

On Genericity: A Case Study in Czech

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On Genericity: A Case Study in Czech

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1. Properties of VA-Sentences and Previous Treatments

Czech has a large class of so-called habitual or iterative verbs that are derived with the suffix *-va-* from simple and derived imperfective verbs:

- (1-a)
- | | | |
|---|---|--|
| simple imperfective verb
<i>psát</i> 'to write' | → | derived imperfective VA-verb
<i>psávat</i> |
|---|---|--|
- (1-b)
- | | | |
|---|---|---|
| derived imperfective verb
<i>zapisovat</i> 'to note, to record' | → | derived imperfective VA-verb
<i>zapisovávat</i> |
|---|---|---|

Unlike in some other Slavic languages (Russian, for example, cf. Isačenko 1962:405-7; Comrie 1976:27; Kučera 1981:177), in Czech this derivation process is very productive and such derived VA-verbs can be found in all the styles of speech (cf. Kučera 1981:177). The suffix *va-* may be repeated for emphasis, which gives rise to a set of expanded verbs: *psát* 'to write' → *psávat* → *psádvat*.

The suffix *-va-* is typically found on the main verb in such generic sentences as those in (2a) to (2e) (examples are taken from Kučera 1981:182):

- (2-a) *Petr mi psával.*
'Peter used to write to me.'
- (2-b) *V sobotu Pavel sedává v hospodě.*
'On Saturday, Paul (usually) sits in the pub.'
- (2-c) *Němci mluvívají špatně česky.*
'Germans tend to speak Czech badly.'
- (2-d) *Ruští generálové umírávají v mladém věku.*
'Russian generals tend to die young.'
- (2-e) *Čapek v těch letech psával romány.*
'Čapek wrote (mostly) novels in those years.'

The basic property of sentences with VA-verbs is traditionally seen as expressing an iteration, a habit, or a regularity. The suffix *-va-* is optional, its use is a sufficient, but not a necessary, condition for this interpretation. In an appropriate context, generic sentences in (2) can be replaced by the corresponding sentences without the suffix *-va-* on the main verb. For example, (2a) can be replaced by

- (2-a') *Petr mi psal.*
'Peter wrote to me / Peter was writing to me'

as (2a') has two contextually-determined uses: it reports a habit or a particular episode.

Kučera (1981), who, to my knowledge, provides the only recent and systematic analysis of sentences with VA-verbs, claims that such sentences as (2a) - (2e) express *quantified states* and "this quantification may manifest itself in various ways. It may, of course, apply to the predicate verb itself [2a], in which case the sentence designates a proper habit, that is, a state that arises from repeated or recurrent activity, accomplishment,

or achievement. But the quantification may also extend over the scope of a temporal adverbial in the sentence [2b], or the subject of the sentence [2c, 2d], or - more rarely - even the object of the verb [2e]" (Kučera 1981:182). Hence, according to him, it does not seem to be possible to provide a uniform analysis for such generic sentences as (2a) - (2e).

What is puzzling about the use of the suffix *-va-* is the fact that it is used in sentences that normally do not denote a regularity or a habit. For example, in its most natural interpretation, (3a)

(3-a)

Na tom kopci stával hrad.
 on that hill stood-HAB-3SG castle-SG-NOM
 'There used to stand a castle on that hill.'

asserts that the castle stood on a hill throughout a certain single uninterrupted interval. Under this interpretation, (3a) does not entail that there were several situations on each of which the castle stood on a hill, with intervening subintervals when it did not.

There is one important feature that both the generic VA-sentences ((2a) - (2e)) and simple state VA-sentences ((3a)) share in common: they have a 'remote past reference' (cf. Kučera 1981). Kučera (1981) speculates that "there is a distinct connection between quantification and such a digitalization of the past continuum" (Kučera 1981:184). However, neither he nor anybody else has succeeded in providing an explanation for this putative connection. In this respect he sharply departs from the traditional-structuralist analyses (markedness theory) in which such a connection is implicitly denied, because it is assumed that the basic property of sentences with the suffix *-va-* is to express an iteration or a habit, and the 'remote past tense' is simply listed as a separate meaning. This point of view is evident in the common practice in Slavic linguistics to label the suffix *-va-* as a 'habitual suffix' and the whole class of the verbs to which it is attached as *iterative verbs*.¹

Another puzzle is posed by the fact that the present tense counterparts of such sentences as (3a) are almost always unacceptable. Consider (3b):

(3-b)

??*Na tom kopci stávd hrad.*
 ??on that hill stands-HAB-3SG castle-SG-NOM
 ??'There usually stands a castle on that hill.'

And finally, we need to account for the fact that the suffix *-va-* is unacceptable in sentences expressing exceptionless, unchangeable states of affairs:

(4)

??*Země se točívá kolem slunce.*
 ??earth-SG-NOM REFL revolves-HAB-3SG around-PREP sun-SG-GEN
 ??'The earth tends to revolve around the sun.'

In view of the properties of VA-sentences described here, I will address the following questions:

- (i) Is there a common denominator for all the distributional facts?
- (ii) Given that the suffix *-va-* appears to extend its scope over different constituents in such sentences as (2a) - (2e), for example, and given that it is used in sentences with and without generic interpretation, is it possible to provide a uniform analysis for it?

