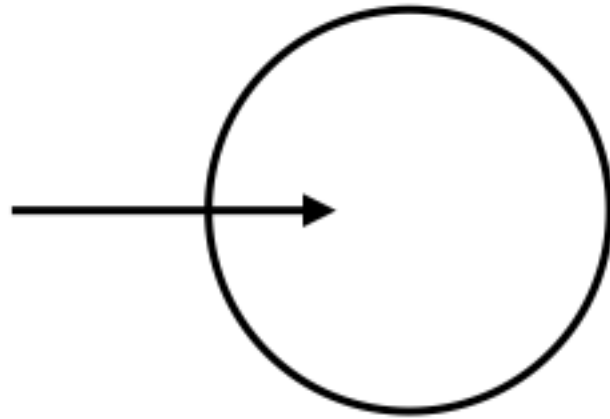
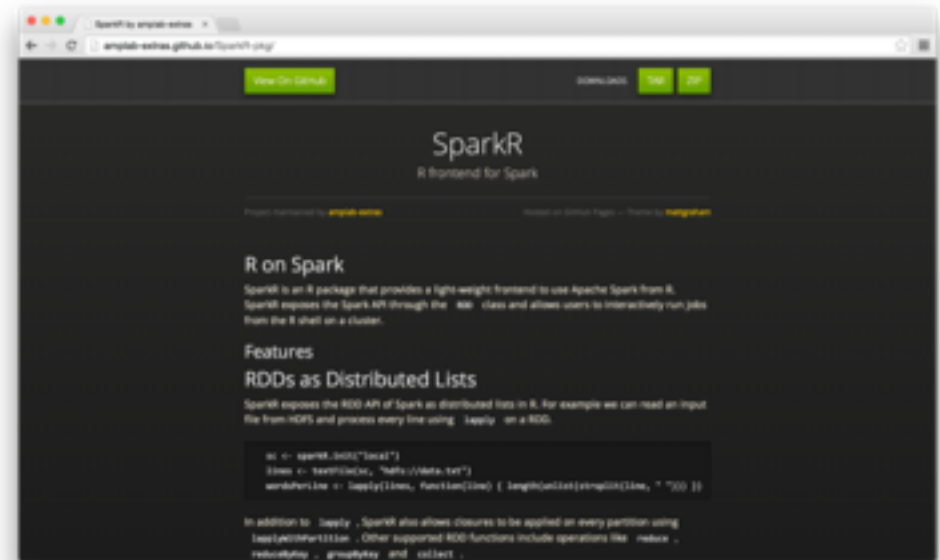


# From walled kingdom to toolbox

Hannes Mühleisen



Outside in





in



```
CREATE FUNCTION wtl(subject INT, age INT, height INT, weight INT) RETURNS TABLE
(subject INT, key STRING, value INT) LANGUAGE R {
  dd <- data.frame(subject, age, height, weight)
  do.call(rbind,
    lapply(split(dd, dd$subject),
      function(split) data.frame(
        subject=rep(split$subject, 3),
        key=c("age", "height", "weight"),
        value=c(split$age, split$height, split$weight))))
};

SELECT * FROM wtl((SELECT * FROM observations AS o));
```

(Released 2014)



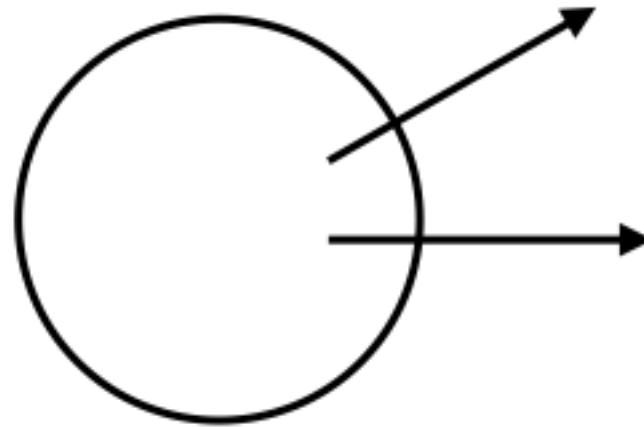
```
CREATE FUNCTION testp(i INT, z INT)
RETURNS BOOLEAN LANGUAGE Python {
  flt = np.array(filter(lambda x:x > z, i))
  return([flt])
};
```

```
SELECT * FROM pval WHERE testp(i, 2);
```

