On the reference of verbal predicates

Both nominal and verbal expressions can be used to refer. This paper assumes the referent of a verbal predicate to correspond to the interval the assertion is made about, the topic time interval I(TT). It will be argued that internal structure and boundedness characteristics of I(TT) and their relationship to the standpoint of the observer, the *točka otsčeta* TO (Padučeva 1996), determine specificity and definiteness of this verbal referent, and that the specification of I(TT) is achieved by grammatical aspect.

Aspect establishes a relation between the event time interval I(e) and I(TT), cf. Klein (1995). In certain cases, aspect selects particular elements encoded in the semantic representation of the verb/VP, namely phases (φ) and boundaries (τ), cf. Bickel (1996). In other cases, aspect relates the whole I(e) to I(TT).[1] I(TT) is projected onto the temporal axis of the speaker via TO. With the selection function, I(TT) is unambiguously anchored to TO, with the simple relation function, it is merely quantified over. In the former case I(TT) is specific, in the latter non-specific.

Depending on the boundaries of I(TT), the standpoint of the observer is located outside (closed boundaries) or within this interval (open boundaries). Being positioned outside means viewing the referent as a whole, being positioned inside viewing only part of it, cf. Leiss (2000). In the former case, I(TT) can be said to be definite, in the latter indefinite. This part-whole structure defining definiteness is independent of the specificity of I(TT). Since Russian does not have grammatical means to specify the boundedness of I(TT), it might seem as if Russian aspect determines the definiteness of this interval – hence the alleged connection of pf aspect and definiteness (e.g. Ramchand 2004). Actually, however, the boundedness-feature of I(TT) follows as a mere default from aspect choice, cf. Sonnenhauser (to appear).

The situation is more obvious in Bulgarian which has also means to specify the boundedness of I(TT) – Aorist and Imperfect[2], cf. Sonnenhauser (to appear), and thus nicely illustrates the specification of I(TT) in terms of inherent structure (specificity, pf/ipf) and boundaries (definiteness Aorist/Imperfect):[3]

	I(TT)	aspect	reading (example)	definiteness/specificity
1	[---τ---]	pf Aorist	event	definite, specific
2	----e----	ipf Present	atemporal	$\varnothing$[4]
3	]---φ---[	ipf Imperfect	actual-processual	indefinite, specific
4	[---e---]	ipf Aorist	general-factual	definite, non-specific
5	]---e---[	ipf Imperfect	continuous	indefinite, non-specific
6	[---φ---]	ipf Aorist	semi-perfective	definite, specific

Table 1

The formal representation can be carried out in terms of von Heusinger's (1997, 2002) modified epsilon operator. This operator allows for a unified representation of the definiteness and specificity of noun phrases. It is interpreted as a context-dependent choice function which may be contextually anchored and which may be quantified over. A modified epsilon-expression $\varepsilon_i x\ Fx$ contains the domain of potential referents F and the context parameter i, which determines the ranking of the elements in F. The operator ε chooses the most salient element out of this ordered set. Definiteness then depends on the familiarity (definite) or non-familiarity (indefinite) of the choice function, specificity has to do with its anchoring – with specific expressions, the choice function is anchored to the situation or to the speaker, with non-specific expressions, it is existentially or universally quantified over.

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[1] The selection/non-selection has to do with semantic markedness.
[2] Both are at least as much aspectual as they are temporal, cf. Sonnenhauser (to appear).
[3] The proposal focuses on single events, therefore the pf Imperfect is excluded.
[4] Since no time interval is individuated, neither specificity nor definiteness apply.

The interaction of definiteness and specificity and their representation is illustrated in table 2 with the expression *a/the F is G,* uttered in a context with the salience hierarchy *k* (von Heusinger 1997: 95):

	definite	**indefinite**
specific	$G\ \varepsilon_k x\ Fx$: *the*	$G\ \varepsilon_l x\ Fx$, mit $l \neq k$: *a (specific)*
non-specific	$\forall i\ G\ \varepsilon_i x\ Fx$, mit $|F|{=}1$: *whoever*	$\exists i\ G\ \varepsilon_i x\ Fx$: *a (non-specific)*

Table 2

The following examples illustrate, how this system can be made use of in representing definiteness and specificity of verbal predicates in Bulgarian:

(1)　　definite, specific
　　a.　　Az otidoch[pf Aorist] na lekcii.　　　　　　(in the situation k)
　　　　　'I went to the lectures.'
　　b.　　otidoch_na_lekcij (az, ε_ki PAST(i))

(2)　　indefinite, specific
　　a.　　Az otivach[ipf Imperfect] na lekcii v 7 časa.　　(in the situation k)
　　　　　'At z o'clock, I was walking to the lectures.'
　　b.　　otivach_na_lekcij (az, ε_li PAST(i))　　　(with $l \neq k$)

(3)　　definite, non-specific
　　a.　　Kato　malăk vednăž padach[ipf Aorist] ot　　tova dărvo.
　　　　　'When I was a child, I fell from this tree.'
　　b.　　padach_ot_tova_dărvo $\forall$s(az, ε_si PAST(i))

(4)　　indefinite, non-specific
　　a.　　Toj raboteše[ipf Imperfect] v universiteta.
　　　　　'He worked at university.' (= He was teacher at university.)
　　b.　　rabotaše_v_universiteta $\exists$s(az, ε_si PAST(i))

The proposal made in this paper is an attempt to account for the referential mechanisms and the referents of verbal predicates. Regarding grammatical aspect as crucial in this respect sheds new light onto its interpretation and its discourse behaviour. Moreover, this proposal captures parallels between the nominal and verbal domains without ignoring the decisive difference: reference to participants vs. reference to intervals.

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