(iii) Is there any connection between the kind of genericity associated with VA-sentences and the 'remote past' interpretation?

The analysis of Czech characterizing sentences in this paper presupposes the account of generic sentences given in Krifka, M., Pelletier, J., Carlson, G., ter Meulen, A., Link, G., Chierchia, G. in their *Introduction to The Generic Book* (edited by L. Schubert and J. F. Pelletier, 1992, ms.). In the next section, I will give a brief outline of their framework.

2. General Framework

Krifka et al. point out that two distinct phenomena have been subsumed under the notion of *GENERICITY*. These are what they label as *REFERENCE TO KINDS* and *CHARACTERIZING SENTENCES*. Reference to kinds can be illustrated by such sentences as **The potato** was first cultivated in South America, **Potatoes** had been introduced into Ireland by the end of the 17th century, **The Irish economy** became dependent upon **the potato**, and **Gold** is a precious metal in which the NPs in bold type are called *kind-referring* or *generic NPs*. A characterizing sentence such as *Pluto chases trucks* is said to express a habit or a regularity that arises out of a number of specific episodes that are denoted by the corresponding *PARTICULAR SENTENCE* *Pluto is chasing the UPS truck*.

In this paper I focus on characterizing sentences, as this type is instantiated by the Czech generic sentences with the suffix *-va-*. According to Krifka et al. the type of genericity expressed in characterizing sentences is associated with the following two properties, among others:

(i) Characterizing sentences "express 'principled' generalizations over the entities of a class, and cannot capture 'accidental' facts about them" (Krifka et al., 1992, II, p. 31). However, they do allow for 'exceptions' or 'counterexamples'. This feature clearly distinguishes them from universal statements.

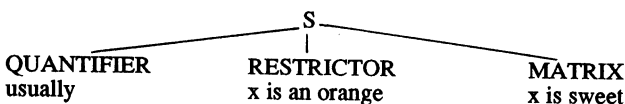
(ii) "[T]he type of genericity found in characterizing sentences is tied to sentences rather than to NPs" (Krifka et al., 1992, II, p. 1). The characterizing reading may be enforced, for example, by various sentence adverbs (*usually, always, often, rarely, typically*), by auxiliaries (as in the English *used to* construction), and also by verbal affixes on main verbs (e.g., the suffix *-va-* in Czech).

In Krifka et al., characterizing sentences are analyzed in terms of a tripartite semantic representation that has the following general form: QUANTIFIER (RESTRICTOR) (MATRIX). The general principles of quantifier interpretation in terms of a tripartite structure were suggested by Lewis (1975), Kamp (1981) and Heim (1982). For example, a sentence like (5a)

(5-a) *Oranges are usually sweet*

has the semantic representation as in (5b)

(5-b)



In (5b), the variable x introduced in the restrictor by the bare subject NP *oranges* is bound by the operator *usually*. Characterizing sentences which lack an overt quantificational adverb are represented with an abstract generic operator GEN, as in (6b)

- (6-a) *Oranges are sweet*
- (6-b) GEN [x ;] (x is an orange ; x is sweet)

The representation of characterizing sentences in terms of a tripartite structure captures in a straightforward way the observation that the type of genericity associated with characterizing sentences takes sentential scope, and that it should be described as being similar to such adverbs as *usually*, *typically*, *occasionally*, that are not only close in meaning to the generic operator but also function as sentential adverbs.

Similar representations of generic sentences that involve dyadic operators can be also found in Lewis (1975), Kamp (1981), Kratzer (1981), Heim (1982)², Farkas & Sugioka (1983), ter Meulen (1986), Schubert & Pelletier (1987, 1989), Declerck (1988), Gerstner & Krifka (1987), Partee, Bach, Kratzer (1987), Carlson (1989)³, and Partee (1990; 1991a; 1991b).⁴

3. Suggested Analysis

3. 1. The Suffix "-VA-" as a Quantifier: Tripartite Semantic Representation

If we assume that the suffix *-va-* functions as a dyadic quantifier that relates two predicate meanings, all the disparate ways in which the quantification induced by the suffix *-va-* appears to manifest itself can be described in a uniform way. Take a characterizing sentence such as (2c), repeated here as (7a):

- (7-a)

<i>Němci</i>	<i>mluvívají^I</i>	<i>špatně</i>	<i>česky.</i>
Germans-PL-NOM	speak-HAB-3PL	badly	Czech
‘Germans tend to speak Czech badly.’			

(7a) can be represented as in (7b):

- (7-b) GEN [x,s ;] (x is German & s is a situation ; x speaks Czech badly in s)

In (b), the generic (characterizing) operator VA quantifies over pairs of individuals and situations, indicated by the individual variable x and situation variable s . In general, the quantifier in a tripartite structure can bind more than one variable and it binds all those variables that occur free in the restrictor clause. Other variables are bound existentially within the matrix. Following Lewis (1975), a quantification over more than one entity can be labelled ‘quantification over *cases*’.

