Wrapping up discussion on Kratzer 2005 (inconclusively!)

The plan:

-- Go back to Irene's objection briefly and present Angelika's reply.

-- Discuss Emmanuel's example and Angelika's reply.

-- A cursory glance to Quantificational Variability Effects in questions (just the facts!)

Kratzer also discusses a second puzzle: Quantificational Variability Effects in questions. We won't discuss her account in class. But I will present the phenomenon in case you guys want to work your way through the rest of the handout.

Part 1

1. Reminder: Kratzer's proposal

1) **The video shows which of those animals the man fed**

The video shows an actual situation s that exemplifies [[**which of those animals the man fed**]] (w_0).

[[**which of those animals the man fed**]] (w_0)=

$\lambda s\ [\lambda x\ [fed(x)(the\ man)(s)\ \&\ animals(x)(s)] = \lambda x\ [fed(x)(the\ man)(w_0)\ \&\ animal\ (x)(w_0)]]$

2) **The video shows which of those animals the man didn't feed**

The video shows an actual situation s that exemplifies [[**which of those animals the man didn't feed**]] (w_0).

[[**which of those animals the man didn't feed**]] (w_0) =
$\lambda s\ [\lambda x\ [\sim fed(x)(the\ man)(s)\ \&\ animals(x)(s)] = \lambda x\ [\sim fed(x)(the\ man)(w_0)\ \&\ animal\ (x)(w_0)]]$

3) The video shows which of those animals the man fed.

Exemplified by situations containing only fed animals.

4) The video shows which of those animals the man didn't feed

Exemplified by situations containing unfed animals

- Since the positive and the negative question extensions are not exemplified by the same situations, (1) and (2) come out as having different truth-conditions.

2. Irene's objection

- The positive and the negative extension of the question are the same proposition!

- We assumed that the set of relevant animals was {a, b, c, d} and replaced the condition 'animal(x)(s)' by '$x \in \{a, b, c, d\}$'

5) [[**which of those animals the man fed**]] (w_0)=
λs [λx [fed(x)(the man)(s) & $x \in \{a, b, c\}$] = λx [fed(x)(the man)(w_0) & $x \in \{a, b, c, d\}$ & x in w_0]

6) [[**which of those animals the man didn't feed**]] (w_0) =
λs [λx [~ fed(x)(the man)(s) & $x \in \{a, b, c, d\}$] = λx [~ fed(x)(the man)(w_0) & $x \in \{a, b, c, d\}$ & x in w_0]

- (5) and (6) are indeed equivalent. [exercise: show this]. To get an intuitive understanding, suppose that the man fed a and b and didn't feed c and d,

5') [[**which of those animals the man fed**]] (w_0)=
λs [λx [fed(x)(the man)(s) & $x \in \{a, b, c\}$] = {a, b}

6') [[**which of those animals the man didn't feed**]] (w_0) =
λs [λx [~ fed(x)(the man)(s) & $x \in \{a, b, c, d\}$] = {c, d}

and consider the following types of situations (courtesy of Angelika Kratzer, in email correspondence).

a. Possible situations in which the man fed only a. Both (5') and (6') are false. The negative one is false too (note: the set of animals that the man didn't feed in these situations is {c, d, b}. Here is where I think I got confused last time. "the man didn't feed b in s" can be true even if b doesn't exist in s.]

(same for situations in which the man fed only b).

b. Possible situations in which the man fed a and b and no other animals. Both (5') and (6') are true.

c. Possible situations in which the man fed no animals whatsoever. Both (5') and (6') are false [note: the set of animals that the man didn't feed in those situations is {a, b, c, d}]

d. Possible situations in which the man fed a, b, and c, but not d. Both (5') and (6') are false. (There's just one animal that didn't get fed.)

e. Possible situations in which the man fed a, b, c, and d. Both (5') and (6') are false.

… etc.

3. Angelika's reply

- We shouldn't have replaced the condition 'animal(x)(s)' by '$x \in \{a, b, c\}$'. The condition 'animal(x)(s)' is to be read as 'x is an animal that exists in s' (cf. Emmanuel's suggestion). This is crucial for the proposal to work.

