

## INTRODUCTION

The notion of ‘existence’, which we take to have solid intuitive grounding, plays a central role in the interpretation of at least three types of linguistic constructions: copular clauses, existential sentences, and (in)definite noun phrases.

### 1. THE INTERPRETATION OF THE COPULA

Copular clauses are one type of stative constructions, a fact that raises the philosophical issue of a typology of states. This question is addressed in the contribution by Claudia Maienborn, who supports her proposals with data from English and German. Her results are incorporated in Ronnie Cann’s dynamic syntax analysis of *be*. The meaning of the copula is further considered in the contributions by Ileana Comorovski and Ljudmila Geist, who analyze data from a variety of languages: French, English, Romanian, and Russian.

Copular clauses are exponents of the class of stative constructions, and as such one question they raise is that of a possible typology of states: are there several types of states? The contribution by Claudia Maienborn ‘On Davidsonian and Kimian states’ tackles this issue and argues that some statives do not denote Davidsonian eventualities (Davidson 1967), but something ontologically ‘poorer’. Maienborn draws a distinction between Davidsonian eventualities and ‘Kimian’ states, with copular clauses falling in the latter category, regardless of whether the predicate denotes a temporary property (‘stage-level predicate’) or a more or less permanent property (‘individual-level predicate’).

What are the differences between Davidsonian eventualities and Kimian states? The former are spatio-temporal entities with functionally integrated participants. It follows from their definition that eventualities can be located in space and time. In characterizing Kimian states, Maienborn combines Kim’s (1969, 1976) notion of temporally bound property exemplifications with Asher’s (1993, 2000) conception of abstract objects as mentally constructed entities. Maienborn defines Kimian states as abstract objects for the exemplification of a property *P* at a holder *x* and a time *t*. From this definition, it follows that Kimian states have no location in space, but can be located in time. Thus statives do introduce an argument; this argument is, however, ontologically ‘poorer’ than Davidsonian eventuality arguments.

The ontological properties of Kimian states find their reflex in the following linguistic facts: (i) Kimian state expressions cannot serve as infinitival complements

of perception verbs and do not combine with locative modifiers; (ii) Kimian state expressions are accessible for anaphoric reference (but only with demonstrative pronouns used anaphorically, not also with personal pronouns); and (iii) Kimian state expressions combine with temporal modifiers.

Maienborn shows copular clauses to display the linguistic characteristics listed above, confirming her hypothesis that copular clauses are associated with Kimian states. This hypothesis is adopted by Ronnie Cann in his contribution ‘Towards a dynamic account of *be* in English’ and encoded in his definition of *be*. Cann analyzes *be* as a semantically underspecified one-place predicate whose content is determined by context through pragmatic enrichment. The analysis is cast in the framework of dynamic syntax (Kempson et al. 2001, Cann et al. 2005), of which the paper contains a clear and concise presentation.

The treatment of *be* as semantically underspecified allows Cann to have a uniform semantics for this verb across constructions. Among the constructions considered in the paper are certain types of ellipsis involving the copula, as illustrated in (1)–(2) below:

- (1) Ellipsis in a predicative copular sentence:  
John’s really happy, John is.
- (2) Existential focus construction:  
Neuroses just ARE. (= Neuroses exist.)

Other constructions analyzed by Cann are predicative copular clauses and *there be* sentences; particular attention is given to existential sentences, both with indefinite and with definite postcopular noun phrases. As Cann points out, his approach to existential sentences allows an incorporation of Perspective Structure, as presented in Borschev and Partee (2002) and pursued in Partee and Borschev (this volume).

The contributions by Ileana Comorovski and Ljudmila Geist are concerned to a large extent with the analysis of specificational copular clauses (cf. Higgins’s 1973 taxonomy of copular clauses). Unlike Cann’s paper, Comorovski’s and Geist’s papers assign at least one full-fledged meaning to the copula.

In her contribution ‘Predication and equation in copular sentences: Russian vs. English’, Ljudmila Geist bases her analysis of specificational clauses on data from Russian and suggests a way of extending her analysis to English. The sentences below provide the basis for Geist’s analysis:

- (3) a. Ubijca            staruxi        (\*éto) Raskol’nikov.  
murderer<sub>Nom.</sub> of-old-lady    this Raskolnikov  
‘The murderer of the old lady is Raskolnikov.’
- b. Pričinoj            avarii            \*byla / byli neispravnye tormoza.  
reason<sub>Sg.Fem.Ins.</sub> of-accident was<sub>Sg.Fem./werePl.</sub> broken brakes<sub>Pl.</sub>  
‘The reason for the accident was broken brakes.’