The idea of quantification over situations goes back to Lawler (1973). The situation variable was introduced by Kratzer (1989) who draws on Carlson’s distinction (1977a,b) between individual-level and stage-level predicates⁵, and on Davidson’s event variable. Kratzer (1989) argues that the difference between these two types of predicates should be represented in terms of the difference in their argument structure. Stage-level or episodic predicates, such as *to be dancing on the lawn*, have a situation (“spatiotemporal”) external argument that can function as a variable in quantificational contexts and it can be bound by various quantificational operators (adverbs, verbal affixes). Individual-level or stative

predicates, such as *to be a dancer* on the other hand, have no situation argument.

Characterizing sentences (2a), (2b), (2c) and (2e) express generalizations over situations. Such characterizing sentences are called *habitual* sentences and they have the following general form (cf. also Krifka et al., II, p. 16):

(8) GEN [...s;...] (restrictor [...s...]; matrix [...s...])

The situation variable may be overtly specified by a temporal adverb (*on Saturday*, as in (2b), *in those years*, as in (2e)) or by a subordinate clause. If the linguistic context does not specify the situation variable *s* (as in (2a) and (2c)), the restrictor is left underspecified and the VA operator is interpreted in such a way that it generalizes only over those situations which are in some sense relevant. The restriction to the relevant set of situations is then supplied by the context, on the basis of world knowledge, of the general pragmatic principles that govern the use of habitual sentences in the discourse (cf. Spears (1974), Newton (1979), Conrad (1982), Kleiber (1985), Krifka (1987), Schubert and Pelletier (1989); Krifka et al. (1992).

Example (2d), repeated here as (9a)

(9-a)

<i>Ruští</i>	<i>generálové</i>	<i>umířdvají</i>	<i>v</i>	<i>mladém</i>	<i>věku.</i>
Russian	generals	die-HAB-3PL	in-PREP	young	age
'Russian generals tend to die young.'					

illustrates an interesting case, as the operator VA does not, under the most typical interpretation of (9a), quantify over a situation variable, even though it has an episodic predicate in its scope. Such episodic predicates as *umířat*^I 'to die' are telic and denote an irreversible transition from one state to another to which a particular individual can be subjected at most once. Since each particular individual can die only once, the situation variable is tied to only one occasion for any given individual. Hence, characterizing sentences with such predicates do not generalize over situations, but rather over individuals, as is shown in (9b)

(9-b) VA [x;] (x is a Russian general; x die young).

Given that the denoted event is "non-resettable" with one and the same particular individual, the individual variable must not be tied to a particular individual. This motivates the fact that the following characterizing sentence is pragmatically deviant:

(10)

?? <i>Petr Veliký</i>	<i>umířdva</i> ^I	<i>v</i>	<i>mladém</i>	<i>věku.</i>
??Peter Great	dies-HAB-3SG	in-PREP	young	age
??'Peter the Great tends to die young.'				

We can think of less usual situations or worlds in which the above sentences may be ascribed a plausible reading (for example, in the following context: 'In Russian movies, Peter the Great tends to die young'.)

What is crucial then for characterizing sentences is that they "must have at least one variable to generalize over. That is, there must be at least one variable which is not explicitly tied to some particular object. If this were not the case, they would merely state that a certain particular object (as described by the **restrictor**) has a certain property (as described by the **matrix**), and they can no longer express a 'generic' fact" (Krifka et al., II, p. 17). This finding is formulated as in (11):

(11)

"An expression Q [...x;...] (restrictor [...x...]; matrix [...{x}...])

is a **generalization over x** iff it allows for models in which there is more than one value for *x* for which \exists [restrictor[...x...]] is true (where \exists binds all free variables except *x*)" (Krifka et al. II,17).

This general statement subsumes as a special case Kopečnýs (1962) "non-actuality" property which is taken to be the salient feature of characterizing sentences and it captures the fact that they are incompatible with temporal adverbials indicating specific time points. This is shown, for example, by the following characterizing sentence:

(12)

*Pavel hrával^I šachy včera v sedm hodin večer.
*Paul played-HAB-3SG chess yesterday at seven o'clock evening
*'Paul used to play chess yesterday at seven o'clock.'

(12) is ungrammatical, because the situation and individual variable are tied to a particular single reference point and to a particular individual, respectively.

The quantificational analysis in terms of a tripartite structure has the advantage that it provides a unified account of the operator VA in characterizing sentences. And this is an important theoretic improvement on the previous accounts, in particular on Kučera (1981). Assuming that the operator VA functions as a quantifier over "cases" set up in the restrictor, and that such "cases" involve specifications of time, location, participants, and so on, the different ways the operator VA affects the interpretation of characterizing sentences can be accounted for in terms of the differences in mapping of lexical material into the restrictor and matrix. The partition of the semantic material into these two semantic constituents depends not only on the syntactic position (cf. Diesing's (1992) Mapping Hypothesis⁶), but it is also related to stress placement, and the topic-focus structure of a sentence, among other things.

This analysis also provides an explicit motivation for the restrictions on the occurrence of determiner quantifiers, adverbs of quantification and numerals in characterizing sentences. In the next two sections, I will discuss some of these constraints.

