

SZEMANTIKA, 6. ELŐADÁS

Kornai András

BME 2020/10/14

- A tulajdonnevek és genusaik (Tauber Boglárka)
- Generikusok
- Alapértelmezések (defaults) (Eper Miklós)
- Határozók
- Sokklauzás definíciók (Koncz Máté)
- Más linkerek mint =AGT, =PAT (Havas Tamás)
- Mi a közös ezekben? Mind olyan helyekről szól, ahol az elemzés ereszthet

ENGEDÉLYKÉRÉS HF

- =AGT engedélyt kér X-től 'valaki mástól' Y-ra
- *kér valaki valakitől valamit* – ebbe kell behelyettesíteni azt, hogy amit kérnek az *engedély valamire (valakitől)*
- request =AGT express/2757 [=AGT want [=AGT HAS =PAT]]
- =AGT express [=AGT want [=AGT HAS [permission for [=AGT {do sg}]]]], permission HAS source, tól/től MARK source
- permission for X: =AGT allow =PAT ' =AGT[LACK[=AGT stop =PAT]]'
- Ezt is helyettesítsük be! (permission for =PAT) HAS source, tól/től MARK source = =AGT[LACK[=AGT stop =PAT]], tól/től MARK =AGT, ra/re MARK =PAT 'engedély vkitől valamire'
- Van egy csomó elemi és összetett kijelentés: *X enged(élyez) Y-t Z-nek; A kér B-t C-től; P csinál Q-t; U megakadályoz V-t* és már csak ezeket kell összerakni, meg hogy mit milyen esettel kell jelölni a végén

=AGT, =PAT

- Elsődleges célunk az egyszerű intranszitiv (tárgyatlan, egyargumentumos) és tranzitiv (tárgyas, kétargumentumos) mondatok kezelése
- Fontos lesz még a kopulativ mondat (a magyarban nincs is ige!) kezelése: angolul *A is B (John is angry)* magyarul *János dühös*
- Ezek felvetik a kérdést: what part of *is* don't you understand?

WEBSTER'S 3RD be/1

of
ket
alls
jah
ms
ge
ks)
nas
k>
the
res
na-
of
by
ter

BDS abbr. come dispose

bdy abbr. boundary

be \ (ˈ) bē, -bi \ *vb*, *past 1st & 3d sing was* \ (ˈ) wəz, (ˈ) wəz also (ˈ) wɒz \ or *dial were* \ see below \ or *war* \ (ˈ) wār \; *2d sing were* \ wə(r) \; *ˈwər*, + *V* *ˈwər*, *ˈwā*, + *V* " or *ˈwər* also *ˈwēr*; *archaic or Brit* (ˈ) w|a(a) (ə) r or |e(ə) r or |a(a) ə or |eə \ or *dial & archaic was* or *dial war* (with you) or *archaic wast* (with thou) \ wəst, (ˈ) wəst also (ˈ) wɒst \ or *wert* (with thou) \ wə(r) |t, *ˈwər* |t, (ˈ) wē |t, (ˈ) wē |t, *usu* |d. + *V* \ *pl were* or *substand & archaic was* or *dial war*; *past subjunctive were* or *substand & archaic was* or *archaic 2d sing wert* (with thou); *past part been* \ (ˈ) bin, bən; *ben* (in standard speech more often unstressed or with secondary stress than with primary stress); *Brit usu & US sometimes* (ˈ) bēn \ or *dial ben* \ (ˈ) ben \ *pres part be-ing* \ ˈbēɪŋ, ˈbēɪŋ, *rapid* (ˈ) bēɪŋ \ or *dial Brit & archaic been* \ (ˈ) bēn, ˈbēn \ *pres 1st sing am* \ əm, (ˈ) am also (ˈ) aa(ə) m; *after "I" often m* \ or *dial is* or *be*; *2d sing are* (with you) \ ə(r), (ˈ) ār, (ˈ) ā(r); *after a vowel-final pronoun often r* \ or *archaic art* (with thou) \ ə(r) |t, (ˈ) ār |t, (ˈ) ā |t, + *V usu* |d. \ or *dial be* or *is* (with you) or *dial Brit beast* (with thou) \ (ˈ) bēst, ˈbēst \ or *bist* (with thou) \ (ˈ) bist \ *3d sing is* \ (ˈ) iz, əz; *after vowels & after voiced consonants other than z, zh, & j: often z*; *after voiceless consonants other than s, sh, & ch: often s* \ or *dial Brit be*, *pl are* or *substand is* or *dial & archaic be* or *archaic been* \ the last like *past part BEEN* \ *pres subjunctive*

