

Trajektische Verschlingung ternärer Kompositionsrelationen

1. Im folgenden werden Verschlingungen, d.h. knotentheoretische Äquivalente der algebraischen (bifunktoriellen) Verschränkungen (vgl. Toth 2025a) mit Hilfe von ternären Kompositionsrelationen (vgl. Toth 2025b) als trajektische Abbildungen dargestellt.

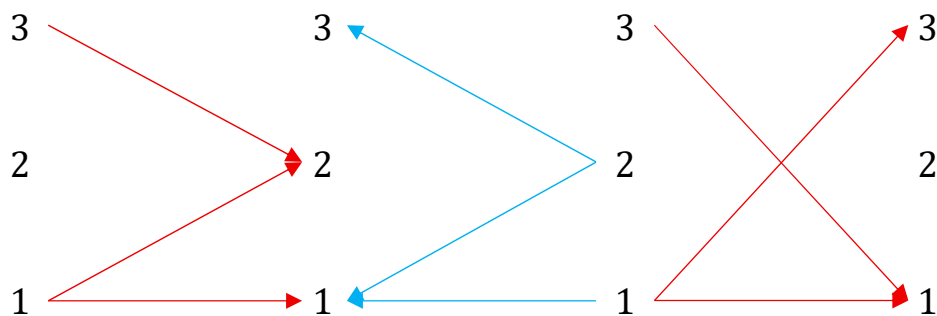
2. Semiotische Kompositionsdualsysteme

1. Semiotisches Dualsystem

3.1 2.1 1.1 $\times$ 1.1 1.2 1.3

$KR = ((3.2, 1.1), (2.1, 1.1), (3.1, 1.1))$

$KR^{-1} = ((1.1, 1.2), (1.1, 2.3), (1.1, 1.3))$

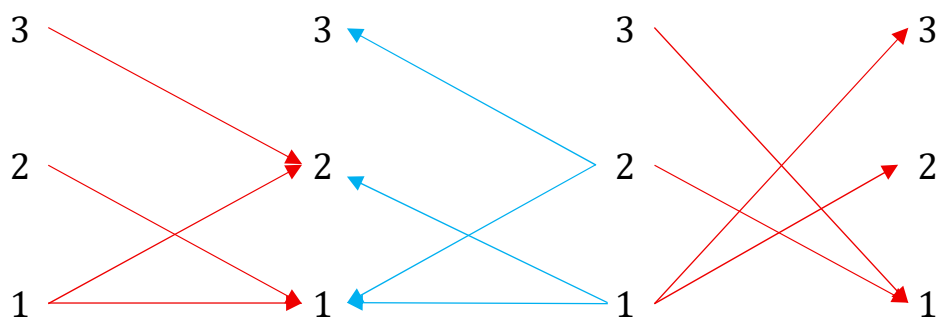


2. Semiotisches Dualsystem

3.1 2.1 1.2 $\times$ 2.1 1.2 1.3

$KR = ((3.2, 1.1), (2.1, 1.2), (3.1, 1.2))$

$KR^{-1} = ((2.1, 1.2), (1.1, 2.3), (2.1, 1.3))$

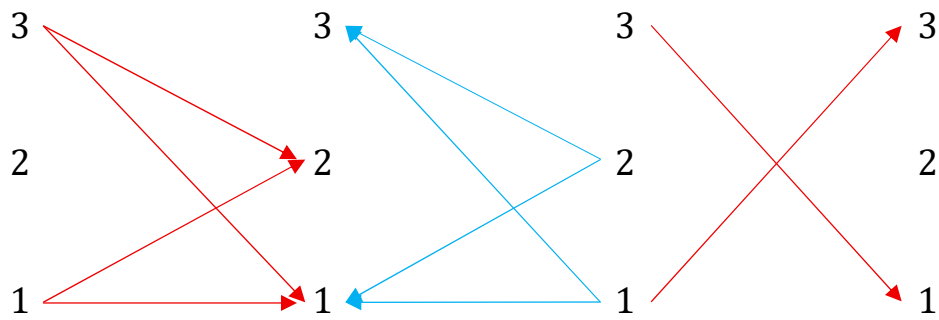


3. Semiotisches Dualsystem

3.1 2.1 1.3 $\times$ 3.1 1.2 1.3

$KR = ((3.2, 1.1), (2.1, 1.3), (3.1, 1.3))$

$$KR^{-1} = ((3.1, 1.2), (1.1, 2.3), (3.1, 1.3))$$

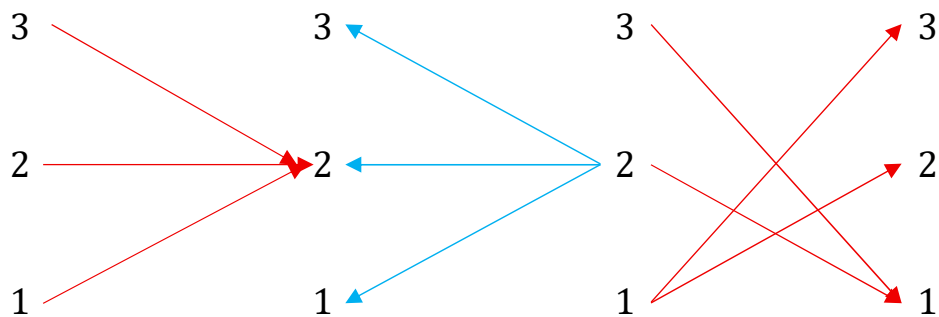


4. Semiotisches Dualsystem