7) [[**which of those animals the man fed**]] (w_0)=

$\lambda s\ [\lambda x\ [\text{fed}(x)(\text{the man})(s)\ \&\ \text{animals}(x)(s)] = \lambda x\ [\text{fed}(x)(\text{the man})(w_0)\ \&\ \text{animal}\ (x)(w_0)]]$

the proposition that is true in a situation s if the animals that exist in s and that the man fed in s are the same as the animals that exist in the actual world and that the man fed in the actual world.

8) [[**which of those animals the man didn't feed**]] (w_0) =
$\lambda s\ [\lambda x\ [\sim \text{fed}(x)(\text{the man})(s)\ \&\ \text{animals}(x)(s)] = \lambda x\ [\sim \text{fed}(x)(\text{the man})(w_0)\ \&\ \text{animal}\ (x)(w_0)]]$

the proposition that is true in a situation s if the animals that exist in s and that the man didn't feed in s are the same as the animals that exist in the actual world and that the man didn't fed in the actual world.

Now:

- (7) and (8) are NOT logically equivalent.

  Again, suppose that the actual animals are a, b, c and d, and that the man fed a and b but didn't feed c and d.

  Consider a situation s2 that contains the man feeding a and b, poor c lies about unfed and nothing else happens.

  (7) is true in s2: the set of animals that exist in s2 and that are fed in s2 is {a, b}
  (7) is false in s2: the set of animals <u>that exist</u> in s2 and that are not fed in s2 is {c} $\neq$ ({c, d})

- (7) and (8) are exemplified by different situations.

- But what about

7') Which of a, b and c the man fed.

8') Which of a, b and c the man didn't feed.

(Irene's examples)

In class, we decided we need:

7'') [[**which of a, b and c the man fed**]] (w_0)=

$\lambda s\ [\lambda x\ [fed(x)(the\ man)(s)\ \&\ in(x)(s)\ \&\ x \in \{a, b, c\}\ ] = \lambda x\ [fed(x)(the\ man)(w_0)\ \&\ in(x)(\ w_0)\ \&\ x \in \{a, b, c\}$

9'') [[**which of a, b and c the man didn't feed**]] (w_0) =
$\lambda s\ [\lambda x\ [\sim fed(x)(the\ man)(s)\ \&\ in(x)(s)\ \&\ x \in \{a, b, c\}\ ] = \lambda x\ [\sim fed(x)(the\ man)(w_0)\ \&\ in\ (x)(w_0)]$

Part 2. Emmanuel's question

Scenario: The Fake Feeding.

> Suppose that there are four relevant animals, a, b, c, and d. In the actual world, the man fed three of those animals, a, b and c. The video depicts the man feeding a, b and c, but it also depicts the man feeding a fourth animal, d. The only thing that the video shows are these four feedings.

Intuition: the sentence in (9) is false in this scenario. (do people agree? Is it possible to judge (9) true in this scenario?)

9) The video shows which of those animals the man fed.

Prediction (of what we have so far): (7) is true in this scenario.

> The video shows a situation in which the man feeds a, b, c and d. But the video ALSO shows a situation where the man fed a, b, c and nothing else happens. Thus, the video shows a situation that exemplifies [[**which of those animals the man fed**]] (w0).

First try:

- But the complete situation that the video shows is not an actual situation (in the actual world, there is no situation in which the man fed a, b, c and d). Thus, no part of that situation is an actual situation (remember that the part-whole relation only holds between situations in the same world). So it is not true that the video shows an actual situation that exemplifies [[**which of those animals the man fed**]] (w0).

Yes, but…

- What if we record the actual feeding, and then we film a fake feeding, and the video shows the two feedings (actual and fake) in succession? Then (7) will come out true…

  [question: does the judgment change if we set up the scenario this way?]

Angelika's reply (see slide 22)

- We need to distinguish between transparent **show** and **show** that has informational content. To account for that example, we need **show** with informational content.

10) The video shows a situation that exemplifies $Q(w_0)$ and in all possible worlds compatible with the content of the video, $Q(w_0)$ is true in the counterpart of s.