2
3
b
k
k
k
l
l

WEBSTER'S 3RD *be*/2

archaic *been* (the last like past part *BEEN* \ pres subjunctive *be* or obs 2d sing **beest** (with *thou*) [ME *been*, fr. OE *bēon*; akin to OHG *bim* am, ON *būa* to live, dwell, Goth *bauan*, L *fui* I have been, *futurus* about to be, *fieri* to become, Gk *phyein* to bring forth, *phynai* to be born, be, Skt *bhavati* he is] vi **1 a** : to equal in meaning : have the same connotation (sense 3) as <God is love> <January is the first month> <let $x \sim 10$ > : represent symbolically <the seven lampstands are the seven churches — Rev 1:20 (RSV)> **b** : to constitute the same idea or object as : have individual identity with <the first person I met *was* my brother> <the pianist himself *was* the composer of the piece> <\$50 *was* all I had> **c** : to constitute the same class as <these three books *are* the authoritative works on the president's life> **d** : to have a meaning that includes or implies the meaning of <fish *are* vertebrates> <red *is* a color> : have a (specified) qualification or characterization <the leaves *are* green> <this book *is* heavy> **e** : to belong as an individual to the class of <the fish you caught *was* a trout> **f** : to belong as a class to the larger class of <some animals with horns and divided hoofs *are* graminivorous animals> — used regularly in senses 1a through 1f as the copula of simple predication **g** : SIGNIFY : amount to <her death *was* nothing to him> **h** : to show oneself as an out-

WEBSTER'S 3RD *be/3*

(some animals with horns and divided hoofs *are* graminivorous animals) — used regularly in senses 1a through 1f as the copula of simple predication **g** : SIGNIFY : amount to (her death *was* nothing to him) **h** : to show oneself as an outstanding example of — used with main stress in spoken sentences (the doctor pleased the parents by commenting, "That *is* a baby") **i** : to constitute genuinely : actualize well the type of (one of the few great elegies which *are* elegies — Douglas Bush) **j** : to seem to consist of : show oneself gripped or dominated by (a feeling) (she *was* all scorn at the proposition) : become completely covered with (road *was* all mud) **2 a** : to exist either absolutely or in relations or under conditions specified : have an objective existence : have reality or actuality : LIVE (Thee, which *wert* and *art* and evermore shalt *be* — Reginald Heber) (I think, therefore I *am*) — often used with *there* (once upon a time *there was* a knight) (there *is* a wreck ahead) **b** : to have, maintain, or occupy a place, situation, or position : show a certain characteristic — often used with a prepositional phrase (the book *is* on the table) (he *was* at ease) **c** : to remain unmolested, unbothered, or uninterrupted — used only in infinitive form (let him ~ ; stop pestering him) **d** : HAPPEN, OCCUR : take place (the concert *was* last night) (where *will* the meeting ~)

WEBSTER'S 3RD *be*/4

⟨let him ~ ; stop pestering him⟩ **a** : HAPPEN, OCCUR : take place ⟨the concert *was* last night⟩ ⟨where will the meeting ~⟩
e *archaic* : BELONG, PERTAIN ⟨to thine and Albany's issue ~ this perpetual —Shak.⟩ **f** (1) : to come or go : JOURNEY ⟨we will ~ on our way shortly⟩ ⟨have you *been* home since Christmas⟩ (2) : to make a stay : show oneself or be present ⟨they will ~ in town all week⟩ ⟨*was* your sister at the party last night⟩ — not used in the present; use of the past tense followed by *to* ⟨I *was* to town yesterday⟩ often considered nonstandard **g** : to come around in due course often in following a schedule or appointed round — used only in perfect forms ⟨has the postman *been* this morning⟩ **h** *sub-*
stand : ACT — used only in the perfect; used as an intensive ⟨see what you have *been* and done⟩ **3** *now dial Brit* : to stand good for expense (as in a treat) ⟨offering to ~ his friend's dinner⟩ ~ *verbal auxiliary* **1** : to undergo an action — used with the past participle of transitive verbs as a passive-voice auxiliary ⟨the money *was* found⟩ ⟨German *is* spoken here⟩ ⟨the house *is being* built⟩ **2** : to perform a continuous action : be supposed to perform a future action — used as the auxiliary of the present participle in the so-called progressive tenses, usu. expressing continuous action ⟨he *is* reading⟩ ⟨I have *been* thinking⟩