- c. Edinstvennyj, kto stal na našu storonu, \*byl / byla Varvara.  
 only-person<sub>Masc.Nom.</sub> who came to our side was<sub>Masc</sub>/was<sub>Fem</sub> Barbara<sub>Fem</sub>  
 ‘The only person who defended us was Barbara.’  
 (Padučeva and Uspenskij 1997:178)

Geist compares the specificational sentences in (3) with equative and predicational copular clauses, arriving at the following results: (i) Example (3a) shows that the predicate proform *eto* is excluded in specificational clauses. This fact suggests very strongly that Russian specificational clauses do not belong to the equative type of copular clauses (which require the presence of *eto*), and therefore the two noun phrases that specificational clauses contain cannot both be referential. (ii) Examples (3b, c) show that the first noun phrase can occur either in the Nominative or in the Instrumental case. Since the case alternation Nominative/Instrumental is only possible with predicative noun phrases, these data provide crucial support in favor of assigning predicate status to the leftward noun phrase (cf. Padučeva and Uspenskij 1997, Partee 1998). (iii) Examples (3b, c) also show that Russian specificational clauses display an inverted agreement pattern, an indication that the rightward noun phrase serves as the syntactic subject.

From these observations, Geist concludes that specificational clauses can be syntactically analyzed as involving predicate inversion. Geist follows Partee (1986) in treating the copula as essentially predicative, with the semantic structure  $\lambda P \lambda x [P(x)]$ . In a specificational clause, the definite subject noun phrase undergoes Partee’s (1987) *ident* operation, which shifts its type from *e* to  $\langle e, t \rangle$ . For instance, the sentence-initial noun phrase in (3a) denotes the property of being identical to the murderer of the old lady. The copula (which in Russian is phonetically empty in the Present Tense) serves as an instruction to predicate this property of *Raskolnikov*. Specificational sentences differ in information structure from the corresponding predicational sentences: in a predicational sentence, the topic is the *e*-type noun phrase, whereas in a specificational one, the topic is the  $\langle e, t \rangle$ -type noun phrase.

Geist extends her analysis of specificational clauses to English, arguing against their treatment as equatives proposed by Heycock and Kroch (1999). To account for the English data, Geist puts forth a type-shifted version of the copula of predication. This comes very close to defining a copula of specification, which is the line of analysis taken in Ileana Comorovski’s contribution ‘Constituent questions and the copula of specification’. Comorovski provides a cross-linguistic investigation of interrogative and declarative specificational clauses. The data she examines are drawn from French, Romanian, and English; these are languages in which, unlike in Russian, the copula is always overt in finite clauses. The data Comorovski examines lead her to the conclusion that specificational subjects must be non-rigid designators (type  $\langle s, e \rangle$ ) that are ‘indirectly contextually anchored’. Indirect contextual anchoring is a link between the denotation of an intensional noun phrase and the context of utterance; this link is established with the help of a referential expression contained in the noun phrase.

Comorovski argues that the specificational reading of copular clauses is induced by the copula of specification, for which a definition is provided. Several arguments are advanced in favor of a lexical approach to copular clauses with specificational interpretation. One of these arguments is based on French and Romanian copular constituent questions with specificational answers. French and Romanian have interrogative pronouns (Fr. *quel*, Rom. non-discourse-linked *care*) that can occur only as predicate nominals in such questions: their limited distribution is taken to indicate that they are selected by a particular lexical head, namely the copula of specification.

## 2. EXISTENTIAL SENTENCES ACROSS LANGUAGES

This part of the volume considers some of the existential constructions of Chinese, Russian, and Italian. Existential constructions bring together issues discussed in Parts I and III: the meaning of the verb ‘be’, the semantics/pragmatics of (in)definites, and the role of existential presupposition in the interpretation of noun phrases.

In their paper ‘Existential sentences, *be*, and the genitive of negation in Russian’, Barbara Partee and Vladimir Borschev are concerned with the forms and meanings of the verb *byt’* (‘be’) in existential and other sentences, as well as with the way *byt’* interacts with the Genitive of negation. These issues lead to a re-examination of what counts as a negative existential as opposed to a negative locative sentence.

