

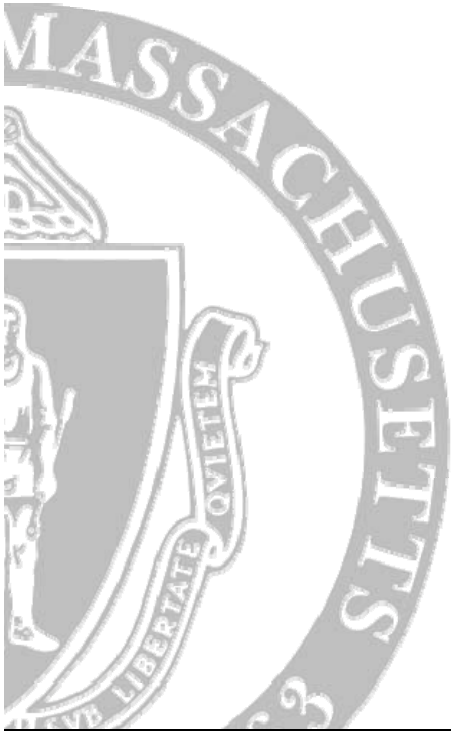
Children's Exhaustivity in Clefts

A Study in German and English

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Exhaustivity in Clefts

- Clefts have an exhaustivity requirement

Context: John ate a banana, a sandwich and a cookie but not fries or an apple.

(1) #It was a sandwich that John ate.

(2) John ate a sandwich.

- Children start out non-exhaustively in clefts, allowing a sentence like (1) to be an appropriate statement whereas adults do not allow (1) since it is non-exhaustive.

How does the theory bring about exhaustivity?

- Kiss (1998) brings it about via a Focus projection. She describes clefts as displaying quantificational properties but does not give a detailed implementation beyond the focus projection.
- In Heizmann (in prep.) I augment Kiss' analysis by suggesting the actual exhaustivity trigger to be an operator sitting in the Focus position. This operator has the property of a universal quantifier, therefore triggering exhaustivity as well as having domain restrictions just like regular universal quantifiers.

How does the theory bring about exhaustivity?

