊕ b, a ⊕ c, b ⊕ c, a ⊕ b ⊕ c}

*b. Plural filters restrict a set to only its plural objects*
{a, b, c, a ⊕ b, a ⊕ c, b ⊕ c, a ⊕ b ⊕ c} → {a ⊕ b, a ⊕ c, b ⊕ c, a ⊕ b ⊕ c}

Based on these findings, Kuhn (2019) considers the scope of pluractionality. He suggests that pluralizing operators, like every day, have a wide scope with respect to indefinite, whereas plurality filters do not possess this property.

(32) a. EVERY-DAY JEAN ONEWORD FORGET. ✓ many words ✓ one word
"Every day, Jean forgot one word."

b. JEAN ONEWORD FORGET-rep. *many words ✓ one word
"Jean forgot one word repeatedly."

(LSF, Kuhn & Aristodemo, 2017)

This is illustrated in example (32): in a. the forgotten word can co-vary day by day. On the other hand, in b., the word must be the same every day. (Kuhn 2019)

In the experimental part of this thesis, I focus on the different scope taking in Czech pluractional and generic sentences. The imperfects are considered plurality filters, and I expect them to have a similar behavior as plurality filters in LSF. Perfective verbs with a pluralizing operator KAŽDÝ DEN (every day) function as a positive baseline. The question is where to put generics in this scheme.

# 4 The experiment

This chapter will provide a detailed description of the experiment I conducted. I will focus on participants, the method, and the interpretation of the study's results. I will also discuss problems I have encountered when analyzing the gathered data.

## 4.1 Terminology summarization

The literature has yet to have a general agreement on what exactly genericity, habituality, pluractionality, and iterativity are. To proceed with the experiment, I will consider two terms: pluractionality and genericity, where pluractionality is to be understood as a basic pluralization of an event that is not habitual and cannot be considered as a characterizing property of a referent. At the same time, genericity can also be singular event, considering kind referring genericity or fact-claiming genericity (e.g., Blood is red). However, genericity is also a pluralized event, becoming a characterizing property of the given referent by pluralization (e.g., John used to like to read in the mornings). The Czech generic morpheme -va- expresses some habits in this thesis's experimental items. In other words, the pluralized event distributed temporally concerning one same referent creates a habituality.

## 4.2 The hypothesis

The following experiment tests whether native speakers perceive Czech generic and pluractional sentences differently in the same context. Based on the results, I shall be able to describe the structural position of the GEN operator and specify the scope of genericity in Czech. The research questions are formed based on the analysis of Kuhn and Aristodemo (2017) and Kuhn (2019):

RQ1: Does genericity in Czech have a wide scope with respect to indefintes?

RQ2: Can the GEN operator be characterized as a plurality filter or rather as a plurality operator?

H0: There is no difference in the acceptability of pluractional and generic verbs.

H1: The generic verbs are accepted remarkably better than the pluractional in a context having a wide scope over the indefinite.

## 4.3 Participants

The questionnaire created in L-Rex was distributed mainly through social media and by secretariats of two university departments: the Department of Czech Language and Literature and the Department of General Linguistics and Baltic Studies. No demographic information was collected, and only two conditions for participating in the study were being a native speaker of Czech and being 18 years old or older. The data were completely anonymous, and no one was paid for participating.

I have gathered results from 118 participants. Twenty participants were removed from the data analyses based on their unreliability. Participants were cleaned if the deduction of means of good fillers and bad fillers was lower than 2 (good fillers mean – bad fillers mean < 2). On a scale of 1 – 7 the good fillers were supposed to be rated by high ratings e. g. 6, 7, and bad fillers by low ratings e. g. 1, 2. In the end, the operation of adjusting outliers had to be done since a significant number of participants rated good fillers with low ratings. I'll try to discuss the question of why further. In cleaning participants, I substituted a rating of 1 for good fillers with a rating of 4.

## 4.4 The method

The presented experiment is one of the acceptability judgment tasks and follows a 1x3 design while observing 3 conditions combined with 1 context. Participants were to decide on a scale of 1 to 7, where 1 means it doesn't correspond at all and 7 means it does correspond by 100 %, how much the target sentence corresponds to a given context. Every participant answered 17 questions, the set contained 8 fillers and 9 tested items from a total of 8 fillers and 9 tested items in 3 conditions. The selection and order of items were pseudo-randomized. Every item is accompanied by written context introducing us to the story and a list that shall or shall not correspond to the target sentence.

The questionnaire also provided an introduction with general information, contact, and informed consent. After agreeing to participate in the study, two practice items were presented.