3. 2. Conditions on the Restrictor

3. 2. 1. Constraints on the Subject NP (Strong/Weak Determiners, Milsark 1974)

Krifka et al. observe that characterizing sentences can contain proper names, definite singular NPs (*John/My brother drinks whiskey*), indefinite singular NPs (*A professor drinks whiskey*), quantified NPs (*Every professor drinks whiskey*), bare plural NPs (*Professors drink whiskey*) and bare mass NPs (*Milk is healthy*). On the basis of such examples, they conclude that characterizing sentences impose no limitations on the kind of NPs which occur in them, "[t]he subject (or other NP) of a characterizing sentence may be ANY TYPE OF NP" (Krifka et al, 1992, II, p. 2). And hence the type of genericity found in characterizing sentences does not stem from any particular NP.

I propose that this conclusion must be modified, in view of the following sentences, among others:

(13-a) *Všichni Češi jsou^I dobří muzikanti.*
 all Czechs-PL-NOM are-3PL good musicians
 'All (the) Czechs are good musicians.'

(13-a') $\forall x$ (Czechs (x)) ; DISTR (good musicians (x))

(13-b) **Všichni Češi bývají^I dobří muzikanti.*
 *all Czechs-PL-NOM are-HAB-3PL good musicians
 *'All (the) Czechs are usually good musicians.'

(13-b') *VA [x ;] ($\forall x$ (Czechs (x)) ; DISTR (good musicians (x)))

These examples show that characterizing sentences that are formally marked with the suffix *-va-* on the main verb are incompatible with universally quantified subject NPs, while sentences without this suffix CAN be universally quantified.

In (13a), the plural subject NP introduces an individual variable into the restrictor clause. Following Link (1983), I assume that plural NPs represent sum individuals, that is, they represent individuals that consist of other individuals. In (13a') the variable x ranges over such a sum individual, and it is bound by the universal quantifier 'all'. Given that the stative predicate *be good musicians* has a distributive interpretation, (13a') is true if it is true for every individual denoted by the subject NP that this individual is a good musician.

The semantic representation (13b'), which underlies (13b) is ill-formed, because the variable x is bound by the universal quantifier \forall in the restrictor, and it cannot be at the same time bound by the quantifier VA. The formula (13b') does not contain any other free variable for the quantifier VA to bind. If we assume that there is a general prohibition against vacuous quantification in natural language (cf. Milsark (1974), Chomsky (1982), Kratzer (1989), for example), the ungrammaticality of (13b) is accounted for:

(14) **Prohibition against vacuous quantification**

For every quantifier Q, there must be a variable x such that Q binds an occurrence of x in both its restrictive clause and its nuclear scope (Kratzer 1989:9).

However, we cannot simply conclude that the subject NP must never be universally quantified in characterizing sentences with the operator VA. Such sentences license universally quantified subject-NPs if they contain non-distributive predicates. The quantifier VA then binds the situation variable s , as is shown in the following examples:

(15-a) *Všechny tužky bývají^I v této zdsuvce.*
 all pencils-PL-NOM are-HAB-3PL in-PREP this drawer
 'All the pencils are usually in this drawer.'

(15-a') $\forall x$ (x are pencils \rightarrow VA [s ;] (s is a situation; x is in the drawer in s))

(15-a'') VA [s ;] (s is a situation; $\forall x$ (x are pencils \rightarrow x is in the drawer in s))

(15-b) *V pátek přicházejí^I všechny děti.*
 on Friday come-HAB-3PL all-PL-NOM children-PL-NOM
 'All the children usually come on Friday.'

This is the right result given the intuition that (15a) does not state a regularity about pencils, but rather it generalizes over the situations in which the pencils are in the drawer. And similarly in (15b), the episodic predicate *přicházívát* 'to come', 'to arrive' introduces the situation variable *s* that is bound by VA, and hence the fact that the individual variable is bound by the universal quantifier does not effect the well-formedness of the sentence:

(15-b)

V pátek přicházívají^I všechny děti.
 on Friday come-HAB-3PL all-PL-NOM children-PL-NOM
 'All the children usually come on Friday.'

Although such stative distributive predicates as 'to be good musicians' are typically not interpreted as having an open situation variable, they can be construed episodically in certain contexts. And consequently, they will be represented with the situation variable *s*. Such a construal often occurs with restrictive *when*-clauses, as is illustrated by (16):

(16)

Všichni Češi bývají^I dobří muzikanti, když jsou v zahraničí.
 'All the Czechs tend to be good musicians, when they are abroad.'

Given such data, we can draw the following conclusion: A tripartite structure with the quantifier VA and a universally quantified subject-NP in the restrictor is well-formed, if the quantifier VA binds the situation variable *s*. The fact that universally quantified subject-NPs are not licensed in all the characterizing sentences certainly weakens the claim, made by Krifka et al., that characterizing sentences impose no limitations on the kind of NPs that occur in them.

The prohibition against vacuous quantification is violated by in characterizing VA-sentences with strong determiner quantifiers (cf. Milsark 1974, and also Diesing 1992:59, for example), namely universal quantifiers like *každý* 'every', 'each', *ani jeden* 'not a single', *skoro všichni* 'almost all'. On the other hand, weak determiner quantifiers like *some*, *many*, *a few* and numerals do not give rise to the vacuous quantification, but rather to pragmatically deviant characterizing sentences. And this holds, regardless whether they are formally marked with the suffix *-va-*:

(17-a)

(?)Několik Čechů je^I dobrými muzikanty.
 (?)several Czechs-PL-GEN is-3SG good-PL-INSTR musicians-PL-INSTR
 (?)'Several Czechs are good musicians.'