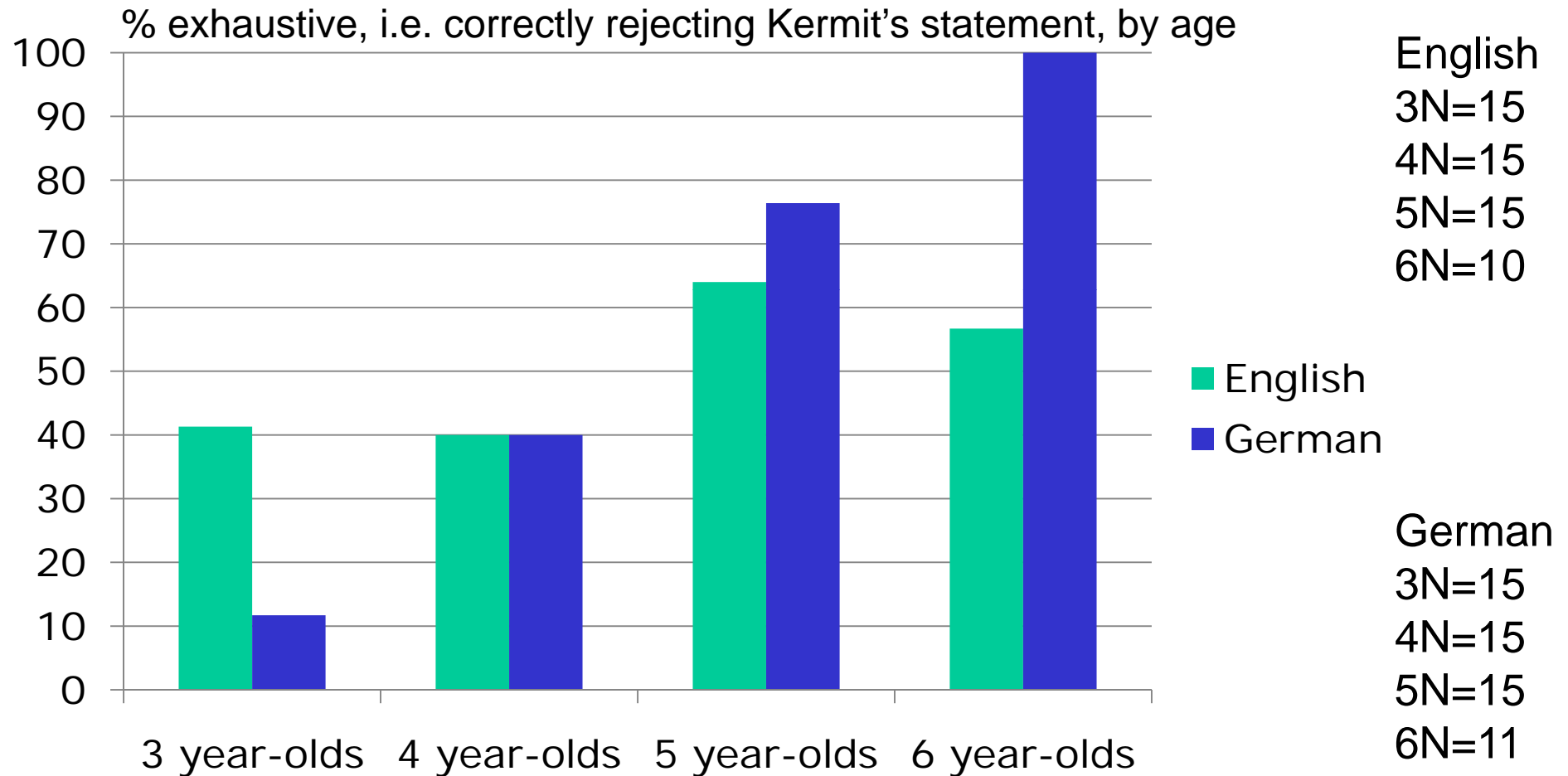
- In addition, I propose the same quantificational operator to be the exhaustivity trigger in questions, thereby unifying exhaustivity in universal quantifiers, questions and clefts under one mechanism.
- Acquisition study tested all constructions.
Today: focus on cleft data from English and German children age 3-6.
- Truth-Value Judgment Task for clefts



Oh...it was the football the Cookie Monster threw away.
Is that right? **NO**

16 stories yielding 5 data points (rest baseline and controls)