## 4.5 Materials

### 4.5.1 Introduction and Practice Items

Let me briefly introduce an introduction I've written about in a previous paragraph. The introduction appeared right after clicking on the link with the study and it said this:

> Dobrý den, jsem Anna Woideová a vítám Vás v lingvistickém experimentu. Experiment je součástí mé bakalářské práce. Probíhá formou anonymního dotazníku, který zabere přibližně 15 minut Vašeho času. V každé otázce Vám bude zobrazen popis situace, s ním související seznam a věta, která má za úkol shrnout data v seznamu. Vaším úkolem bude posoudit, jak přiložená věta odpovídá seznamu. Použijte své jazykové cítění. Nejedná se o gramatickou správnost nebo spisovnost, ale o to, jak dobře věta popisuje situaci ze seznamu. V úvodní části Vám toto bude předvedeno na příkladech. První část dotazníku obsahuje cvičné otázky s vysvětlením, jak dotazník vyplnit. Poté bude zahájena samotná testovací část. Na otázky odpovídejte zvolením čísla na škále od 1 (věta vůbec neodpovídá) do 7 (věta naprosto odpovídá). Prosím o soustředěné přečtení a pečlivé vyplnění dotazníku. Děkuji Vám za účast.

Translated as:

> *Hello, I'm Anna Woideová, and I welcome you to the linguistic experiment. The experiment is part of my bachelor's thesis. It takes the form of an anonymous questionnaire that will take approximately 15 minutes of your time. In each question, you will be shown a description of the situation, a list related to it, and a sentence to summarize the data in the list. Your task will be to judge how the attached sentence matches the list. Use your linguistic sense. It is not a matter of grammatical correctness or spelling, but how well the sentence describes the situation in the list. This will be demonstrated with examples in the introductory section. The first part of the questionnaire contains practice questions explaining how to complete the questionnaire. Then the actual testing part will begin. Answer the questions by selecting a number on a scale from 1 (sentence does not correspond all) to 7 (sentence corresponds perfectly). Please read and complete the questionnaire carefully. Thank you for your participation.*

The introduction was followed by two practice items, for an illustration of the aim of each participant, from which I'm presenting the first one:

> Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

*Decide how closely, on a scale of 1 to 7, the attached sentence corresponds to the entry on the list.*

**Pondělí**: Jahody

*Monday: Strawberries*

**Úterý:** Jablka

*Tuesday: Apples*

**Středa:** Banány

*Wednesday: Bananas*

**Čtvrtek:** Švestky

*Thursday: Plums*

**Pátek:** Maliny

*Friday: Raspberries*

**Sobota:** Meruňky

*Saturday: Apricots*

**Neděle:** Hrozno

*Sunday: Grapes*

(33) **Eliška jí každý den zeleninu.**
*Eliška eats vegetables every day.*

(věta neodpovídá, zvolíme tedy 1)

*(sentence does not correspond, so choose 1)*

### 4.5.2 Fillers

The fillers are distributed through the questionnaire as a distraction and mainly as control items. The function of fillers is to assess the reliability of participants and accordingly exclude random answers. The fillers were of two conditions: good fillers and bad fillers. They were created in such a way that the rating of good fillers was supposed to be high and on the other hand, the rating of bad fillers was supposed to be

low. The fillers contain the distributivity of the event, universal quantifier (UQ) KAŽDÝ (each), and bad fillers, on top, the UQ located in a relative clause creating a scope island. This was decided after a discussion with my supervisor doc. PhDr. Mojmír Dočekal, Ph.D. and my advisor dr. Petr Biskup. I will provide an example of bad and good filler with a description below:

> Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.
>
> *Decide how closely, on a scale of 1 to 7, the attached sentence corresponds to the entry on the list.*
>
> **Poslanec 1:** Praha
>
> *Congressman 1: Praha*
>
> **Poslanec 2:** Liberec
>
> *Congressman 2: Liberec*
>
> **Poslanec 3:** Brno
>
> *Congressman 3: Brno*
>
> **Poslanec 4:** Ostrava
>
> *Congressman 4: Ostrava*
>
> **Poslanec 5:** Zlín
>
> *Congressman 5: Zlín*

(34) **Jeden zkorumpovaný poslanec, který byl z každého města, pronesl řeč.**
*One corrupted congressman that be-*$_{1SG\ PST}$*from EACH city, utter-*$_{1SG\ PST}$ *a speech.*
'One corrupted congressman that was from each city uttered a speech.'

The example above is an example of a bad filler. The UQ KAŽDÝ (each) is in the target sentence positioned in the scope island. That creates a situation where KAŽDÝ can not take scope over arguments (POSLANEC) outside the scope island. Therefore, the target sentence is unacceptable. This unacceptability is caused by the fact that the existential quantifier is taking scope over UQ (∃>∀), and this creates the situation where one congressman is coming from more than one city, which is impossible in the world we

live in and is known to us. This effect of scope islands was described by Chris Barker: "Relative clauses are particularly strong scope islands. There is an inverse-linking reading for (7a) = (30a) on which the universal takes wide scope relative to the indefinite, so that there are potentially as many women who spoke as there are boroughs. But the bracketed relative clause in (7b) = (30b) is a scope island for everyone, and therefore is unambiguous: there must be a single woman such that for every borough, the woman is from the borough." (Barker 2015)

(35) a. A woman from every borough spoke.
b. A woman [who is from every borough] spoke.

