Restriction Classes, Bitches

It's OWL learning time

- OWL lets you define properties
- OWL lets you control what the property can apply to
- OWL lets you control the values the property can take
- OWL provides an easy way to do this
- OWL provides a really confusing way to do this

- The easy way is usually wrong

You wrote **Domain** – did you *mean bit*ches ?

- What can this property apply to?
    - Everything that eats something is an Animal .
    - `ObjectPropertyDomain(<&ex;eat>`
      `<&ex;#Animal>)`
- This applies to *every* use of the property

You wrote **Range** – did you *mean bit*ches ?

- You can define range restrictions
  - What kind of values can it take?
    - Everything that is eaten by something is a FoodStuff .
    - ```
      ObjectPropertyRange(<&ex;eat>
      <&ex;#Animal>)
      ```
- This applies to *every* use of the property

What if different Things have different constraints?

- How can we say that "Everything that a Weasel eats is an Egg."?

- We have to say that Objects that are the value of eat for any Weasel are a subclass of Egg.

- Sound complicated?

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$\exists eat^{-1}.Weasel \sqsubseteq Egg$

```
SubClassOf(

   ObjectSomeValuesFrom(

        ObjectInverseOf(<&ex;#eat>)

        <&ex;#Weasel>)

   <&ex;#Egg>)
)
```

Or... Attempto, Bitches

- Everything that eats something is an Animal .

- Everything that is eaten by something is a FoodStuff .

- Everything that a Weasel eats is an Egg.

  http://attempto.ifi.uzh.ch/site/