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# Visual category Theory

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$\text{Part}_3 \in C^{\text{Parts}}$

Visual Category Theory Brick by Brick, Part 3: Using LEGO® to Teach Abstract Mathematics

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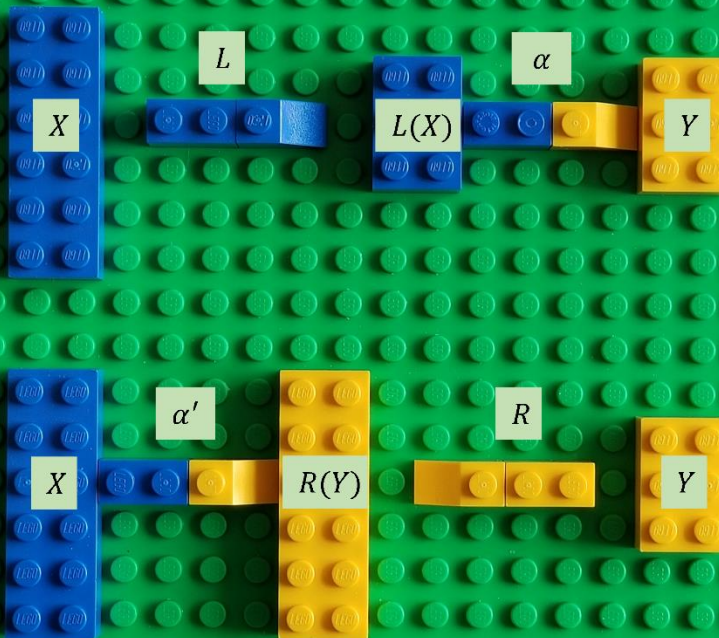
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Consider covariant functors  $L: \mathcal{D} \rightarrow \mathcal{C}$  and  $R: \mathcal{C} \rightarrow \mathcal{D}$  between categories  $\mathcal{C}$  and  $\mathcal{D}$ , objects  $X \in \mathcal{D}$  and  $Y \in \mathcal{C}$ , and the following arrows in categories  $\mathcal{C}$  and  $\mathcal{D}$ :  
 $Ar(\mathcal{C}) \ni \alpha: L(X) \rightarrow Y$  and  $Ar(\mathcal{D}) \ni \alpha': X \rightarrow R(Y)$



In addition to 3 books mentioned in Part<sub>1</sub>, we also used the following references:

- Category Theory by Steve Awodey
- Topoi: The Categorical Analysis of Logic by Robert Goldblatt
- The Theory of Mathematical Structures by Jiří Adámek
- Mathematics of the Transcendental by Alain Badiou
- Memory Evolutive Systems: Hierarchy, Emergence, Cognition by Andrée Ehresmann and Jean-Paul vanbremeersch