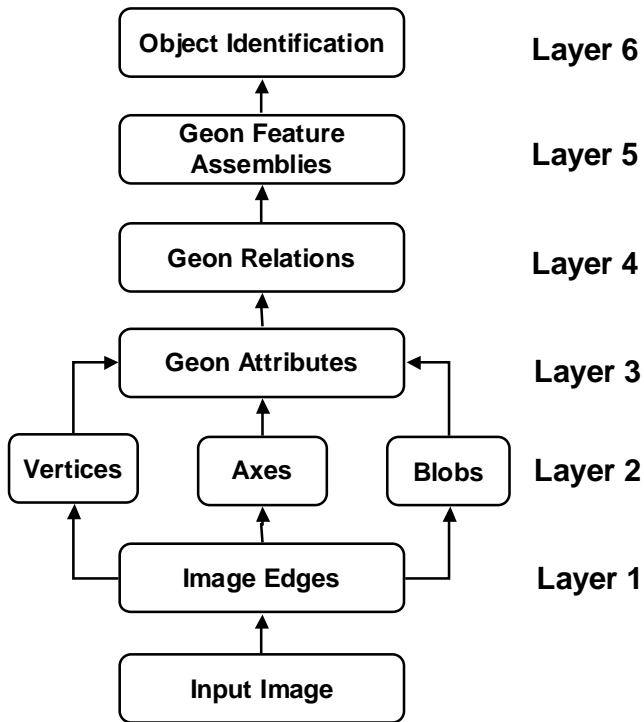


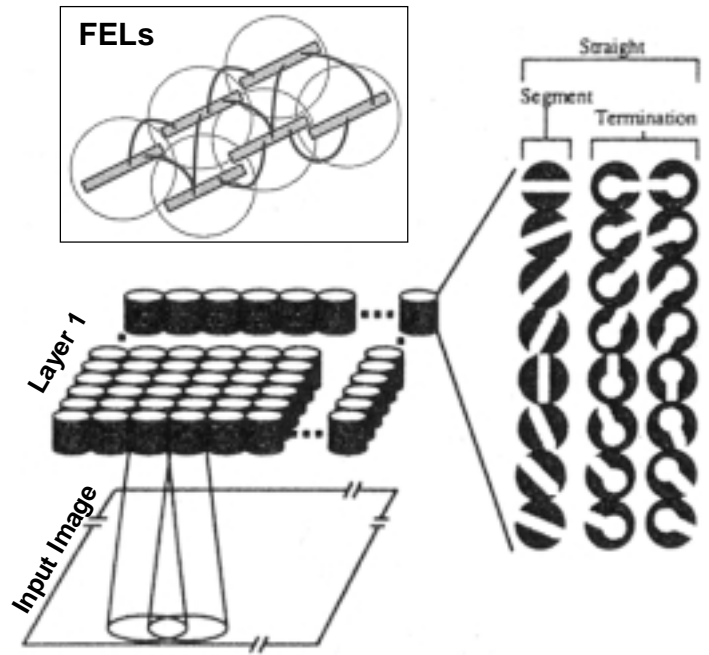
Theorien der Objekterkennung  
 Strukturelle Beschreibungen  
 Recognition by Components (RBC)

Verarbeitungsstufen im Modell von Hummel & Biederman (1992)



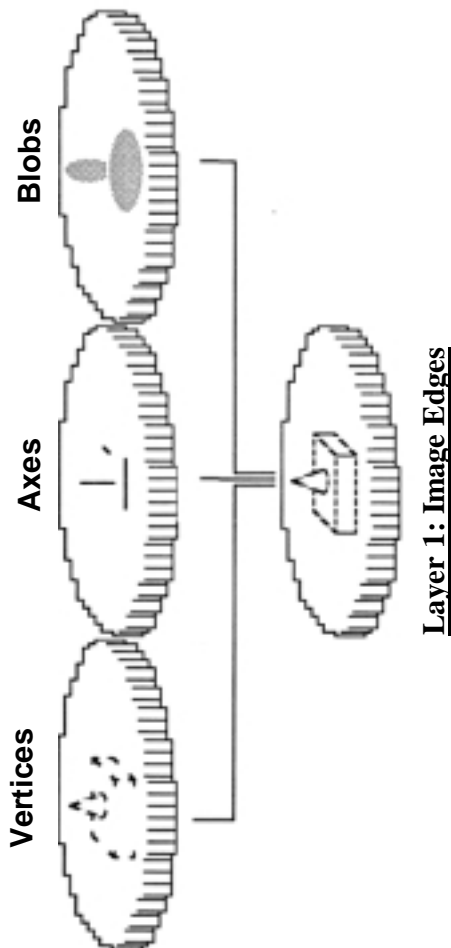
Theorien der Objekterkennung  
 Strukturelle Beschreibungen  
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Layer 1: Image Edges