Partee and Borschev take up the way of distinguishing existential from locative sentences proposed in Borschev and Partee (2002), namely in terms of Perspective Structure, a notion which relates to a difference in predication in the two types of sentences. Both types of sentences have the argument structure BE (THING, LOC). Partee and Borschev suggest that an ‘existence/location situation’ may be structured either from the perspective of the THING or from the perspective of the LOCATION. They introduce the term ‘Perspectival Center’ for the participant (THING or LOC) chosen as the point of departure for structuring the situation. In the unmarked structure, the THING is chosen as ‘Perspectival Center’. This yields a locative sentence, which is a standard predicational sentence. Thus locative sentences are a type of copular sentences of the kind analyzed by Cann and Maienborn in Part I of the volume. In contrast to locative sentences, in an existential sentence, it is the LOC that is chosen as ‘Perspectival Center’, a choice that turns the predication around: saying of the LOC that it has THING in it.

The following principle holds of Perspectival Centers: any Perspectival Center must be normally presupposed to exist. It follows from this principle that the THING denoted by a Nominative subject in a negative locative sentence is normally presupposed to exist, whereas in negative existential sentences (where the subject is Genitive), only the LOCATION is normally presupposed to exist. This is confirmed by examples like (4):

- (4) a. *Studenty ne byli na koncerte. Koncerta ne bylo.*  
 Students-NOM NEG were at concert. Concert NEG was  
 ‘The students were not at the concert. There was no concert.’
- b. *Studentov na koncerte ne bylo. # Koncerta ne bylo.*  
 Students-GEN at concert NEG was. Concert NEG was  
 ‘There were no students at the concert. #There was no concert.’

The semantics of negative existential sentences is formulated in terms of Perspective Structure: a negative existential sentence denies the existence in the Perspective Center LOCATION of the thing(s) described by the subject noun phrase. Existence is understood to always be relative to some LOCATION. The LOCATION may be indicated explicitly, or it may be implicit, given by the context, e.g. ‘here’ or ‘there’, ‘now’ or ‘then’.

While in Russian many sentences with the structure BE (THING, LOC) are clearly associated with either typical existential or typical locative morpho-syntax, some of the negative sentences with the structure BE (THING, LOC) present a mixture of the morpho-syntactic properties of typical negative locative sentences (e.g. Nominative subject) and typical negative existential sentences (e.g. presence of *net* ‘is not’). One source for the break-up of the clustering of properties is the divergence of Theme (an information structure notion) and Perspective Center. An important question raised by the mixed sentence forms is whether they can all be analyzed as instances of sentence negation, or whether what appears at first sight to be a negative sentence is in fact just an instance of constituent negation. Thus the question that arises is what negative sentence is the negation of an affirmative sentence, and moreover, of which type of affirmative sentence (existential or locative)?

One set of intermediate cases discussed by Partee and Borschev involves sentences with definite subjects that have morpho-syntactic characteristics of existential sentences. Since it is indefinites that typically occur in existential sentences, the question is whether this type of intermediate cases call for the postulation of (at least) a third class of sentences, existential-locative sentences, with the suggestion that the classification of sentences with the structure BE (THING, LOC) may not be discrete. The suggestion that at least some of the sentences with definite subjects and (partial) existential morpho-syntax are plain existential sentences converges with a similar suggestion made in the contribution by Ronnie Cann, who, unlike many of his predecessors, does not analyze English existential sentences with definite subjects as ‘presentational’, but as existential.

Partee and Borschev note that the existential interpretation of the intermediate cases is favored by the presence in the sentence of a possessive expression (e.g. *u nas*, lit: ‘at us’). This brings us to the topic of ‘have’-existentials, such as those analyzed in the contribution on Chinese by Jianhua Hu and Haihua Pan, ‘Focus and the basic function of Chinese existential *you*-sentences’. The authors use data from the Chinese existential *you*-construction, the closest counterpart of the English *there*

*be* construction, which show that the Chinese construction can be used to introduce not only a new entity, but also a new relation, such as the membership relation or the type-token relation. The authors argue that the basic function of Chinese existential *you*-sentences is to introduce into the discourse something new, be it an entity or a relation. Hence, the ‘Definiteness Effect’ in Chinese is only a by-product of the discourse function of the existential construction.