WEBSTER'S 3RD *be*/5

gressive tenses, usu. expressing continuous action <he *is* reading> <I have *been* sleeping> <the house *is* being built> but sometimes in present-tense form expressing future non-continuous action <he *is* leaving tomorrow> **3** : to have changed place or condition as a result of completing an action — used with the past participle of certain intransitive verbs as an auxiliary forming archaic perfect tenses <Christ *is* risen from the dead — 1 Cor 15:20 (DV)> <the minstrel boy to the war *is* gone — Thomas Moore> **4** : become supposed : become destined — used with the infinitive with *to* to express futurity, arrangement in advance, or obligation <I *am* to interview him today> <he *was* to become one of the most famous men of his century> <you *are* to repay the loan in monthly installments> — usu. not used in the form of an infinitive or participle **5** : to undergo a continuous action : be in the process of — used in a passive sense with the present participle or with the gerund preceded by the prefix *a-* or the preposition *a* <while the ark *was* building — 1 Pet 3:20 (NCE)> <when the ark *was* a building — 1 Pet 3:20 (DV)>; now usu. replaced by the passive construction with *being* followed by the past participle, as in 1 and 2

CAMBRIDGE ENGLISH DICT *be/1*

- ① used to say something about a person, thing, or state, to show a permanent or temporary quality, state, job, etc. *He is rich. It's cold today. I'm Andy. That's all for now. What do you want to be (= what job do you want to do) when you grow up? These books are (= cost) \$3 each. Being afraid of the dark, she always slept with the light on. Never having been sick himself, he wasn't a sympathetic listener. Be quiet! The problem is deciding what to do. The hardest part will be to find a replacement. The general feeling is that she should be asked to leave. It's not that I don't like her - it's just that we rarely agree on anything!*
- ② used to show the position of a person or thing in space or time *The food was already on the table. Is anyone there? The meeting is now (= will happen) next Tuesday. There's a hair in my soup.*
- ③ used to show what something is made of *Is this plate pure gold? Don't be so cheeky! Our lawyers have advised that the costs*

CAMBRIDGE ENGLISH DICT *be/2*

- ④ used to say that someone should or must do something *You're to sit in the corner and keep quiet. Their mother said they were not to (= not allowed to) play near the river. There's no money left - what are we to do?*
- ⑤ used to show that something will happen in the future *We are to (= we are going to) visit Australia in the spring. She was never to see (= she never saw) her brother again.*
- ⑥ used in conditional sentences to say what might happen *If I were to refuse they'd be very annoyed. (formal) Were I to refuse they'd be very annoyed.*
- ⑦ used to say what can happen *The exhibition of modern prints is currently to be seen at the City Gallery.*
- ⑧ to exist or live (formal) *Such terrible suffering should never be. (old use or literary) By the time the letter reached them their sister had ceased to be (= had died).*

LDOCE *be*

- ❶ used with past participles to form the
- ❷ used in sentences about an imagined situation
- ❸ used in sentences to introduce an aim when you are saying what must be done in order to achieve it
- ❹ used to say that someone or something is the same as the subject of the sentence
- ❺ used to say where something or someone is
- ❻ used to say when something happens
- ❼ used to describe someone or something, or say what group or type they belong to
- ❽ to behave in a particular way
- ❾ used to say how old someone is
- ❿ used to say who something belongs to
- ⓫ used to talk about the price of something
- ⓬ to be equal to a particular number or amount
- ⓭ to exist

LDOCE *be*+

This is the fun part: 1,429 expressions from *be taken aback (by sth)* to *be yours for the taking/asking*. Most of these appear to be perfectly compositional *be able to do sth* 'to have the skill, strength, knowledge etc needed to do something'; *be wrong (about sb/sth)* 'to not be right in what you think or believe about someone or something'

The difficulties predate Webster's 3rd: *Webster's New World* (going back to 1951) uses even more vague terms in the definition, such as 'used to express futurity, possibility, obligation, intention, etc'; *The Concise Oxford* (1911) has, distributed among several senses, 'exist, occur, live, remain, continue, occupy such a position, experience such a condition, have gone to such a place, busy oneself so, hold such a view, be bound for such a place, belong under such a description, coincide in identity with, amount to, cost, signify'.