On the other hand, a sentence with KAŽDÝ located outside the scope island should be acceptable:

Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

*Decide how closely, on a scale of 1 to 7, the attached sentence corresponds to the entry on the list.*

**Poslanec 1:** Praha

*Congressman 1: Praha*

**Poslanec 2:** Liberec

*Congressman 2: Liberec*

**Poslanec 3:** Brno

*Congressman 3: Brno*

**Poslanec 4:** Ostrava

*Congressman 4: Ostrava*

**Poslanec 5:** Zlín

*Congressman 5: Zlín*

(36) **Jeden zkorumpovaný poslanec z každého města pronesl řeč.**
*One corrupted congressman from EACH city utter-*$_{1SG\ PST}$ *a speech.*
'One corrupted congressman from each city uttered a speech.'

The above example is a good filler. There is an opposite situation where UQ scopes over the existential quantifier (∀>∃). Then we have the situation where several congressmen, each from a different city, uttered a speech, which is possible in our world. This should correspond to the given list. In a discussion chapter, I will describe a problem where the evaluation by participants happened to be different than expected.

### 4.5.3 Items

There was one set of nine items in three conditions. The items aimed to observe the presence of wide or narrow scope in pluractional and generic sentences, and to compare these sentences with the perfective baseline. Every item contained a written context, a list of objects over which the event could be distributed, and a target sentence of one of the three conditions. The three conditions were based on three forms of verbs: perfective (perf), imperfective/pluractional (plur/imperf), and generic (gen). Perfective verbs were set as a baseline. Then the baseline was compared with imperfective or pluractional verbs (according to the verb, there was a possibility for one of these forms) and finally with generic verbs. Let's illustrate it with an example:

> Oslice Lucie je nepřátelská k ostatním zvířatům a často je kope. Její ošetřovatelka nakopnutá zvířata zapisuje do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co ošetřovatelka do seznamu zaznamenala.
>
> *The female donkey named Lucie is unfriendly towards other animals and she kicks them often. Her breeder records the kinds of animals, that were kicked, in the special list. Decide how closely, on a scale of 1 to 7, the attached sentence corresponds to the entry on the list of the animal breeder.*
>
> **Pondělí:** Ovce
>
> *Monday: Sheep*
>
> **Úterý:** Pštros
>
> *Tuesday: Ostrich*
>
> **Středa:** Koza
>
> *Wednesday: Goat*
>
> **Čtvrtek:** Slepice

*Thursday: Han*

**Pátek:** Lama

*Friday: Lama*

**Sobota:** Husa

*Saturday: Goose*

**Neděle:** Prase

*Sunday: Pig*

(37) perf: **Lucie každý den kopla jedno zvíře.**
*Lucie each day kick-3SG PERF PST one animal-ACC.*
'Lucie kicked one animal each day.'

(38) plur/imperf: **Lucie kopala jedno zvíře.**
*Lucie kick-3SG PLUR PST one animal-ACC.*
'Lucie was kicking one animal.'

(39) gen: **Lucie kopávala jedno zvíře.**
*Lucie kick-3SG GEN PST one animal-ACC.*
'Lucie was kicking one animal.'

The items and conditions were randomized throughout the questionnaire. There was a different context for every verb. Thus, every question contained the context, a list attached to the context, and a target sentence in one of the three conditions. The full set of tested items and fillers is presented in the appendix. In the set of items, for five of them, the pluractional condition was chosen and for four the imperfective condition. The following example will show the imperfective condition.

Básník Kryštof si během týdne zapisuje do seznamu, kterou báseň kdy psal. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Kryštof do seznamu zaznamenal.

*A poet named Kryštof writes a list where he takes a record of written poems during days in the week. Decide how closely, on a scale of 1 to 7, the attached sentence corresponds to the entry on the list of Kryštof.*

**Pondělí:** O noci

*Monday: On night*

**Úterý:** O lásce

*Tuesday: On love*

**Středa:** O přírodě

Wednesday: On nature

**Čtvrtek:** O lidech

*Thursday: On people*

**Pátek:** O hvězdách

Friday: On stars

**Sobota:** O vodě

*Saturday: On water*

**Neděle:** O včelách

*Sunday: On bees*

(40) perf: **Kryštof každý den napsal jednu báseň.**
*Kryštof each day write-*$_{3SG\ PERF\ PST}$ *one poem-*$_{ACC}$.
'Kryštof wrote one poem each day.'

(41) plur/imperf: **Kryštof psal jednu báseň.**
*Kryštof write-*$_{3SG\ PLUR\ PST}$ *one poem-*$_{ACC}$.
'Kryštof was writing one poem.'

(42) gen: **Kryštof psával jednu báseň.**
*Kryštof write-*$_{3SG\ GEN\ PST}$ *one poem-*$_{ACC}$.
'Kryštof was writing one poem.'

## 4.6 Results

The data collected in L-Rex were then statistically analyzed using the programming language R on the PositCloud web platform. Results from 98 out of a total of 118 participants were analyzed based on filler rating.

In Figure 1, the distribution of filler ratings is to be seen. Unfortunately, the number of filtered participants based on these ratings would be too high, as the low rating of good fillers was unexpected. To deal with this situation I acceded to adjusting outliers by substituting a rating of 1 for good fillers with a rating of 4. The distribution of ratings in clean fillers is presented in Figure 2.