(17-b)

?Několik Čechů bývá^I dobrými muzikanty.
 ?several Czechs-PL-GEN is-HAB-3SG good-PL-INSTR musicians-PL-INSTR
 ?'Several Czechs are usually good musicians.'

The question mark in parenthesis in (17a) indicates that such sentences are perfectly acceptable if they are not characterizing, that is, if they make an assertion about particular individuals. Similarly as in Krifka et al. (1992, II, p. 20), it may be argued that Czech characterizing sentences, such as (17a) and (17b), are pragmatically deviant, rather than semantically unacceptable.⁷ The reason is that they involve quantification over individuals and the numerically specified subject NP indicates that their interpretation depends on the number of individuals indicated by it. However, it is difficult to find a context in which the number of individuals would play a crucial role. Why should it matter for the

appropriateness of (17) whether the number of Czech musicians is two, twenty, several or any other number? In those cases in which we come up with some rather outlandish context that makes characterizing sentences such as (17a) and (17b) appropriate utterances, the quantifier *VA* will bind the situation variable *s*. However, sentences with weak determiner quantifiers are often pragmatically odd, even if they involve a quantification over the situation variable. For example, a characterizing sentence in which the subject-NP contains a numeral, such as *two*, is odd in the context of a restrictive *when* clause that introduces a situation variable into the restrictor:

(18)

?*Dva Češi jsou^I / bývají dobří muzikanti, když jsou v zahraničí.*
 ?'Two Czechs are / tend to be good musicians, when they are abroad.'

Krifka et al. also point out that the subject NP of a characterizing sentence can be numerically specified with weak determiner quantifiers, if the predicate has a non-distributive interpretation. This is shown in (19):

(19-a) *Two canaries can be kept in the same cage, if it is large enough.*(19-b) *Two magnets either attract or repel each other.* Krifka et al. (1992, II, p. 20-21)

The following Czech example illustrates the same point:

(20) *Dvě molekuly vodíku se vážou na jednu molekulu kyslíku.*
 'Two molecules of hydrogen bind one molecule of oxygen.'

(20') GEN [x, y;] (x is two molecules of H & y is one molecule of O ; x binds y)

Here, the number specification is essential. Hence, the following conclusion can be made:

(21) Characterizing sentences are often pragmatically deviant if their subject NPs are modified with weak determiner quantifiers and if they are headed by distributive predicates.

3. 2. 2. Constraints on Temporal Adverbials

The prohibition against vacuous quantification motivates not only the constraint on the occurrence of universally quantified subject NPs, but also the constraint on the occurrence of universal adverbs of quantification, such as *always* or *never*. This is shown in (22):

(22-a)

**Nikdy tam nebyvám^I včas.*
 *never there NEG-am-HAB-1SG on-time
 '*I am usually never there on time.'

(22-b)

**Vždycky tam byvám^I včas.*
 *always there am-HAB-1SG on-time
 '*I am usually always there on time.'

Such sentences lack a bindable variable in the restrictor. The *only* available variable, namely the situation variable *s*, is bound by the universal quantifier \forall in the restrictor. Since (22) does not contain any other free variable for the quantifier *VA* to bind, the logical representation yields a vacuous quantification.

Count cardinal temporal adverbials, such as *three times*, and frequency adverbials, such as *several times* and *many times*, can be accommodated within the scope of the operator VA provided that they constitute sum situations over which the operator VA quantifies. In other words, it must be obvious from the context that the number of episodes indicated by such adverbials is repeated an unspecified number of times. This point is illustrated by the following examples:

(23-a)

*Pavel	hráva ^I	trikrát	šachy.
*Paul	plays-HAB-3SG	three-times	chess

(23-b)

Pavel	hráva ^I	trikrát	týdně	šachy.
Paul	played-HAB-3SG	three-times	weekly	chess
'Paul usually plays chess three times a week.'				

VA [s;] (Paul plays chess in s ; s is three times a week)

By comparison, characterizing sentences with such frequency adverbials as *usually*, *often*, *seldom* are perfectly acceptable:

(24)

Obyčejně / často / zřídka	tam	bývám ^I	včas.
usually / often / rarely	there	am-HAB-1SG	on-time
'I usually / often / rarely tend to be there on time.'			

We could attribute this difference to the difference among various subclasses of what Lewis (1975) calls 'adverbs of quantification'. While universal adverbs of quantification *always* and *never* correspond to standard quantifiers, such adverbs as *usually*, *generally*, *often*, *seldom* do not (cf. Farkas & Sugioka 1983). We could assume that adverbs that do not correspond to standard quantifiers can occur in the scope of the operator VA, while those that do, like universal adverbs of quantification, for example, cannot, as they bind the situation variable.

The ultimate motivation for the above facts, for the interaction between the quantifier VA and the quantifiers and numerals within the subject-NP should be sought in the semantics of the quantifier VA, namely in its inherent vagueness and in the exception-allowing feature that ensues from it.