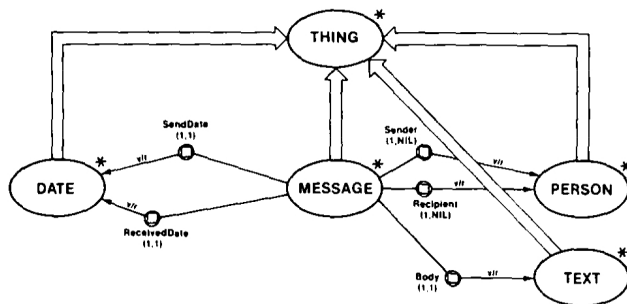
COLLINS *be*

- ① to have presence in the realm of perceived reality, exist, live
- ② *not all that is can be understood*
- ③ to pay a visit, go
- ④ *have you been to Spain?*
- ⑤ to take place, occur
- ⑥ *my birthday was last Thursday*
- ⑦ used as a linking verb between the subject of a sentence and its noun or adjective complement or complementing phrase. Has no intrinsic meaning of its own but rather expresses the relationship of either essential or incidental equivalence or identity or to specify an essential or incidental attribute. It is also used with an adverbial complement to indicate a relationship of location in space or time

FORMULAS

- ❶ Resemble dictionary definitions, designed for human readability
- ❷ Conjunctive top-level, avg 2.7 conjuncts (max 9 found so far)
camera kamera cinematographica_machinula kamera
1221 N machine, make photograph, HAS lens
- ❸ make =AGT CAUSE [=PAT[exist]]
- ❹ Syntactic sugar: $x \text{ IS_A } y$ can be written as $x[y]$ or as $y(x)$
- ❺ Defaults are in $\langle \rangle$, grouping by $\{ \}$
- ❻ Only one quantifier: gen, treated as a noun (no scope). Two thematic roles (VBTOs), no ternary relations Kornai:2012
- ❼ < 20 binaries, < 600 core (uroboros) vocabulary elements

CLASSIC KR



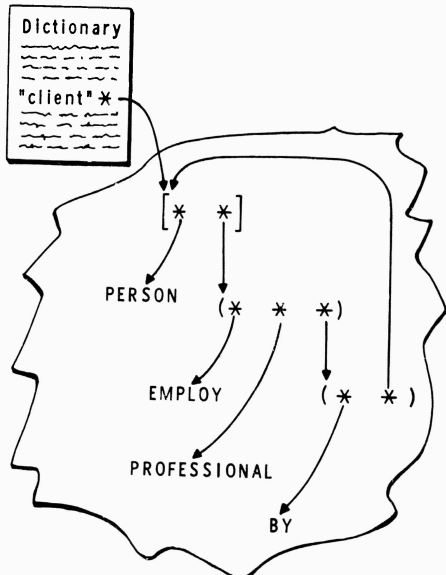
"A MESSAGE is, among other things, a THING with at least one Sender, all of which are PERSONs, at least one Recipient, all of which are PERSONs, a Body, which is a TEXT, a SendDate, which is a DATE, and a ReceivedDate, which is a DATE."

4lang GRAPHS

- ① Don't have a huge variety of links: 0 (is/is_a); 1 (subject); 2 (object)
- ② In contrast, Cyc has over 45.000 link types, and more contemporary efforts like DBpedia or YAGO have $10^5 - 10^6$. The vast majority of these are like *isSpouseOf*, obviously compositional
- ③ To get compositional links right, one needs to deal with *is*, *of* as well as with *spouse* 'husband or wife'.
- ④ Note effortless transition from disjunction of common nouns to disjunction of relations *isHusbandOf* or *isWifeOf*! This makes sense iff *is spouse of* is indeed *is (husband or wife) of* i.e. iff the meanings of words (their definitions) can be substituted *salva veritate*
- ⑤ 4lang graphs are built on RDF-like “triple stores”, explicitly addressing known difficulties with these such as **negation**, **quantifier scope**, **nested modals** and relations of seemingly

QUILLIAN, SCHANK

Semantic Memory



Conceptual Dependency

John
‡ ⇒ good
Love
↑
one