The Perspective Theory developed in Borschev and Partee (2002) is the background against which Lucia Tovena casts her contribution ‘Negative quantification and existential sentences’. Tovena proposes a new analysis of Italian negative existential sentences that contain negative determiners, but no copula. This type of sentence is illustrated below:

- (5) a. Nessuno testimone intorno a lei.  
(There were) no witnesses around her.
- b. Niente processo per la truppa.  
(There will be) no trial for the troops.

Tovena develops a semantics of this type of negative existential sentences as tripartite structures. The negative quantifiers *nessuno* and *niente* take the head noun as restrictor and the predicate expression as nuclear scope. The semantic characteristic that the two negative existential sentences above share is that the intersection of the sets denoted by the head noun and the predicate expression is empty. However, the two constructions show subtle semantic differences, which are reflected in their syntactic properties. In order to account for these facts, Tovena adapts Borschev and Partee’s Perspective Structure and reformulates it in terms of Generalized Quantifier Theory. Tovena’s approach also accounts for some fine-grained interactions between the general semantics of Italian verbless sentences and some of the semantic/pragmatic properties of their arguments, such as specificity, familiarity, and presupposition. These properties will be a central issue of the third part of the volume.

### 3. EXISTENCE AND THE INTERPRETATION OF NOUN PHRASES

Existence also plays a prominent role in the interpretation of noun phrases. The existential quantifier is one of the two elementary quantifiers in predicate logic, employed for the description of language by Frege. However, it has become clear that the interpretation of indefinite noun phrases involves not only the assertion of the existence of some set denoted by their descriptive part, but that they often have additional semantic and pragmatic properties. According to Krifka (1999), indefinite (or existential) determiners add to their logical meaning of existence some pragmatic constraints. Such additional constraints on indefinite noun phrases are discussed in the contributions by von Heusinger and by Zamparelli. Von Heusinger suggests that specific indefinites are characterized by contextual anchoring (sim-

ilar to the indirect anchoring of a class of definites discussed in the contribution by Comorovski); Zamparelli proposes that the Italian indefinite determiner *qualche* has the pragmatic function of domain extension. Corblin observes that the interpretation of modified numerals like *at least n* involves the existence of two sets. His analysis is developed in the framework of DRT, which is also used by Geurts, who considers the issue of whether the existential import of universal quantifiers is a presupposition or not. One of his main arguments against a semantic presupposition analysis is based on English existential sentences.

The contributions in the third section of the book address some of the intricacies of noun phrase interpretation, going beyond the issue of existence, including number and maximality, indefiniteness and specificity, and contextual anchoring. In his contribution ‘Existence, maximality, and the semantics of numeral modifiers’, Francis Corblin proposes a model for the existence claim and the maximality claim associated with modified numerals. In particular, Corblin sets out to explain why the noun phrase *ten kids* in (6a) has a different interpretation from *at least ten kids* in (6b). The difference is illustrated by the different interpretation of the two plural pronouns (cf. Kadmon 1987): the pronoun *they* in (6a) refers to exactly ten kids (cardinality reading), while the pronoun *they* in (6b) refers to all the kids entering the room (maximality reading).

- (6) a. Ten kids walked into the room. They were making an awful lot of noise.  
 b. At least ten kids walked into the room. They were making an awful lot of noise.

In order to account for this difference, Corblin suggests that numeral modifiers such as *at least*, *at most*, *exactly* introduce two sets into the discourse: (i) a set having the cardinality expressed by the numeral, and (ii) the maximal set of individuals satisfying the conditions expressed by the sentence. Relying on this assumption, he can account for the maximality reading of the pronoun *they* in (6b). Among other extensions of his account is the interpretation of numeral modifiers in existential sentences.

In his contribution *Existential import*, Bart Geurts discusses the status of the existential assumption associated with certain quantifiers. He considers the following sentences in a context where it is assumed that there are no Swiss bullfighters:

- (7) a. Every Swiss matador adores Dolores del Rio.  
 b. Most Swiss matadors adore Dolores del Rio.
- (8) a. Some Swiss matadors adore Dolores del Rio.  
 b. No Swiss matador adores Dolores del Rio.