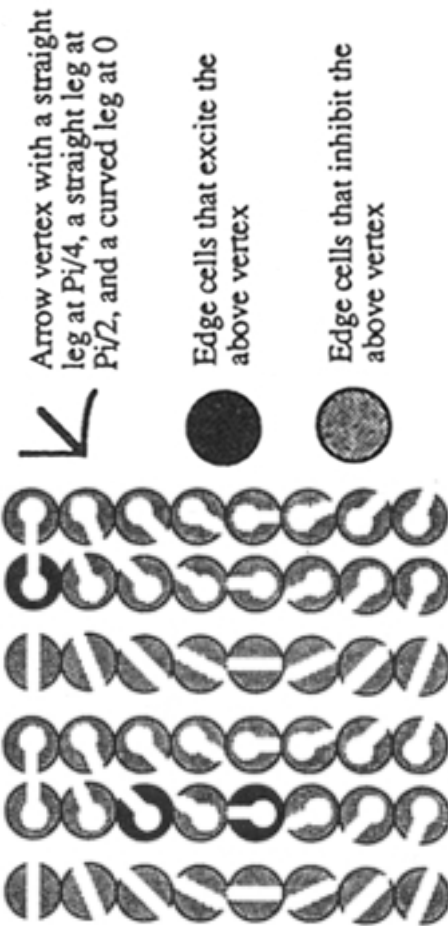
(Nach Hummel & Biederman, 1992)

Layer 2: Vertices, Two-Dimensional Axes, and Blobs



Layer 1: Image Edges

(Nach Hummel & Biederman, 1992)



(Aus Hummel & Biederman, 1992)

**Theorien der Objekterkennung**  
**Strukturelle Beschreibungen**  
**Recognition by Components (RBC)**

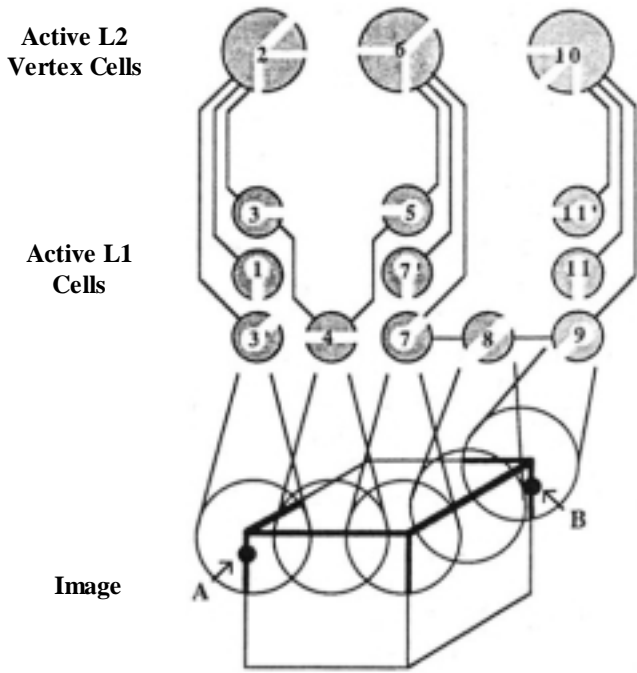


Figure 17. Illustration of grouping features into geons using fast enabling links (FEL) chains. (Consider Points a and b on the brick. When the cell representing Point a [Cell 1] fires, it will cause Cell 2 to fire, which will cause Cell 3 to fire, and so on, until this process has reached Point b [Cell 11]. L = layer) (Aus Hummel & Biederman, 1992)