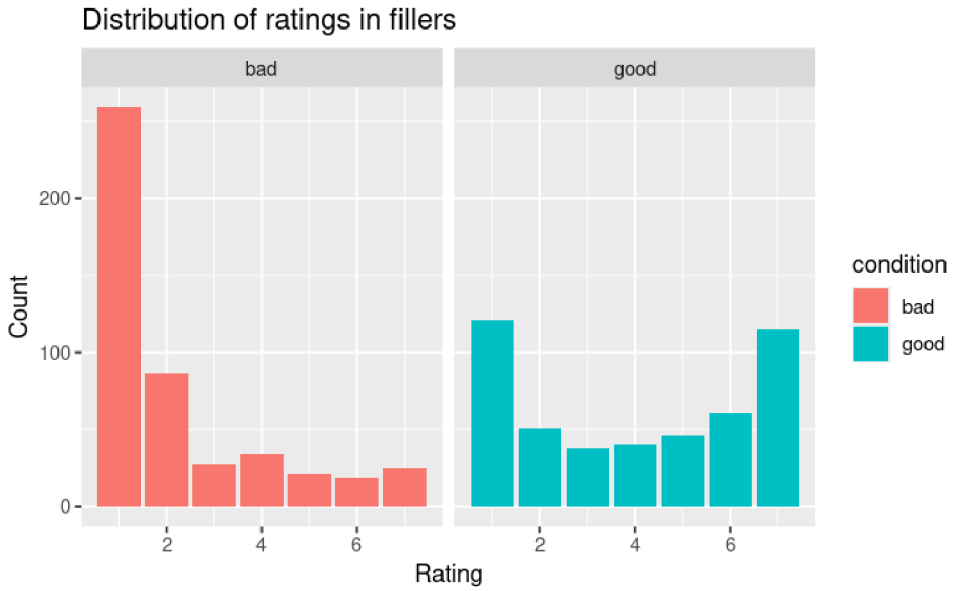


**Figure 3: Ratings of bad and good fillers**

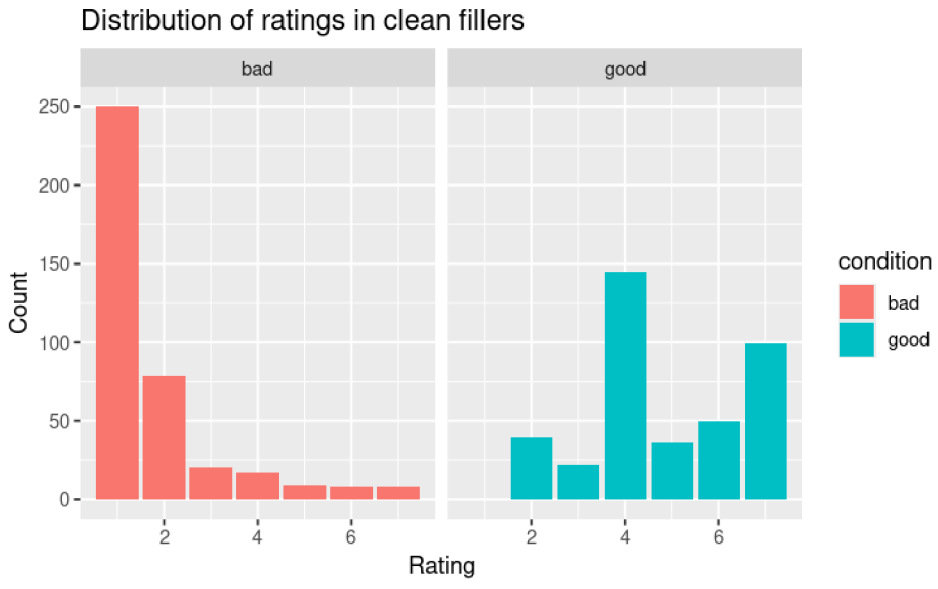


**Figure 2: Ratings of bad and good fillers after adjustment**

Sgall's analyses of topic-focus articulation in the Czech language can explain the low rating of good fillers. Sgall claims that the semantic relevance of communicative dynamism plays a role in the understanding of these kinds of sentences. (Sgall, 1980) By communicative dynamism, we understand the power of particular utterance parts used to develop communication. The communicative dynamism is described by relative degrees that tell us what is the utterance subpart's relevance according to the utterer intention. (Uhlířová & Svoboda 2017)

According to Sgall there would be differences in the meanings of the sentences (43) and (44) which can be compared to differences between two first-order logic formulas with different orders of quantifiers.

(43) Jeden zkorumpovaný poslanec z každého města pronesl řeč.
*One corrupted congressman from each city uttered a speech.*

(44) Z každého města pronesl řeč jeden zkorumpovaný poslanec.
*From each city uttered a speech every congressman.*

The example (44) may seem ungrammatical from English translation. The fact is that it is a perfectly normal sentence in Czech. One can wonder if the usage of different word order like in number (44) would help more participants get a good reading. However, it is not a topic of my study but finding an answer could be a good approach in future linguistic experiments.