- (9) a. There are no Swiss matadors in the drawing room.  
 b. There are some Swiss matadors in the drawing room.

The general wisdom is that informants judge sentences (7a, b) as infelicitous and sentences (8a, b) as true or false – with some informants that think that (8a, b) are infelicitous (cf. Lappin and Reinhart 1988). The general account for this ‘existential import’ effect has been the assumption that strong quantifiers presuppose the corresponding existential statement (cf. de Jong and Verkuyl 1985). Geurts argues against a simple theory of existential presupposition and shows that, in the case of weak quantifiers, ‘existential import’ depends on the information structure of the sentence. He illustrates this fact with existential sentences, as in (9a, b). In the imagined situation, these sentences are judged as true and false respectively even by informants that judge (8a, b) as infelicitous. According to Geurts, this is so because, given the ban on presuppositional noun phrases in existential sentences as well as the non-topic status of the post copular non phrases, the weak quantifiers that introduce the noun phrases *no Swiss matadors* in (9a) and *some Swiss matadors* in (9) come with an empty domain presupposition. In contrast, the same noun phrases can be taken as topics of (8a, b) in an appropriate discourse, and thereby get a presuppositional interpretation. Geurts concludes that ‘existential import’ is not just an existential presupposition, but an instruction to recover a suitable domain from the context. Furthermore, this view of ‘existential import’ is argued to apply not only to weak quantifiers, but also to strong ones.

Specific indefinites are another kind of noun phrases whose interpretation is not sufficiently covered by pure existential quantification. They need additional contextual information for their interpretation. This context-dependence is shown in both their semantic and their syntactic behavior. In his contribution ‘Referentially anchored indefinites’, Klaus von Heusinger analyses the particular semantics of specific indefinites. In (10) below, the referent of the specific indefinite *a (certain) task* can depend either on the context of utterance, namely the speaker, or on the noun phrase *each student*. In the former case, the specific indefinite takes wide scope, whereas in the latter it takes intermediate scope.

Von Heusinger argues that specificity expresses an anchoring relation to an argument, rather than to a set, as was proposed in Enç’s (1991) analysis of specificity in terms of partitivity. He formulates his analysis in terms of file change semantics: while a definite noun phrase indicates that the referent is already given in the context, a specific indefinite introduces a new discourse item that has a (pragmatically salient) link to an already given discourse item. In this way, not only the wide scope of specific indefinites can be accounted for, but also their intermediate scope. The analysis is illustrated with data from Turkish, a language that marks specificity morphologically with a case suffix on the direct object. In (11) the specificity marker on the direct object is present with both the wide-scope and the intermediate-scope reading:

- (10) Bill gave each student a (certain) task to work on.



- (11) Her antrenör belli bir atlet-i / \*atlet çalış-tır-acak.  
 Every trainer certain one athlete-ACC work-CAUS-FUT.  
 ‘Every trainer will train a certain athlete.’
- a. All trainers paired with the same athlete (specific wide scope).
  - b. Each trainer paired with a different athlete (specific narrow scope).

The Turkish data also show that intermediate readings of indefinites are specific, a fact that contradicts the assumption that all specific indefinites must be linked to the speaker, thereby getting wide scope. It rather seems that specificity is a more general property of being referentially anchored to another argument, rather than being epistemically dependent on some agent.

The contribution *On singular existential quantifiers in Italian* by Roberto Zamparelli discusses a related issue: what are the syntactic and semantic conditions that determine the different interpretations of indefinite determiners? Zamparelli investigates the Italian determiner *qualche*. *Qualche N* is shown to introduce an undetermined but small number of *Ns*, while *un qualche N* is shown to be an ‘epistemic indefinite’ (cf. Alonso-Ovalle and Menéndez-Benito 2003 for Spanish *algún*) and therefore have a free choice interpretation. The most striking aspect of the semantics of *qualche N* is that this expression selects a singular count noun, but denotes a plural entity. Zamparelli argues that *qualche N* and *un qualche N* have the basic logical meaning of existence, i.e. they are used to assert that the intersection of the set denoted by their head noun and the set denoted by the predicate is non-empty. He then derives the differences between their interpretations from the interaction of their syntactic position within the DP with contextual domain restriction and pragmatic Horn scales. Thus this study is another clear illustration of the fact that the issue of existence is deeply embedded in linguistic structure and plays a crucial role in the interfaces between different linguistic components.