**Theorien der Objekterkennung**  
**Strukturelle Beschreibungen**  
**Recognition by Components (RBC)**

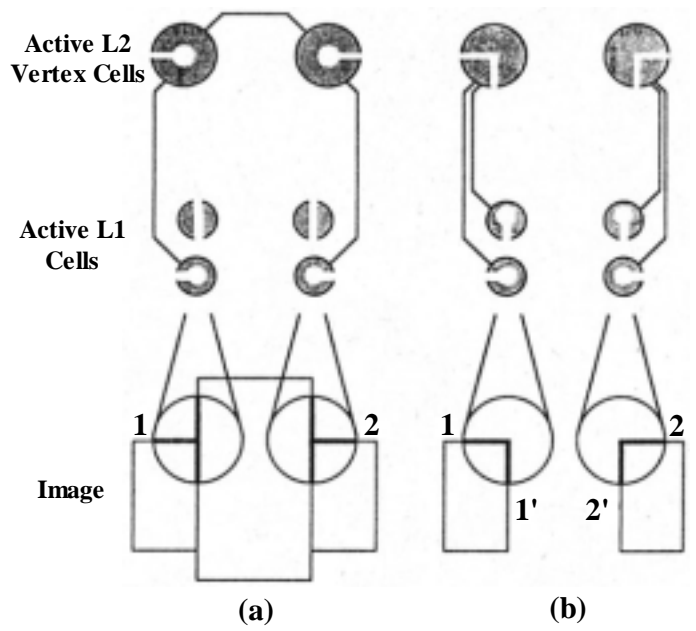
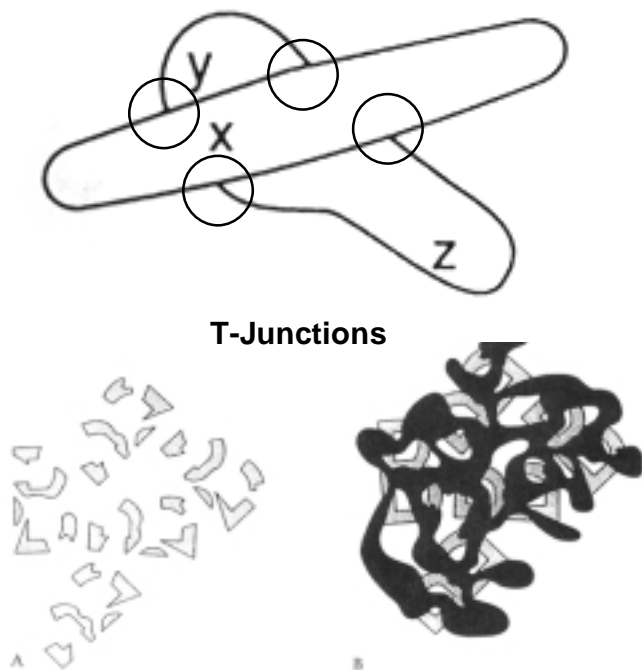


Figure 16. a: Contours 1 and 2 will group because lone terminations are activated at the occlusion points. b: Contours 1' and 2' produce L vertices that prevent the same contours (1 and 2) from grouping. The extra terminations (f and 2') inhibit the lone termination cells. L2 and L1 = Layer 2 and Layer 1. (Aus Hummel & Biederman, 1992)

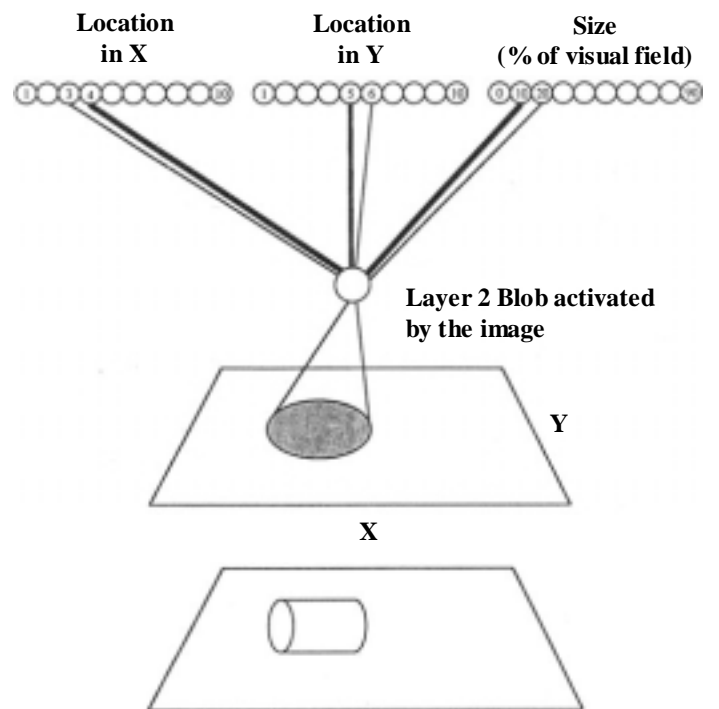
**Theorien der Objekterkennung**  
**Verarbeitung der Bildstruktur**  
**Segmentierung (Perceptual Parsing)**