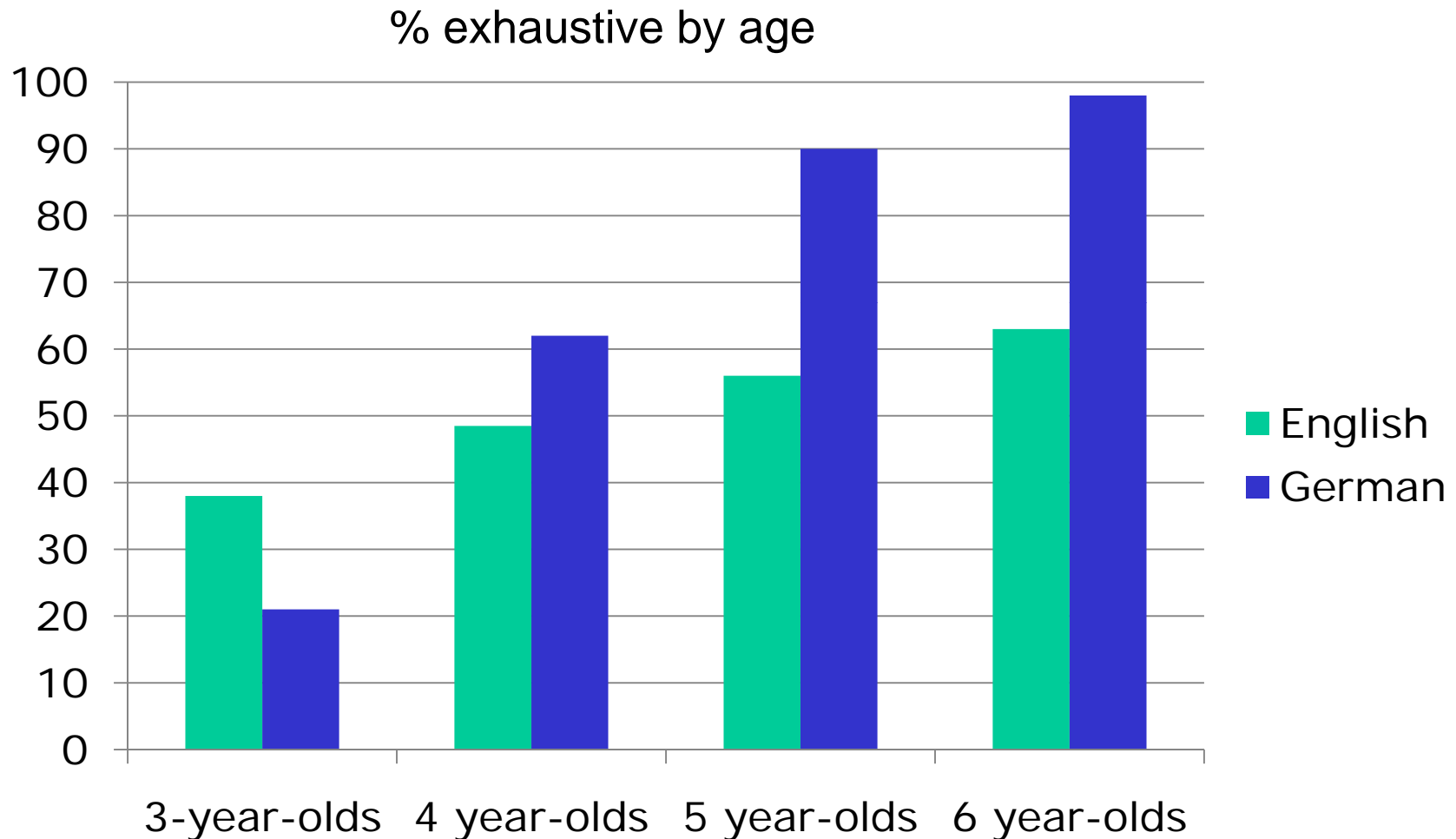
Results 1: Clefts



Results 1 + 2

- German 3-year-olds are significantly worse, $F(1,28)= 7.224$, $p=0.012$, and German 6-year-olds are significantly better, $F(1,28) = 4.793$, $p= 0.041$, in recognizing the exhaustivity requirement of **clefts**.
⇒ More structural displacement clues in German than in English, initially inhibiting but ultimately an advantage.
- German 5 and 6 year-olds also performed significantly better on **multiple questions** than their English peers, $F(1,28)= 5.362$, $p=0.028$ and $F(1,28)= 8.147$, $p=0.010$, after an initial 'inhibition' phase at age 3, which was not significant.
⇒ More structural displacement clues in German than in English, initially inhibiting but ultimately an advantage.

Results 2: Multiple Questions (Who bought what?)

