

Zimmermann and Sternefeld (2013) *IntoSem*

Chapter 5: Composing Extensions

Exercises

Exercise 1: Transitive Verbs and Binary Relations

Let the sets in the right column act as the extensions of the verbs in the left column (at some s) – but not respectively; your task is to pair them up.¹

\oplus <i>begat</i>	\clubsuit $\{\langle a_4, a_6 \rangle, \langle a_3, a_2 \rangle, \langle a_3, a_3 \rangle, \langle a_2, a_5 \rangle, \langle a_4, a_5 \rangle, \langle a_3, a_1 \rangle\}$
\ominus <i>married</i>	\diamond $\{\langle a_4, a_6 \rangle, \langle a_2, a_3 \rangle, \langle a_2, a_6 \rangle, \langle a_4, a_3 \rangle, \langle a_4, a_2 \rangle, \langle a_6, a_3 \rangle\}$
\otimes <i>outran</i>	\heartsuit $\{\langle a_5, a_2 \rangle, \langle a_1, a_3 \rangle, \langle a_4, a_1 \rangle, \langle a_5, a_6 \rangle, \langle a_1, a_5 \rangle, \langle a_5, a_7 \rangle\}$
\odot <i>portrayed</i>	\spadesuit $\{\langle a_4, a_7 \rangle, \langle a_5, a_2 \rangle, \langle a_1, a_3 \rangle, \langle a_2, a_5 \rangle, \langle a_7, a_4 \rangle, \langle a_3, a_1 \rangle\}$

Try to explain your choices in explicit terms.

Exercise 2: Nouns and Definiteness

The extension of *the capital of Italy* is the individual Rome and (1) is fine. But (2) is not fine.

- (1) Rome is the capital of Italy.
- (2) ?? Sicilia is the region of Italy.

Specify the extension of *region of Italy* (at the actual situation s , according to the encyclopaediae) and explain what is wrong with (2).



¹*begat* is the past tense of the archaic verb *beget* ‘become the father (or mother) of’. Conceive of *married* in the context of a multiple wedding ceremony in a church, of *outran* in the context of a race, and of *portrayed* as used in a book about the history of art.

Now why is (3) fine again? Generally?

(3) ✓ Sicilia is the largest region of Italy.

Finally, note a difference between (4) and (5):

(4) You are my friend.

(5) ?You are the friend of mine.

Do Zimmermann and Sternefeld predict a difference?²

Exercise 3: Relative Adjectives

Adjectives like *big* and *small* (cf. pp. 110f.) are called **relative**. Assume (simplistically) that for any adjective A and noun N and any situation s,

$$\llbracket A \ N \rrbracket_s = \{ x : x \text{ is } N \text{ and } A\text{-er than the average } N \text{ in } s \}$$

and that (*chimpanzee* is a hyponym of *hominid* and that) (1) is true at s:

(1) Lucy is a big chimpanzee but a small hominid.

Then draw a Venn diagram with circles that represent the extensions of the following noun phrases at s, inspired by the illustration on the right:

- (i) hominid
- (ii) chimpanzee
- (iii) big hominid
- (iv) small hominid
- (v) big chimpanzee
- (vi) small chimpanzee



²The *mine* instead of *me* can be considered an idiosyncrasy of English.