Let's proceed with the analyses of experimental items. Figure 3 offers the means and medians for the three tested conditions. As expected, the highest ratings were received by baseline perfective condition. The difference between means of plur/imperf and gen conditions isn't big but it's still statistically significant as will be presented in linear mixed models later. Both conditions were rated much lower than the baseline.

| materials | condition | mean | median |
|---|---|---|---|
| <chr> | <chr> | <dbl> | <dbl> |
| Items | gen | 3.10 | 2 |
| Items | perf | 6.49 | 7 |
| Items | plur/imperf | 2.31 | 2 |

**Figure 4: Means and medians of items**

I'm also presenting an error bar chart (Fig. 4) visually showing the differences between means.

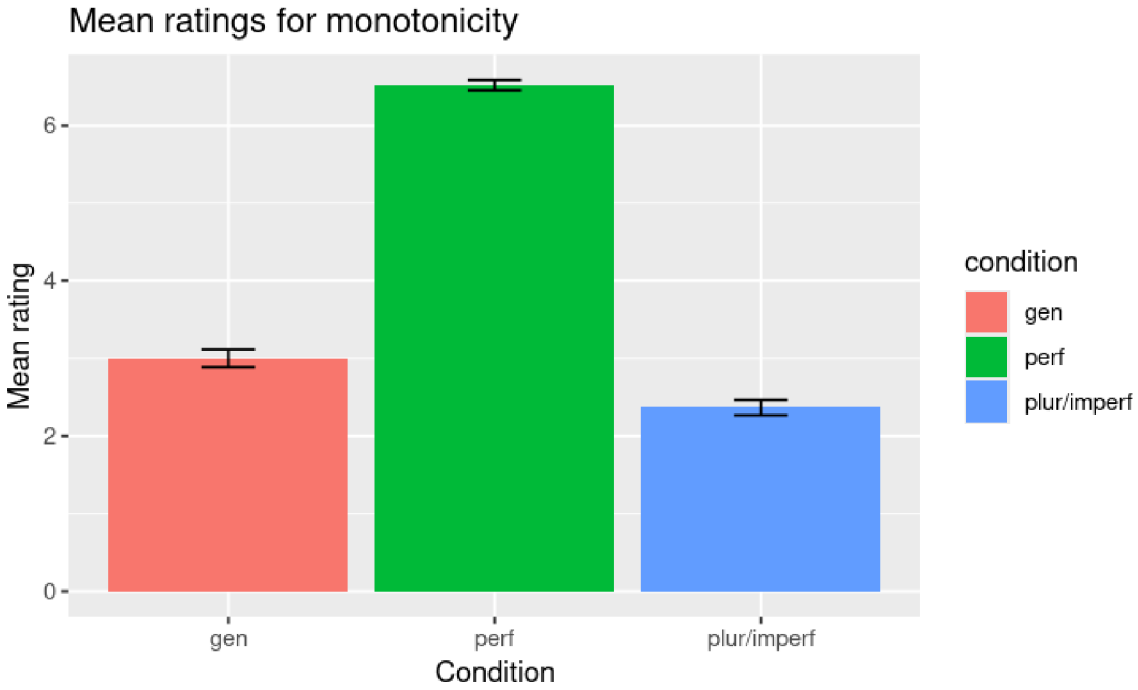


**Figure 5: Mean ratings of items**

The next bar chart presents the rating distribution over the conditions (Fig. 5). We can see that overall, the ratings of plur/imperf and gen conditions were low. However, higher ratings were slightly more common for the generic condition than the pluractional/imperfective condition.