(Soon)



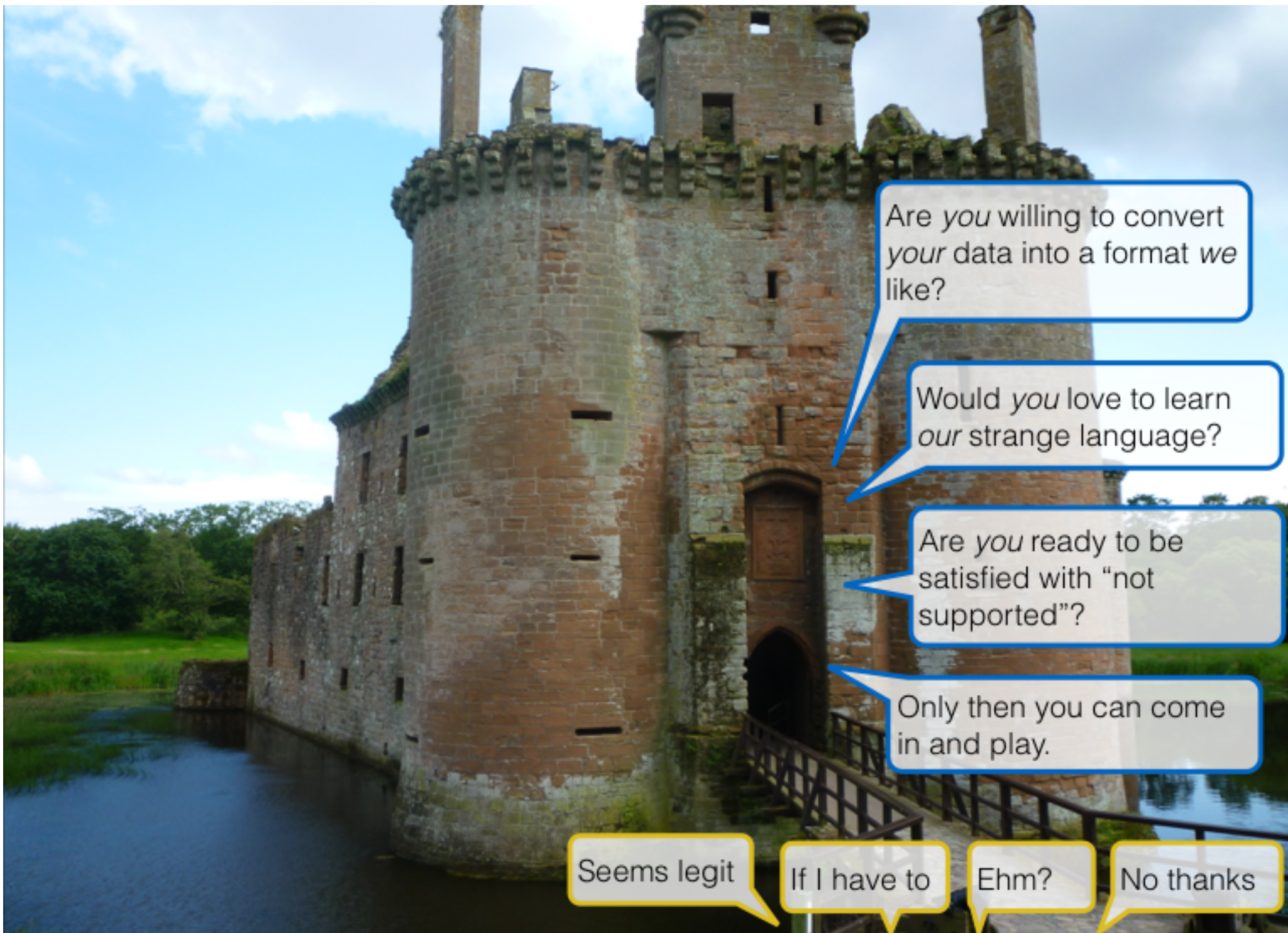




Inside out







Are *you* willing to convert  
*your* data into a format *we*  
like?

