currently:

- positive programs
- conjunctive query $\Leftrightarrow \sim$ positive fragment of rel. Algebra, SQL

Mai 29-14:07

cf. Slide 562

$$F(O) \equiv \exists ON, D, CN, P, A, Perc, T$$

$$organization(O, ON, Hq, HqC, HqP, D) \land$$

$$country(CN, HqC, Hq, HqP, P, A) \land$$

$$enc(HqC, \text{"Europe"}, Perc) \land$$

$$isM(HqC, O, T) \land P > 10.000.000$$

Mai 29-14:19

Now: look for the countries

$F(\cancel{Q}) \equiv \exists ON, D, CN, P, A, Perc, T$

HqC

organization(O, ON, Hq, HqC, HqP, D) ∧

country(CN, HqC, Hq, HqP, P, A) ∧

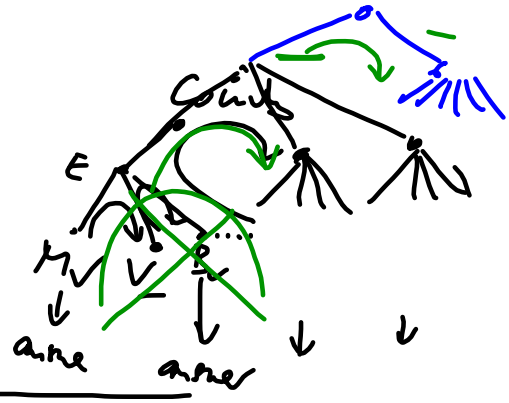
enc(HqC, 'Asia', Perc) enc(HqC, "Europe", Perc) ∧

isM(HqC, O, T) ∧ P > 10.000.000

Mai 29-14:27

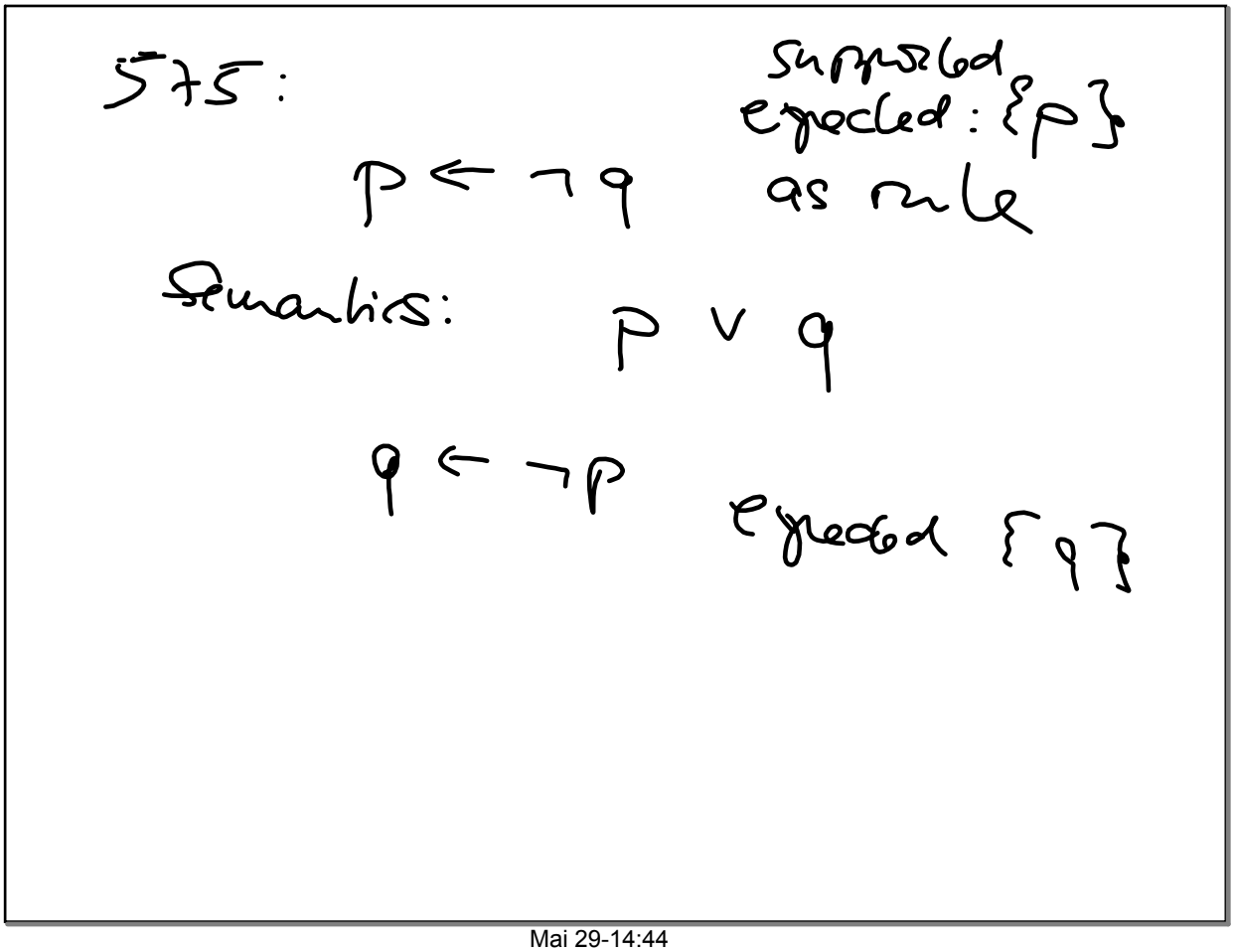
Another example:

```
select distinct country.code
from country, city
where country.code = city.country
and city.population > 1000000
```




```
select code
from country
where exists (select *
        from city
        where country.code = city.country
        and city.population > 1000000)
```

Mai 29-14:30


S75:
supposed
expected: {p}
p ← ¬q
as rule
Semantics:
p ∨ q
q ← ¬p
expected {q}

Mai 29-14:44