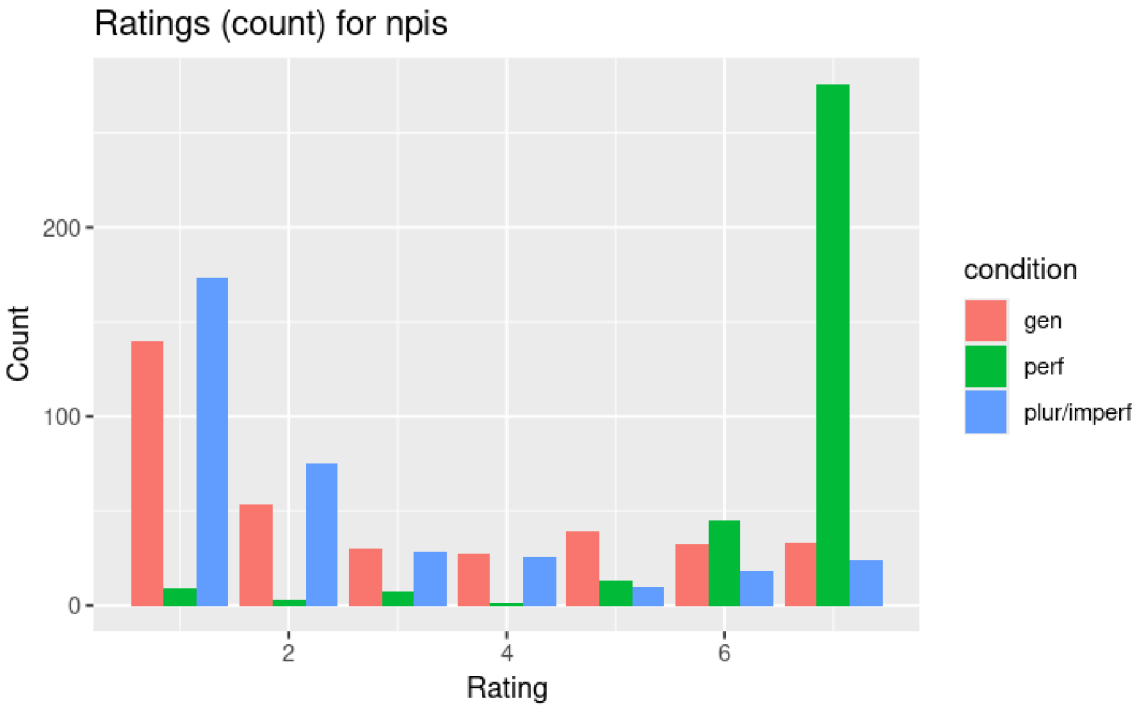


**Figure 6 Distribution of ratings**

Before proceeding with mixed linear models, I would like to focus on the difference between pluractional and imperfective clauses. Due to a lack of pluractional verbs, I had to develop this combined condition. Thus, the first five experimental items contained pluractional and the other four imperfective verbs. To observe if there is a relevant difference, they were divided into two groups based on the type of a verb and analyzed. Although the plur condition was evaluated slightly lower than imperf, based on the linear mixed model (Fig. 6) and comparison by emmeans (Fig. 7) function presented below, no statistically relevant difference was found, therefore further analyses will count the conditions as one.

```
Fixed effects:
                Estimate Std. Error       df t value Pr(>|t|)
(Intercept)       3.0899     0.1503  32.2168  20.561  < 2e-16 ***
conditionimperf  -0.7862     0.1809 641.7085  -4.347 1.61e-05 ***
conditionperf     3.4082     0.1336 773.1941  25.511  < 2e-16 ***
conditionplur    -0.7751     0.1665 699.5289  -4.655 3.88e-06 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

**Figure 7: Mixed linear model (plur and imperf divided)**

```
$contrasts
 contrast       estimate    SE  df t.ratio p.value
 gen - imperf     0.7862 0.181 642   4.347  0.0001
 gen - perf      -3.4082 0.134 773 -25.511  <.0001
 gen - plur       0.7751 0.167 700   4.655  <.0001
 imperf - perf   -4.1945 0.181 629 -23.124  <.0001
 imperf - plur   -0.0111 0.221 331  -0.050  1.0000
 perf - plur      4.1834 0.166 711  25.189  <.0001
```

**Figure 9: Contrasts (plur and imperf divided)**

To confirm the statistical relevance of the difference between gen condition and plur/imperf condition, I will present a linear mixed model. Gen condition was set as an intercept here and we must focus on the difference between the intercept and plur/imperf condition. As hypothesized the estimate of plur/imperf is significantly lower than the estimate of gen. This shows that generic sentences allow wide scope over indefenites because the reading of varying objects over the week is acceptable. This cannot be said about pluractionals/imperfectives. These findings reject H0 and confirm H1.

```
Fixed effects:
                    Estimate Std. Error       df t value Pr(>|t|)
(Intercept)           3.0020     0.1332  37.8296  22.546  < 2e-16 ***
conditionperf         3.5173     0.1204 934.2833  29.211  < 2e-16 ***
conditionplur/imperf -0.6419     0.1204 934.2833  -5.331 1.23e-07 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

**Figure 8: Mixed linear model**

Furthermore, in contrasts by emmeans one can see the statistical relevance of the difference between the acceptability of generic condition and pluractional/imperfective condition.

```
$contrasts
 contrast              estimate   SE  df t.ratio p.value
 gen - perf              -3.517 0.12 934 -29.211  <.0001
 gen - (plur/imperf)      0.642 0.12 934   5.331  <.0001
 perf - (plur/imperf)     4.159 0.12 934  34.542  <.0001
```

**Figure 10: Contrasts of all conditions**

# 5 Conclusion

This thesis aimed to offer experimental data on genericity and pluractionality for the Czech language. After the theoretical introduction based mainly on the studies of Filip (2023), Kuhn & Aristodemo (2017) and Kuhn (2019) it proceeded with the experiment. The 108 participants evaluated the acceptability of perfective, imperfective/pluractional, and generic verbs in environments having a wide scope with respect to indefinites where the perfective condition was considered as baseline.

The results show a significant difference in the acceptability of pluractional verbs and generic ones. The generic verbs containing the inflectional morpheme -va- were evaluated significantly higher than their imperfective/pluractional counterparts. This allows us to argue that genericity in Czech has a wide scope over indefinites and it can be considered as a pluralizing operator instead of a plurality filter. This then is an answer to my research questions.

*"Whereof one cannot speak, thereof one must be silent."*

Ludwig Wittgenstein

# Bibliography

Barker, C. "Scope." In *The Handbook of Contemporary Semantic Theory*, edited by S. Lappin and C. Fox, 40–76. 2nd ed. Chichester, UK: Wiley-Blackwell, 2015.

Bertinetto, P. M., and A. Lenci. "Habituality, Pluractionality, and Imperfectivity." In *The Oxford Handbook of Tense and Aspect*, edited by R. I. Binnick. Oxford Handbooks. Oxford: Oxford Academic, 18 Sept. 2012. https://doi.org/10.1093/oxfordhb/9780195381979.013.0030.