Would *you* love to learn  
*our* strange language?

Are *you* ready to be  
satisfied with "not  
supported"?

Only then you can come  
in and play.

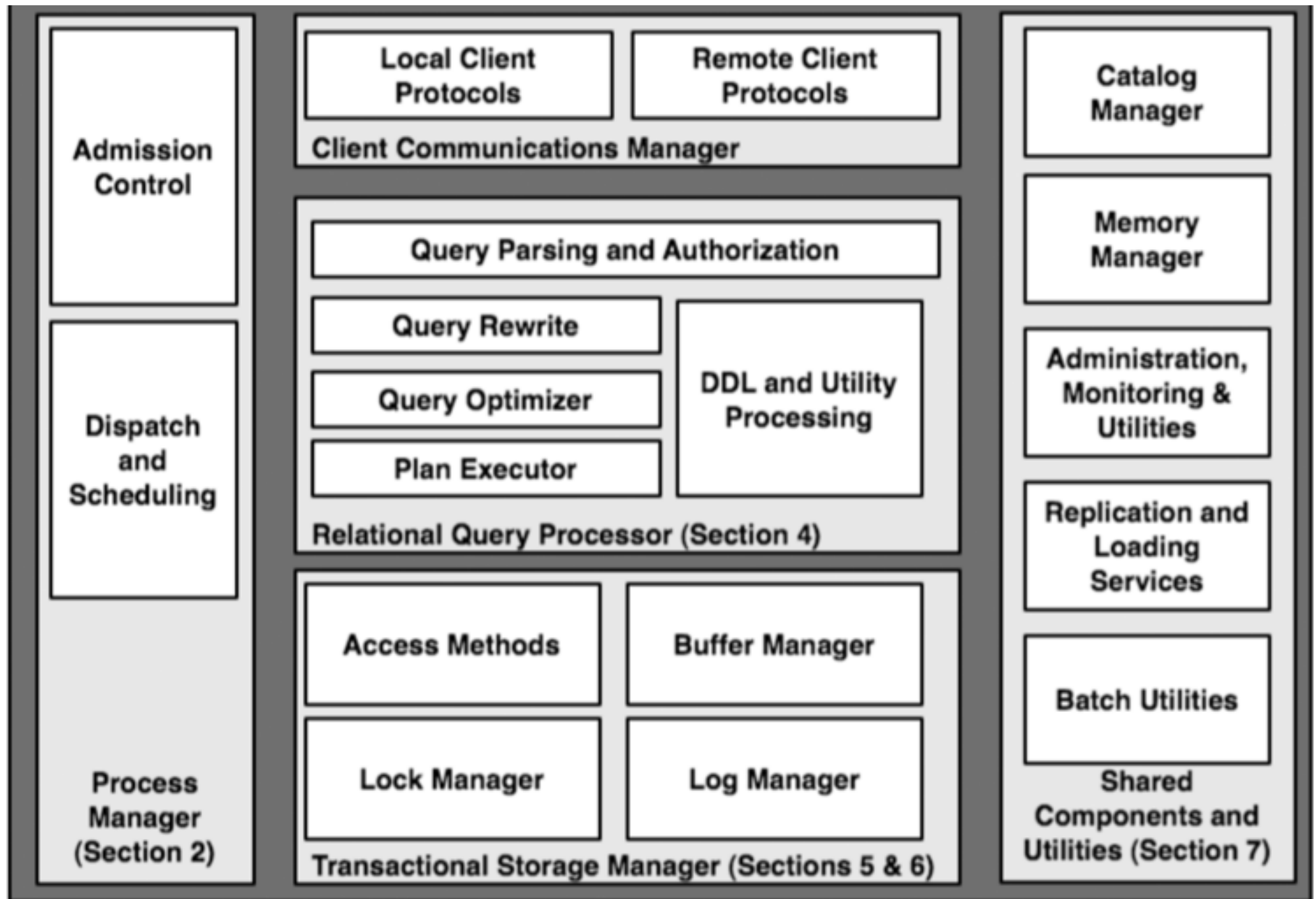
Seems legit

If I have to

Ehm?