3. 2. 3. The 'Essential/Contingent' Distinction, the Suffix -VA- and Genericity

It has been observed that characterizing sentences allow exceptions or counterexamples. This feature clearly distinguishes them from universal statements. For example, the proposition expressed by such a characterizing sentence as *Pluto chases trucks* is true, even if there is one occasion on which Pluto sees a truck and does not chase it. However, in this situation the corresponding universally quantified sentence *Pluto always chases trucks* will be false.

This exception-allowing feature can be traced back to the inherent vagueness that is associated with the kind of quantification found in characterizing sentences. If in reply to the question about where my socks are, the speaker answers with (25)

(25)

Tvoje ponožky bývají^I přece ve skříni.
 your socks are-HAB-3PL evidently in-PREP closet
 'Your socks are usually in the closet, don't you know?'

and should it turn out that the socks are always, without exception, in the closet, and the speaker later asserts

(26)

Přesně řečeno, tvoje ponožky jsou^I vždycky ve skříni.
 strictly speaking your socks are-3PL always in-PREP closet
 'Strictly speaking, your socks are always in the closet.'

he is not contradicting himself.

In general, every time the operator *-va-* is used, vagueness is a crucial part of the message. The vagueness motivates the possibility of exceptions or counterexamples and it can be denied or suspended by an explicit comment from the speaker. Therefore, it is to be seen as an implicature of characterizing sentences, rather than an entailment. It may be suggested that the speaker chooses the operator *VA* as a "hedging" device, because he lacks an adequate evidence for making a stronger claim or because the stronger statement is known to be false.

It is well known that formulae involving universal quantification cannot capture the meaning of generic sentences (Lyons 1977, Carlson 1977, Schubert&Pelletier 1987, Krifka et al. 1992, among many others).⁸ Carlson (1977b) convincingly argues that characterizing sentences cannot be adequately represented as involving a near-universal quantifier *most* or *almost all*.⁹ Just like the generic operator *GEN*, so does *VA* require that there be a 'sufficiently large and vague' number of admissible assignments of values for the free variable(s) that it binds. It is notoriously difficult to determine what the "suitable" number of instances is over which a characterizing sentence can be said to express a generalization. What counts as "a suitable number" or "a sufficiently large number" varies from sentence to sentence, and it may depend on various contextual parameters, both linguistic and non-linguistic, including our general knowledge of the real world. The inherent vagueness is the central problem of generic sentences that needs to be solved. It poses a problem in particular to a truth conditional semantic description of characterizing sentences (cf. Krifka et al., among others).

The exception-allowing feature is motivated by the vagueness inherent in the kind of quantification found in characterizing sentences. The vagueness, in turn, presupposes that the predications in the scope of *VA* express a contingent state of affairs. This is shown by the following sentences:

(27-a)

??*Valčík bývá^I ve třičtvrtěním taktu.*
 ??waltz is-HAB-3SG in-PREP three-four time
 ??'The waltz tends to be in three-four time.'

(27-b)

Valčík bývá^I populární.
 waltz is-HAB-3SG popular
 'The waltz tends to be popular.'

It is a necessary attribute of waltzes that they are in three-four time, whereas being popular is not.

The crucial point, illustrated by the above examples, is that Czech provides two systematic means for expressing generic sentences depending on whether they express generalizations based on necessary, permanent, unchangeable properties or on temporary, accidental, contingent properties. Formally, this semantic distinction is optionally marked by the suffix *-va-* that is sanctioned only in the latter type of generic sentences. This behavior may be captured by the following generalization: **The predicate P in a formula $VA(P)$ expresses a contingent state of affairs.**¹⁰

The recognition of different kinds of predications that is based on the distinction between what is essential and what is contingent raises a number of epistemological and metaphysical problems (cf. Lyons 1977:195-7). Nevertheless, despite the problematic status of essentialism, such a distinction seems to play an important role in the semantic analysis of Czech and also in other languages, for example in the analysis of the English progressive (cf. Dowty 1979:179 and 198).¹¹

Why should a predication expressing an exceptionless state of affairs in the scope of the operator VA be odd? The most compelling motivation seems to be a pragmatic one. In the case of exceptionless states of affairs, the use of the generic predication P is more expected than the use of the characterizing predication $VA(P)$, because the state of affairs expressed by such a predication P does not allow any exceptions or counterexamples (at least in the real world as we know it). Informationally, the predication P that conveys an exceptionless state of affairs is stronger than the corresponding characterizing predication $VA(P)$. By Grice's maxim of quantity¹², it seems that the weaker, contingent predication with a characterizing verb should be used by the speaker only if the stronger statement is known to be false or if the speaker does not have enough evidence for its truth.

How should we describe the difference between the generic sentences with the suffix *-va-* and those without it? Both types of generic sentences represent generalizations from past experiences to statements of regularity. Since they involve induction from limited experiences or observations about the actual world to a regularity about possible worlds, both types of the quantifiers used in them, namely VA and $-VA$ (for those generic sentences that do not allow the suffix *-va-*), can be viewed as modal operators. The main difference between these two quantifiers would be in their respective modal bases with respect to which the generic sentences are interpreted. (cf. more on this in Krifka et al., the possible worlds semantics based on Stalnaker (1968), Lewis (1973) and Kratzer (1981)).