Bybee, J., R. Perkins, and W. Pagliuca. *The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World*. Chicago: University of Chicago Press, 1994.

Cusic, D. D. *Verbal Plurality and Aspect*. Stanford, CA: Stanford University dissertation, 1981.

Dahl, Ö. "The Marking of the Episodic/Generic Distinction in Tense-Aspect Systems." In *The Generic Book*, edited by G. N. Carlson and F. J. Pelletier, 412–440. Chicago: University of Chicago Press, 1995.

Farkas, D. F. "On Carlson's 'A Unified Analysis of the English Bare Plural'." In *A Reader's Guide to Classic Papers in Formal Semantics*, edited by L. McNally and Z. G. Szabó, 100:59–78. Studies in Linguistics and Philosophy. Cham: Springer, 2022. https://doi.org/10.1007/978-3-030-85308-2_4.

Filip, H. *Generic Sentences*. Unpublished manuscript, Heinrich Heine University Düsseldorf, 2023.

Greenberg, Y. "An Overt Syntactic Marker for Genericity in Hebrew." In *Events and Grammar*, edited by Susan Rothstein, 125–143. Dordrecht: Kluwer Academic Publishers, 1998.

Karlík, P. "Habituálnost." In *CzechEncy - Nový Encyklopedický Slovník Češtiny*, edited by P. Karlík, M. Nekula, and J. Pleskalová, 2017. https://www.czechency.org/slovnik/HABITUÁLNOST (accessed November 30, 2024).

Krifka, M., F. J. Pelletier, G. N. Carlson, A. ter Meulen, G. Chierchia, and G. Link. "Genericity: An Introduction." In *The Generic Book*, edited by G. N. Carlson and F. J. Pelletier, 1–124. Chicago: University of Chicago Press, 1995.

Leslie, S.-J., and A. Lerner. "Generic Generalizations." In *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), edited by E. N. Zalta and U. Nodelman. https://plato.stanford.edu/archives/fall2022/entries/generics/ (accessed November 30, 2024).

Nübler, N. "Iterativnost." In *CzechEncy - Nový Encyklopedický Slovník Češtiny*, edited by P. Karlík, M. Nekula, and J. Pleskalová, 2017. https://www.czechency.org/slovnik/ITERATIVNOST (accessed November 30, 2024).

Uhlířová, L., and A. Svoboda. "Výpovědní Dynamicknost." In *CzechEncy - Nový Encyklopedický Slovník Češtiny*, edited by P. Karlík, M. Nekula, and J. Pleskalová, 2017. https://www.czechency.org/slovnik/VÝPOVĚDNÍ%20DYNAMIČNOST (accessed November 30, 2024).

Sgall, P., E. Hajičová, and E. Buráňová. *Aktuální členění věty v češtině*. Praha: Academia, 1980.

Tkaczyk, M. "Komunikace: Základní vymezení, formy a typy komunikace." Lecture, Mediální a komunikační studia, 2019, Brno.

Wittgenstein, L. *Tractatus Logico-Philosophicus*. Translated by C. K. Ogden. London: Routledge & Kegan Paul, 1922.

# Appendix A Items and fillers

## A.1 Items

1. Petr rád chodí na ryby. Během minulého týdne si výsledky své oblíbené aktivity zaznamenával do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Petr do seznamu zaznamenal.

   **Pondělí:** Amur
   **Úterý:** Pstruh
   **Středa:** Štika
   **Čtvrtek:** Amur
   **Pátek:** Candát
   **Sobota:** Okoun
   **Neděle:** Cejn

   **Gen:** Petr chytával jednu rybu.
   **Perf:** Petr každý den chytnul jednu rybu.
   **Plur/imperf:** Petr chytal jednu rybu.

2. Oslice Lucie je nepřátelská k ostatním zvířatům a často je kope. Její ošetřovatelka nakopnutá zvířata zapisuje do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co ošetřovatelka do seznamu zaznamenala.

   **Pondělí:** Ovce
   **Úterý:** Pštros
   **Středa:** Koza
   **Čtvrtek:** Slepice
   **Pátek:** Lama
   **Sobota:** Husa
   **Neděle:** Prase

   **Gen:** Lucie kopávala jedno zvíře.
   **Perf:** Lucie každý den kopla jedno zvíře.
   **Plur/imperf:** Lucie kopala jedno zvíře.

3. Pavel je literární teoretik a často zapomíná adjektiva hodící se k analýze literárních děl. Jeho kolega Josef si z něj dělá legraci a zapomenutá slova si zaznamenává do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta

přiložená k seznamu významově odpovídá tomu, co Josef do seznamu zaznamenal.

**Pondělí:** Melancholický
**Úterý:** Patetický
**Středa:** Fantasknί
**Čtvrtek:** Cynický
**Pátek:** Vycizelovaný
**Sobota:** Mystický
**Neděle:** Existenciální

**Gen:** Pavel zapomínával jedno slovo.
**Perf:** Pavel každý den zapomněl jedno slovo.
**Plur/imperf:** Pavel zapomínal jedno slovo.