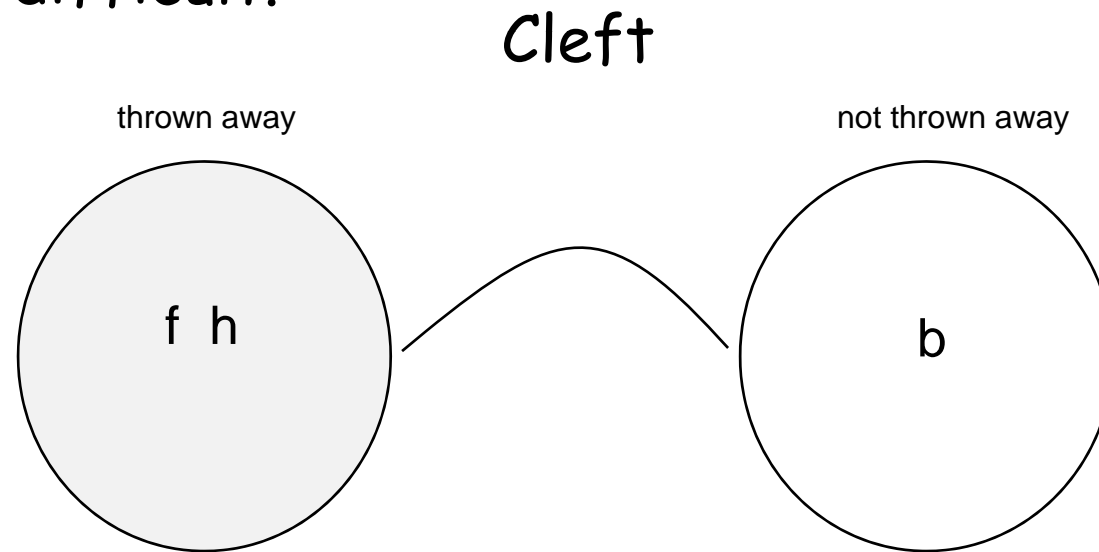


The Bigger Picture

- The same mechanism is responsible for exhaustivity, i.e. an operator which has the properties of a universal quantifier (partial correlation shows this too).
- However, this mechanism alone is not enough to explain all of the exhaustivity data. For both languages, exhaustivity in **single questions and quantifiers** is acquired significantly earlier than in **multiple questions and clefts**.
- In addition to quantification, the semantic calculations within/between sets are relevant as well \Rightarrow It is harder to calculate a relation between sets than within a set.

The Bigger Picture

- In clefts you have to calculate the relation between the contrastive set and the background set in addition to exhausting the contrastive set. This additional step makes clefts more difficult.



Additional Factor

- Another additional factor could make clefts harder as well. A minimally different structure, the presentational cleft, without exhaustivity requirement is present in English as well as in German.
- (3) It was a sandwich that John ate.
- (4) There was a sandwich that John ate.

Summary

- Exhaustivity in clefts comes in later than in single questions and quantifiers in both, English and German. This is due to the semantic requirement of relating sets which is an additional requirement than 'just' exhausting a set.
- The difference between English and German children can be explained when the whole range of syntactic displacement clues is factored in. More clues causes an initial conservative/inhibition stage. However, more clues mean a 'faster' track to the adult grammar in later stages.

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Selected References

COST A33 Projekt: <http://www.zas.gwz-berlin.de/cost/index.html>

Kiss, Katalin É. 1998. Identificational Focus versus Information Focus. *Language* 74: 245-273.

Mousoulidou, Marilena & Kevin Paterson. 2008. *Referential Processes in Children's Sentence Comprehension: Evidence from Quantified Noun-phrases*. Poster presented at the 21st CUNY Conference on Human Sentence Processing.

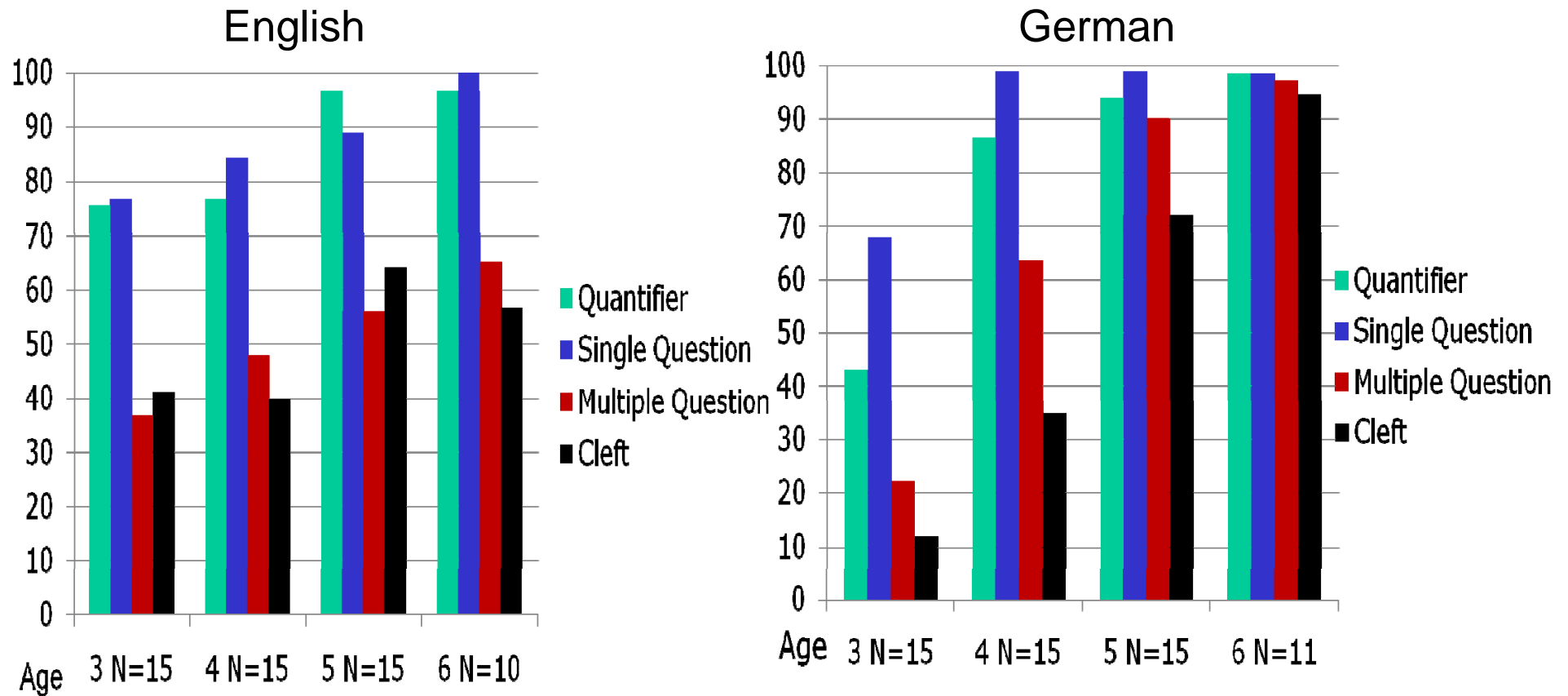
Roeper, Tom & Jill deVilliers. 1991. "The Emergence of Bound Variable Structures" In Tom Maxfield and Bernadette Plunkett (eds) *The Acquisition of WH, UMOP (University of Massachusetts Occasional Papers)*. University of Massachusetts, Amherst.