4. Stative Predicates with the Suffix *-va-*: Episodic Construal and/or "Remote Past"

A further supporting argument for the claim that the application of the operator VA to a given predication P requires that the predication express a contingent property of some entity mentioned in it, can be provided by the stative predicates with the suffix *-va-*. Consider the following characterizing sentences with stative predicates *to know*, *to be intelligent*, *to like*:

(28-a)
 ??Znávám^I Ivana dobře.
 ??know-HAB-1SG Ivan-SG-ACC well
 ??'I usually know Ivan well.'

(28-b)
 ?Pluto byvá^I inteligentní.
 ?Pluto is-HAB-3SG intelligent
 ?'Pluto tends to be intelligent.'

(28-c)
 ??Mívá Ivana ráda.
 ??has-HAB-3SG Ivan-SG-ACC fond-FEM
 ??'She tends to like Ivan.'

Stative predicates do not introduce an open situation variable. Therefore, if they occur in characterizing sentences, the operator VA quantifies over an individual variable. Since in the above sentences the individual variable is tied to a particular individual, they constitute meaningful utterances only if the denoted disposition can be seen as a temporary or transient characteristics of the individual denoted by the subject NP. This presupposes that the stative predicate can be coerced into an "episodic" construal, which, in turn, sanctions the introduction of an open situation variable. Hence, the acceptability of such characterizing sentences will depend on the subject NP as well as on the (linguistic and extra-linguistic) context. For example, the episodic construal of the stative predicate *to be intelligent* may mean something like 'to act in an intelligent way', that is, (28b) would mean that Pluto changes back and forth between acting in an intelligent way and not. There certainly is nothing unusual about making such an assertion, given that many dispositions vary across the different stages of a single individual. Just as one can assert something about a kind by saying something that is generally true of the objects that realize it, one can assert something of an object by saying something that is generally true of its stages. The oddity of such characterizing sentences as (28a) - (28c) is attributable to the fact that the episodic construal may not easily fit our conventional ways of viewing dispositions or potentials of particular individuals. Even though dispositions may change in time, they do not change at the same rate as episodic states of affairs do.

The corresponding past tense sentences (29a) - (29c)

(29-a)
 Znával^I jsem Ivana dobře.
 knew-HAB-1SG am-AUX-1SG Ivan-SG-ACC well
 'I used to know Ivan well.'

(29-b)
 Pluto býval^I inteligentní.
 Pluto was-HAB-3SG intelligent
 'Pluto used to be intelligent.'

(29-c)
 Mívala^I Ivana ráda.
 had-HAB-3SG-FEM Ivan-SG-ACC fond-FEM
 'She used to like Ivan.'

have two possible interpretations: (i) quantificational and (ii) non-quantificational. Contrary to Kučera (1981), who claims that such past tense sentences have *only* the non-quantificational interpretation, I believe that the non-quantificational interpretation is in

most situations the one that is clearly preferred. The main reason is that it is often difficult to coerce stative predicates into an episodic construal. Since the non-quantificational meaning is readily available in the past tense, there are no restrictions on the occurrence of universally quantified subject-NPs and universal adverbs of quantification:

(30-a)

Všichni Češi bývali^I dobří muzikanti.
 all Czechs-PL-NOM were-HAB-3PL good musicians
 'All (the) Czechs used to be good musicians.'

(30-b)

Býval^I jsem tam vždycky včas.
 NEG-am-HAB-1SG am-AUX-1sg there never on-time
 'I always used to be there on time.'

In such sentences, the presence of universal quantifiers does not violate the constraint against vacuous quantification, because the operator *VA* does not here function as a quantifier.

All the past tense sentences with operator *VA*, assert that the denoted state holds in the distant past. And they have the implicature that there exists a nonempty interval between this distant past and t_0 for which the disposition is not asserted to be true (cf. also Kučera 1981:179-180). This can be shown by the following examples in which characterizing sentences with the operator *VA* are incompatible with adverbials indicating recent past, such as *až do včerejška* 'until yesterday':

(31-a)

Kdysi tajně poslouchával^I radio.
 once-upon-a-time secretly listened-to-HAB-3SG radio
 'Then he used to listen secretly to the radio.'

(31-b)

?**Až do včerejška tajně poslouchával^I radio.*
 ?*until yesterday secretly listened-to-HAB-3SG radio

On the other hand, the corresponding sentences without the suffix *-va-* would be perfectly acceptable with temporal adverbials indicating both the remote and recent past.

For English, it may be argued that *used to* functions as a past tense operator that is applied to stative predicates. In Czech, on the other hand, the situation is puzzling, given that the suffix *-va-* on its own does not carry any tense indication. If we assume that the suffix *-va-* is a sentential modal operator, its use in quantificational and non-quantificational sentences could be traced back to its inherent vagueness. Both the quantificational and non-quantificational uses of *VA*-sentences have in common that they are stative and express a property that is a contingent property of some entity mentioned in a sentence. In both the quantificational and non-quantificational uses, a property is asserted to hold for only some objects or individuals that realize a certain kind or for only certain stages of a given particular object. Hence, the well-formedness conditions on both the quantificationally and non-quantificationally used *VA*-sentences crucially rely on the notions of exceptions or counterexamples and on the contingency of the expressed state of affairs. It is much harder to justify the connection between the inherent vagueness of the operator *VA* and the 'remote past' meaning. It is possible to speculate that the remote past reference is derivable from the combination of two meaning components present in the

past tense VA-sentences: the past tense and the vagueness inherent in the modal operator VA. The solution to the puzzle formulated by Kučera (1981) is to be sought in the intersection of modal and temporal semantics.