4. Neúspěšná elektrikářka Markéta často seká do kabelů, místo toho aby je opravovala. Aby v tom měla přehled, zaznamenává si přeseknuté kabely do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Markéta do seznamu zaznamenala.

   **Pondělí:** Modrý
   **Úterý:** Červený
   **Středa:** Žlutý
   **Čtvrtek:** Oranžový
   **Pátek:** Zelený
   **Sobota:** Černý
   **Neděle:** Bílý

   **Gen:** Markéta sekávala jeden kabel.
   **Perf:** Markéta každý den přeseknula jeden kabel.
   **Plur/imperf:** Markéta sekala jeden kabel.

5. Jonáš je kocour, který se nerad mazlí, ale zato hodně často kouše členy své domácnosti. Jeho majitelka Anna si jednotlivá kousnutí zaznamená do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Anna do seznamu zaznamenala.

   **Pondělí:** Šimon
   **Úterý:** Michael
   **Středa:** Matouš

**Čtvrtek:** Anna
**Pátek:** Lída
**Sobota:** Iva
**Neděle:** Kamil

**Gen:** Jonáš kousával jednu osobu.
**Perf:** Jonáš každý den kousl jednu osobu.
**Plur/imperf:** Jonáš kousal jednu osobu.

6. Důchodkyně Irena našla novou zálibu v pěstování stromů. Stromy, které zasadila, si zaznamenává do seznamu. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Irena do seznamu zaznamenala.

**Pondělí:** Jabloň
**Úterý:** Buk
**Středa:** Hrušeň
**Čtvrtek:** Javor
**Pátek:** Třešeň
**Sobota:** Dub
**Neděle:** Slivoň

**Gen:** Irena sázívala jeden strom.
**Perf:** Irena každý den zasadila jeden strom.
**Plur/imperf:** Irena sázela jeden strom.

7. Básník Kryštof si během týdne zapisuje do seznamu, kterou báseň kdy psal. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Kryštof do seznamu zaznamenal.

**Pondělí:** O noci
**Úterý:** O lásce
**Středa:** O přírodě
**Čtvrtek:** O lidech
**Pátek:** O hvězdách
**Sobota:** O vodě
**Neděle:** O včelách

**Gen:** Kryštof psával jednu báseň.
**Perf:** Kryštof každý den napsal jednu báseň.
**Plur/imperf:** Kryštof psal jednu báseň.

8. Skvělá kuchařka Edita si do seznamu zapisuje, které jídlo kdy uvařila, aby se často neopakovala. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Edita do seznamu zaznamenala.

   **Pondělí:** Guláš
   **Úterý:** Lasagne
   **Středa:** Koprovka
   **Čtvrtek:** Špagety
   **Pátek:** Rajská
   **Sobota:** Segedýn
   **Neděle:** Svíčková

   **Gen:** Edita vařívala jedno jídlo.
   **Perf:** Edita každý den uvařila jedno jídlo.
   **Plur/imperf:** Edita vařila jedno jídlo.

9. Kreslířka Anna si zapisuje do seznamu, co kdy nakreslí. Rozhodněte jak moc, na škále od 1 do 7, věta přiložená k seznamu významově odpovídá tomu, co Anna do seznamu zaznamenala.

   **Pondělí:** Květinu
   **Úterý:** Stůl
   **Středa:** Strom
   **Čtvrtek:** Vázu
   **Pátek:** Kočku
   **Sobota:** Dům
   **Neděle:** List

   **Gen:** Anna kreslívala jeden objekt.
   **Perf:** Anna každý den nakreslila jeden objekt.
   **Plur/imperf:** Anna kreslila jeden objekt.

## A.2 Fillers

1. Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

   **Poslanec 1:** Praha
   **Poslanec 2:** Liberec
   **Poslanec 3:** Brno
   **Poslanec 4:** Ostrava
   **Poslanec 5:** Zlín

   **Good:** Jeden zkorumpovaný poslanec z každého města pronesl řeč.
   **Bad:** Jeden zkorumpovaný poslanec, který byl z každého města, pronesl řeč.

2. Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

   **Student 1:** Oxford
   **Student 2:** Harvard
   **Student 3:** Cambridge
   **Student 4:** Standford
   **Student 5:** Princeton

   **Good:** Jeden úspěšný student z každé univerzity dostal cenu.
   **Bad:** Jeden úspěšný student, který byl z každé univerzity, dostal cenu.

3. Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

   **Zpěvák 1:** Polsko
   **Zpěvák 2:** Francie
   **Zpěvák 3:** Švédsko
   **Zpěvák 4:** Slovinsko
   **Zpěvák 5:** Irsko

   **Good:** Jeden operní zpěvák z každé země měl koncert.
   **Bad:** Jeden operní zpěvák, který byl z každé země, měl koncert.

4. Rozhodněte jak moc, na škále od 1 do 7, přiložená věta odpovídá záznamu v seznamu.

   **Kniha 1:** Academia
   **Kniha 2:** Luxor
   **Kniha 3:** Kosmas
   **Kniha 4:** Dobrovský
   **Kniha 5:** Megaknihy

   **Good:** Jedna stará kniha z každého knihkupectví byla potrhaná.
   **Bad:** Jedna stará kniha, která byla z každého knihkupectví, byla potrhaná.