(Aus Nakayama et al., 1995)

**Theorien der Objekterkennung**  
**Strukturelle Beschreibungen**  
**Recognition by Components (RBC)**

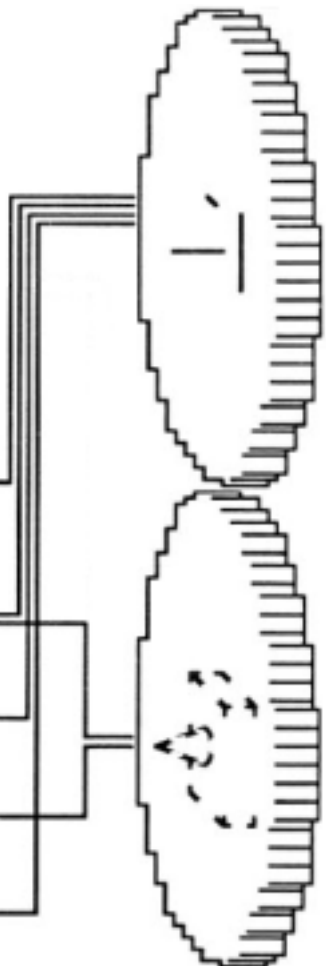
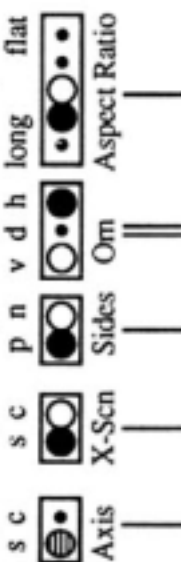
**Geon Attribute**



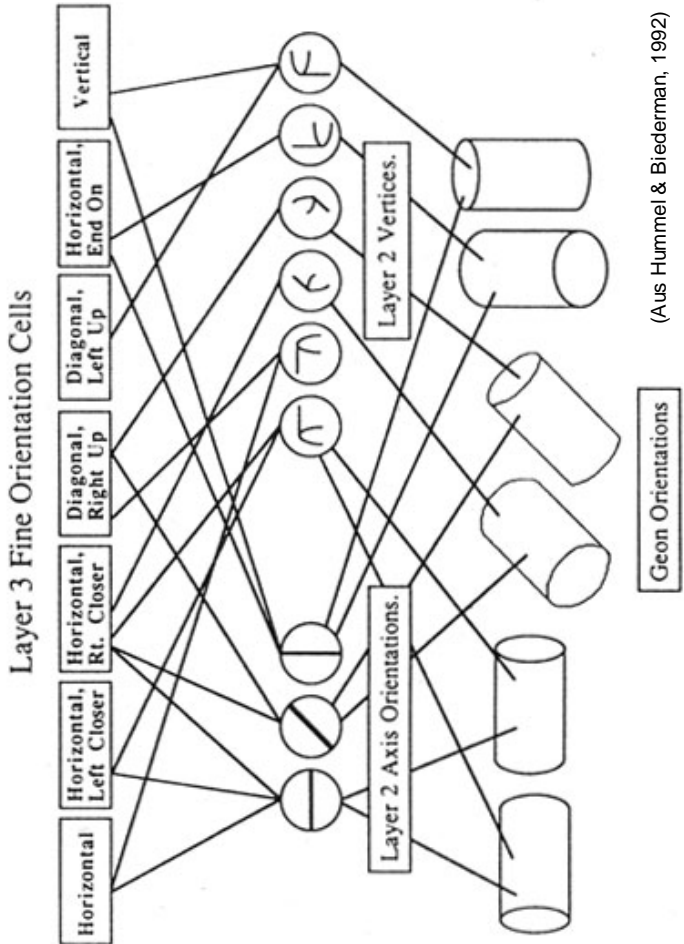
(Nach Hummel & Biederman, 1992)