Roeper, Tom, Petra Schulz, Barbara Z. Pearson & Ina Reckling. 2007. 'From Singleton to Exhaustive: The Acquisition of Wh-'. In Michael Becker and Andrew McKenzie (eds) *Proceedings of SULA 3*, University of Massachusetts Amherst.

Seymour, Harry, Tom Roeper & Jill de Villiers. 2003. *Diagnostic Evaluation of Language Variation (DELV) Criterion Referenced*. San Antonio, TX: The Psychological Corporation.

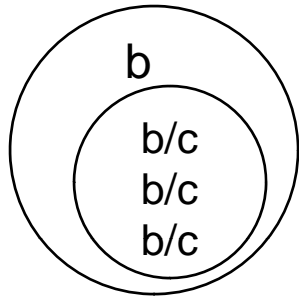
Strauss, Uri. 2006. 'The Acquisition of Exhaustivity'. In Tanja Heizmann (ed) *UMOP (University of Massachusetts Occasional Papers) 34*. University of Massachusetts, Amherst.

English and German All Structures Results

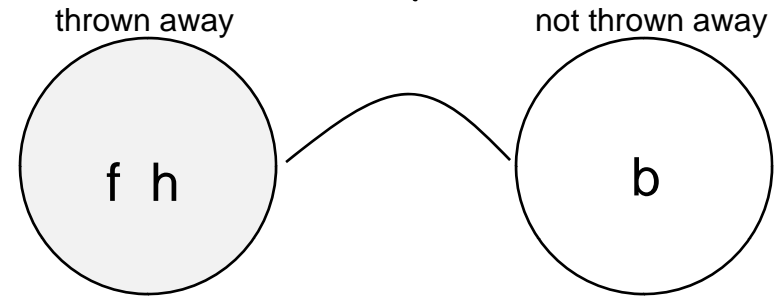


Calculations of Sets

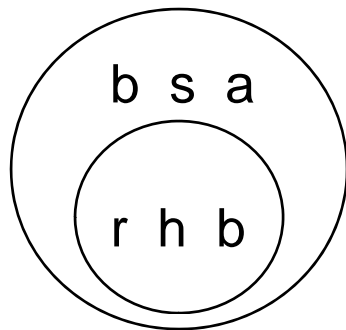
Quantifier



Cleft



Single Questions



Multiple Questions