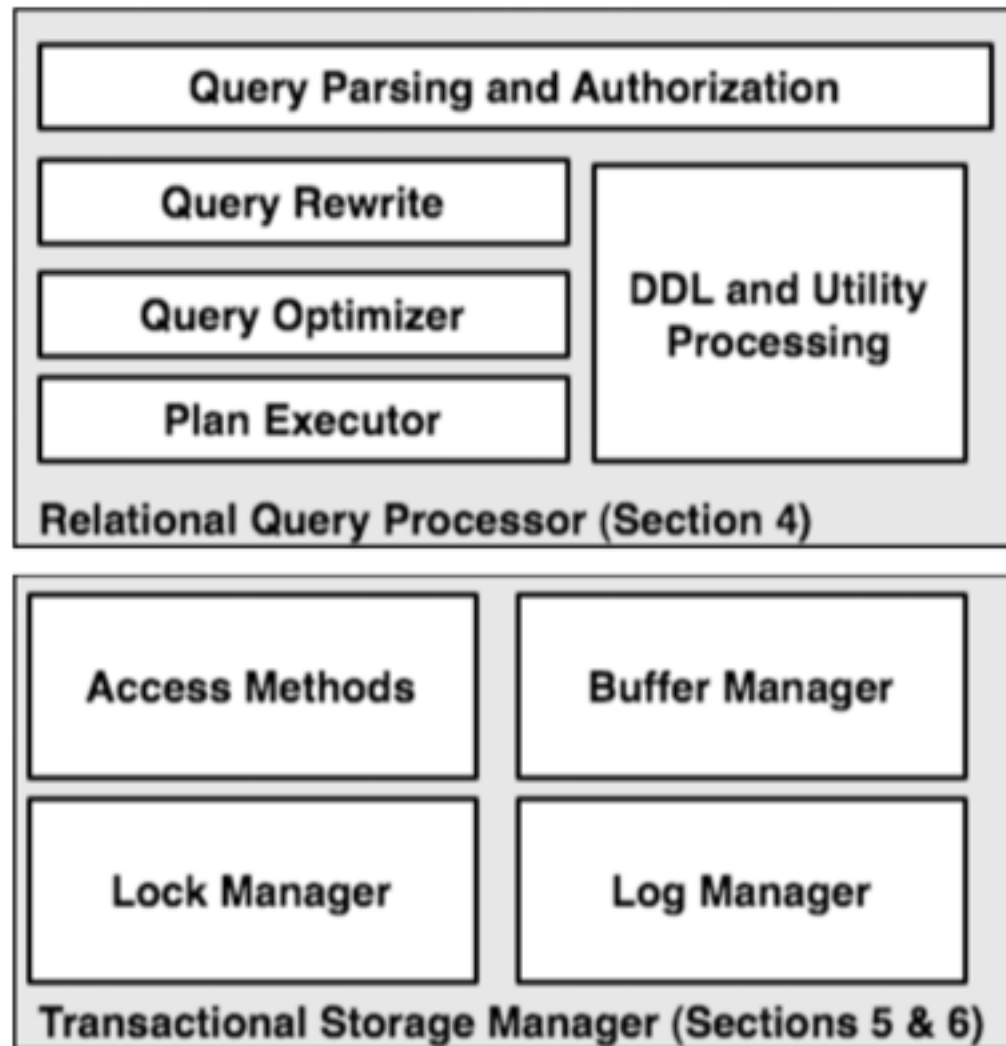
No thanks






[Hellerstein, Stonebraker & Hamilton: Architecture of a Database System]

# “Unbundling”



Let' not miss the boat again.  
How do we support the “data scientist”?

Thank you.

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 @hfmuehleisen