## REFERENCES

- Alonso-Ovalle, L. and P. Menéndez-Benito (2003): ‘Some epistemic indefinites’, in M. Kadowaki and S. Kawahara, eds., *Proceedings of the Northeastern Linguistic Society* 33, pp. 1–12, GLSA, University of Massachusetts, Amherst.
- Asher, N. (1993): *Reference to Abstract Objects in Discourse*, Dordrecht: Kluwer.
- Asher, N. (2000): ‘Events, facts, propositions, and evolutive anaphora’, in J. Higginbotham, F. Pianesi, and A. Varzi, eds., *Speaking of Events*, pp. 123–150, New York, Oxford: Oxford University Press.
- Borschev, V. and B.H. Partee (2002): ‘The Russian genitive of negation in existential sentences: the role of Theme–rheme structure reconsidered’, in E. Hajicova, P. Sgall, J. Hana, and T. Hoscovek, eds., *Travaux du cercle linguistique de Prague* (nouvelle série), pp. 185–250.
- Cann, R., R. Kempson and L. Marten (2005): *The Dynamics of Language*, Oxford: Elsevier.
- Davidson, D. (1967): ‘The logical form of action sentences’, in N. Resher, ed., *The Logic of Decision and Action*, pp. 81–95, Pittsburgh: University of Pittsburgh Press.
- de Jong, F. and H. Verkuyl (1985): ‘Generalized quantifiers: the properness of their strength’, in J. van Benthem and A. ter Meulen, eds., *Generalized Quantifiers in Natural Language*, pp. 21–43, Dordrecht: Foris.

- Enç, M. (1991): 'The semantics of specificity', *Linguistic Inquiry* 22: 1–25.
- Heycock, C. and A. Kroch (1999): 'Pseudoclefts connectedness: implications for the LF interface level', *Linguistic Inquiry* 30: 365–397.
- Higgins, F.R. (1973): *The Pseudo-Cleft Construction in English*, Ph.D. dissertation, MIT.
- Kadmon, N. (1987): *On Unique and Non-Unique Reference and Asymmetric Quantification*, Ph.D. dissertation, University of Massachusetts, Amherst.
- Kempson, R., W. Meyer-Viol, and D. Gabbay (2001): *Dynamic Syntax*, Oxford: Basil Blackwell.
- Kim, J. (1969): 'Events and their descriptions: some considerations', in N. Resher et al., eds., *Essays in Honor of Carl G. Hempel*, pp. 198–215, Dordrecht: Reidel.
- Kim, J. (1976): 'Events as property exemplifications', in M. Brand and D. Walton, eds., *Action Theory. Proceedings of the Winnipeg Conference on Human Action*, pp. 159–177, Dordrecht: Reidel.
- Krifka, M. (1999): 'At least some determiners aren't determiners', in K. Turner, ed., *The Semantics/Pragmatics Interface from different Points of View*, vol. 1, pp. 257–291, Amsterdam: Elsevier.
- Lappin, S. and T. Reinhart (1988). Presuppositional effects of strong determiners: a processing account. *Linguistics* 26: 1021–1037.
- Padučeva, E.V. and V.A. Uspenskij (1997): 'Binominativnoe predloženie: problema soglasovanija svjazki', in L.P. Krysin, ed., *Oblik slova. Sbornik statej pamjati D.I. Šmeleva*, pp. 170–182, Moscow: Nauka.
- Partee, B.H. (1986): 'Ambiguous pseudoclefts with unambiguous *be*', in S. Berman, J.-W. Choe, and J. McDonough, eds., *Proceedings of NELS 16*, pp. 354–366, GLSA, University of Massachusetts, Amherst.
- Partee, B.H. (1987): 'Noun phrase interpretation and type-shifting principles', in J. Groenendijk, D. de Jongh, and M. Stokhof, *Studies in Discourse Representation Theory and the Theory of Generalized Quantifiers*, Dordrecht: Foris.
- Partee, B.H. (1998): 'Copula inversion puzzles in English and Russian', in K. Dziwirek et al., eds., *Annual Workshop on Formal Approaches to Slavic Linguistics: The Seattle Meeting*, pp. 361–395, Ann Arbor: Michigan Slavic Publications.