Remember

- As we saw last time, in Kratzer's situation semantics no given possible situation can be part of more than one world.
- Here, Kratzer follows David Lewis, according to whom individuals are world-bound: no individual can exist in more than one world (see Lewis 1968, 1973, 1986).
- To replace the relation of identity between entities that are not in the same worlds, Lewis introduces counterpart relations between individuals.
- Crucially, there is not just one fixed counterpart relation:

> "Things resemble and differ from one another in many different respects. There are countless ways to amalgamate similarities and differences into a resultant relation of overall similarity. Hence we are not stuck with one fixed counterpart relation. Our daggers [PMB: Lewis is discussing an example in which Macbeth the hallucinatory sees a dagger] can be noncounterparts in one way and counterparts in another, and so can be a multitude in one way and a definite individual in another" (Lewis 1983: 7-8)

(see Lewis 1983 for lots of discussion.)

Back to our example:

11) The video shows which animals the man fed.

12) The video shows a situation that exemplifies $Q(w_0)$ and in all possible worlds compatible with the content of the video, $Q(w_0)$ is true in the counterpart of s.

- Angelika: The most natural counterpart relation is one where the complete actual feeding situation (THE feeding) is related to the complete feeding situation (THE feeding) in the accessible worlds.
- If the counterpart relation is such that the complete actual feeding situation is related to the complete feeding situations in the worlds compatible with the information in the video, then (9) comes out as false in Emmanuel's scenario.
- If (9) can be judged true in Emmanuel's scenario, that's good news. Even if we assume that **show** always contributes informational content (unlike direct perception **see**), we could account for the two intuitions by the two salient ways of construing the counterpart relation.
- But if (9) is always judged as false in Emmanuel's scenario, it's not clear (at least to me!) how we could account for this in the account above.

Part 3: Quantificational Variability Effects

The Phenomenon

(here, I will follow closely the presentation in Lahiri 2002: 63-65. All the examples below are taken for there.)

- In many languages, indefinites exhibit quantificational variability effects (QVEs) when combined with adverbs of quantification:

13) (a) A man rarely loves his enemies.
    (b) A man usually hates his enemies.
    (c) A man sometimes loves his enemies.
    (d) A man hates his enemies

We can roughly state the truth-conditions of the sentences above as:

14) (a) Few(x) [man (x)] [x loves x's enemies]
    (b) Most(x) [man (x)] [x hates x's enemies]
    (c) $\exists$(x) [man (x)] [x hates x's enemies]
    (d) GEN(x) [man(x)] [x hates x's enemies]

- Kamp 1981, Heim 1982 (building on Lewis 1975): in these sentences the indefinites do not have any quantificational force of their own. They introduce a variable together with a restriction, and get their quantificational force from the adverb of quantification (in (d) the presence of a covert generic operator is assumed).

- Berman 1987 and many others: these sentences involve quantification over situations.

- Berman 1991, 1994: some sentences with embedded questions exhibit QVEs:

15) (a) Sue mostly remembers what she got for her birthday.
    (b) Bill knows, for the most part, what they serve for breakfast at Tiffany's.
    (c) Mary largely realized what they serve for breakfast at Tiffany's.
    (d) With few exceptions, John knows who likes Mary.
    (e) To a considerable extent, the operating system lists what bugs might occur.
    (f) The school paper recorded, in part, who made the dean's list.
    (g) The conductor usually/seldom finds out who rides the train without paying.

Quantificational force derived from the adverb of quantification. Berman:

16) most(x) [they serve x for breakfast at Tiffany's] [Bill knows that they serve x for breakfast at Tiffany's]

QVE not always available:

17) (a) Sue mostly wonders what she got for her birthday
(b) For the most part, Bill asks what they serve for breakfast at Tiffany's.
(c) With few exceptions, John inquired who likes Mary.

(a) cannot mean 'for most x such that Sue got x for her b-day…'; (b) and (c) barely make sense.

- An analysis of QVE in questions must (i) derive the truth-conditions of sentences like (36) and (ii) explain the lack of QVE in (17).

- There are several accounts of QVE in the market (see, e.g., Lahiri 2002, and references therein). We won't go through them. At this point, just think

- Why is this phenomenon challenging for G & S's proposal?

- The proposal in Kratzer 2005: We can mimic quantification over individuals by quantifying over the relevant parts of the *res* situation (remember: the situation that the verb takes as its argument)