Footnotes

1. In Czech linguistics such verbs are known as *slovesa iterativni'* or *slovesa ndsobend*, in Russian the terms *mnogokratnyj* (cf. Comrie 1976:27, Fn. 1); or "indefinite-iterative" (cf. Rassudova 1984:16ff.) are used.
2. Heim (1982) was the first to propose a theory of characterizing sentences with indefinite generic NPs using a dyadic operator.
3. Carlson (1989) provides a relational analysis of characterizing sentences that assumes that characterizing sentences relate two semantic constituents, whereby their different readings can be represented by varying the specific relation in which the constituents are related to each other.
4. Partee, Bach, Kratzer (1987) and Partee (1990; 1991a; 1991b) employ the tripartite structure representation to capture the parallels between the different morpho-syntactic means by which quantification is expressed within one language and across languages. The quantifier can be realized not only by determiner quantifiers (*every, most*) within NPs, that is, by *D-quantifiers*, but it may also be expressed at the level of the sentence or VP with sentence adverbs (*usually, always*), auxiliaries, and verbal affixes, that is, by *A-quantifiers*.
5. Carlson's distinction can be roughly described as a distinction between predicates that hold more or less permanently or that can be predicated atemporally of their arguments and predicates that are episodic, namely those predicates that Carlson analyzes as applying to a spatiotemporal slice of an individual. The distinction between *individuals* and their temporally restricted *stages* can be illustrated with adjectival predicates: *tall, intelligent, sane* apply to individuals and *drunk, present, sick* to their temporary manifestations.
6. According to Diesing's (1992) Mapping Hypothesis, the material from the VP is mapped into the Nuclear Scope, while the material outside the VP is mapped into the Restrictive Clause.
7. Declerck (1988) claims that generic sentences and restrictive *when*-clauses are associated with a general property of 'unboundedness'. In support of this argument, he gives examples, such as (a) *Cats are beautiful when they have white fur*, and (b) *?Twelve cats are beautiful when they have white fur*. Declerck (1988) believes that such examples as (b) show that the restrictive indefinite NP must not be numerically specified. Against Declerck (1988), Krifka et al. argue that there are pragmatic, rather than semantic, reasons for the unacceptability of such sentences as (b). They assign the following quantificational analysis to (a) and (b):
 (a') GEN [x;] (x is a cat & x has white fur; x is beautiful)
 (b') GEN [x;] (x is twelve cats & x have white fur; x are beautiful) (cf. Krifka et al. (1992, II, p. 20)).
8. The reason is that universal quantification is too strong, because formulae involving universal quantification are falsifiable by just one counterexample. At the same time,

universally quantified formulae are too weak, because they may be true as a matter of accidental fact.

9. Carlson (1977b), in his discussion of generics, observes that sentences such as *Dutchmen are good sailors* can be true even if the corresponding sentences with *most* or *almost all* are false. Obviously, most Dutchmen are not sailors at all, nevertheless *Dutchmen are good sailors* is true. And a similar argument can be made for Czech characterizing sentences. Contrary to Dahl's (1985) claim, for example, the use of the suffix *-va-* does not always indicate that "what is expressed in the sentence took place in the majority of those occasions" (Dahl 1985:97).

10. The following contrastive pairs also illustrate this point: ??*Země se točívá^I kolem slunce* ?? 'The earth tends to revolve around the sun' vs. *Všechno se točívá^I kolem ní* 'Everything tends to revolve around her'; ??*Voda mívá^I chemické složení H₂O* ?? 'Water usually has the chemical composition H₂O' vs. *Voda z vodovodu mívá^I správnou teplotu*. 'Tap water is usually the right temperature.'¹⁵ Notice that such examples show that the 'essential/contingent' distinction cannot be made in the lexicon of a language once and for all. A particular lexical predicate may belong to either class in different sentences. Whether a given sentence expresses an essential or a contingent property of some entity mentioned in it, cannot be often viewed simply as a projection of the lexical semantic properties of the main verbal predicate, but rather it depends on a number of contextual factors: the subject-NP, various adjuncts, interpreter's knowledge about the larger scenes (in Fillmore's sense) that a given sentence evokes.

11. Dowty (1979:179 and 198) illustrates this point, among others, with the following examples: *Your beer glass is sitting near the edge of the table - The long box is standing on end - The socks were lying under the bed; John's house sits at the top of a hill - ??John's house is sitting at the top of a hill; New Orleans lies at the mouth of the Mississippi River - ??New Orleans is lying at the mouth of the Mississippi River; The river flows through the center of town - (?) The river is flowing through the center of town.*

12. (1) Make your contribution as informative as is required (for the current purposes of the exchange.). And, (2) Do not make your contribution more informative than is required. Cf. Grice (1975)

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