### Geon Attribute als direktes Input von Schicht 6

Axis: Straight vs. Curved  
 X-Scn (Size of Cross Section):  
 Straight vs. Curved  
 Sides: Parallel vs. Non-Parallel  
 Aspect Ratio (X-Scn/Axis):  
 Long, Flat (5)



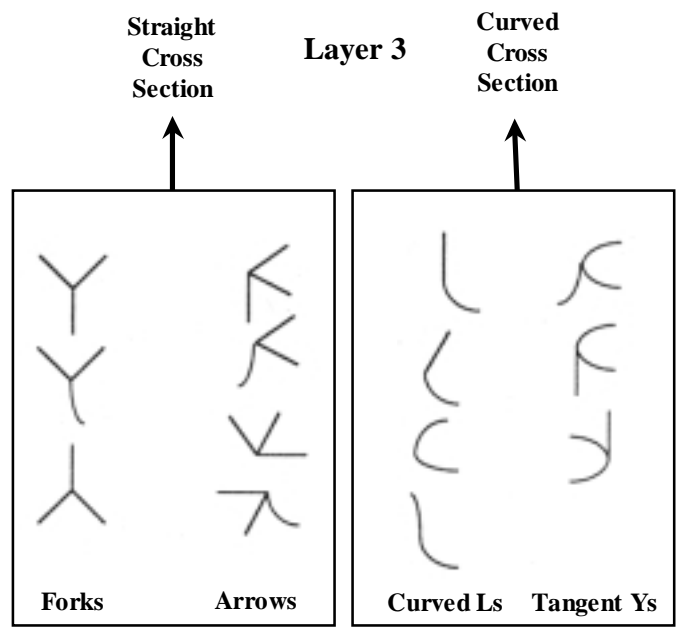
(Nach Hummel & Biederman, 1992)



(Aus Hummel & Biederman, 1992)

### Theorien der Objekterkennung Strukturelle Beschreibungen Recognition by Components (RBC)

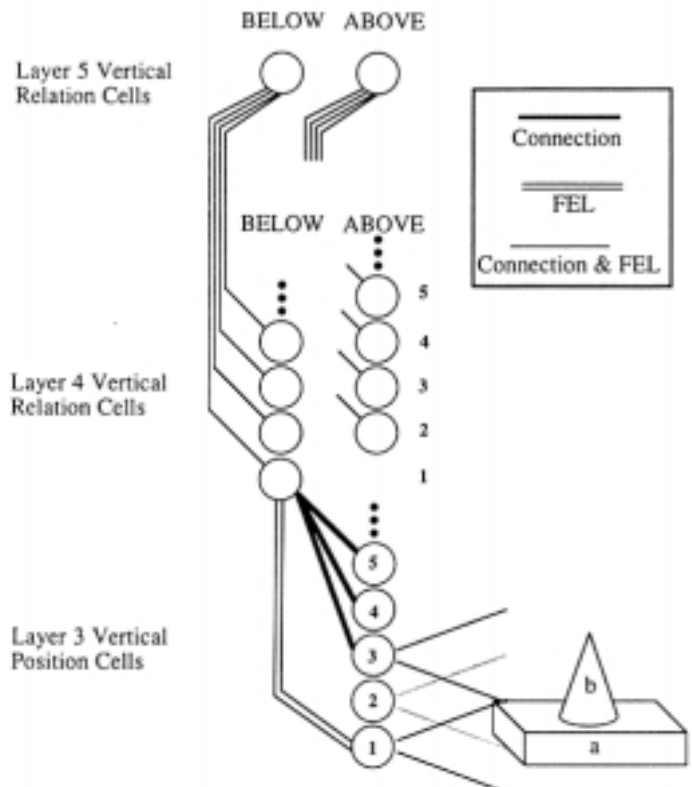
#### Geon Attribute



#### Layer 2 Vertex Cells

(Nach Hummel & Biederman, 1992)

### Theorien der Objekterkennung Strukturelle Beschreibungen Recognition by Components (RBC)



(Aus Hummel & Biederman, 1992)

# Theorien der Objekterkennung

## Strukturelle Beschreibungen

### Recognition by Components (RBC)