$$3.1 \quad 2.2 \quad 1.2 \quad \times \quad 2.1 \quad 2.2 \quad 1.3$$

$$KR = ((3.2, 1.2), (2.1, 2.2), (3.1, 1.2))$$

$$KR^{-1} = ((2.2, 1.2), (2.1, 2.3), (2.1, 1.3))$$

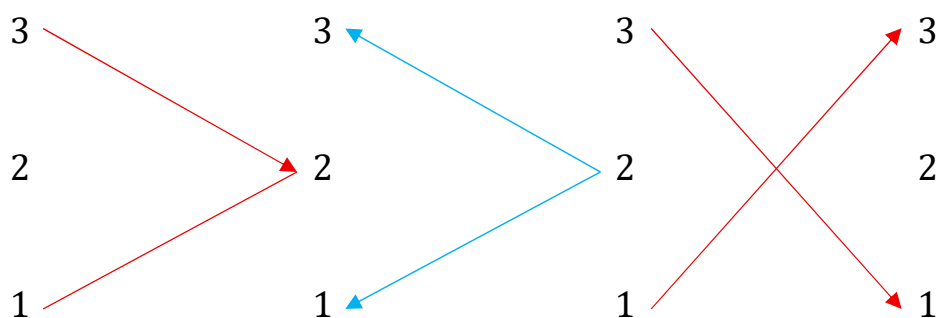


5. Semiotisches Dualsystem

$$3.1 \quad 2.2 \quad 1.3 \quad \times \quad 3.1 \quad 2.2 \quad 1.3$$

$$KR = ((3.2, 1.2), (2.1, 2.3), (3.1, 1.3))$$

$$KR^{-1} = ((3.2, 1.2), (2.1, 2.3), (3.1, 1.3))$$

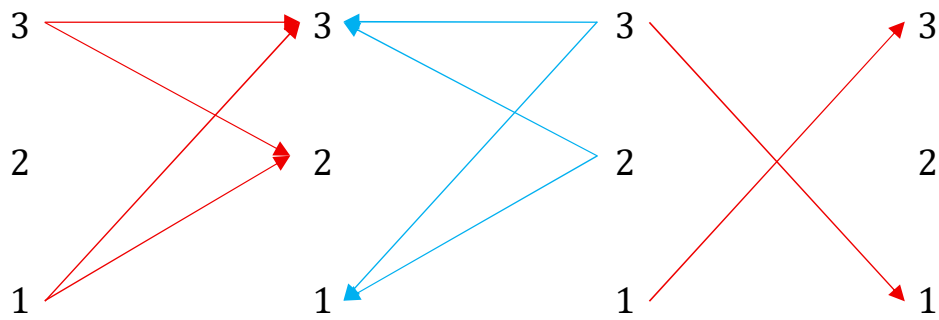


6. Semiotisches Dualsystem

$$3.1 \quad 2.3 \quad 1.3 \quad \times \quad 3.1 \quad 3.2 \quad 1.3$$

$$KR = ((3.2, 1.3), (2.1, 3.3), (3.1, 1.3))$$

$$KR^{-1} = ((3.3, 1.2), (3.1, 2.3), (3.1, 1.3))$$

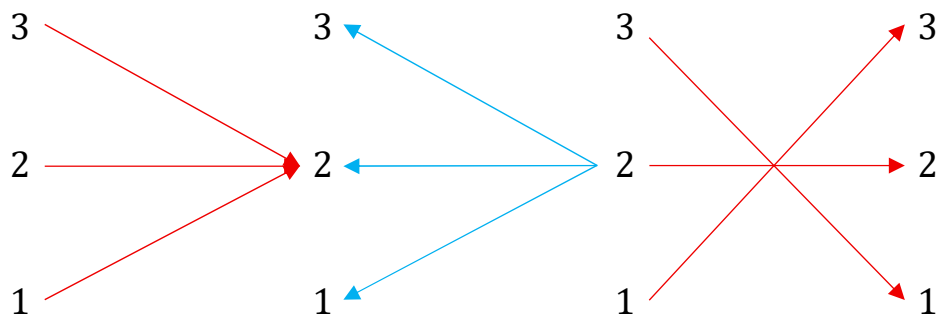


7. Semiotisches Dualsystem

$$3.2 \quad 2.2 \quad 1.2 \quad \times \quad 2.1 \quad 2.2 \quad 2.3$$

$$KR = ((3.2, 2.2), (2.1, 2.2), (3.1, 2.2))$$

$$KR^{-1} = ((2.2, 1.2), (2.2, 2.3), (2.2, 1.3))$$

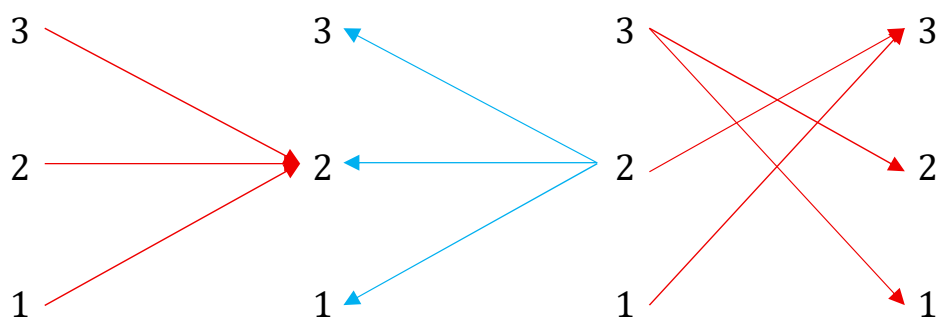


8. Semiotisches Dualsystem

$$3.2 \quad 2.2 \quad 1.3 \quad \times \quad 3.1 \quad 2.2 \quad 2.3$$

$$KR = ((3.2, 2.2), (2.1, 2.3), (3.1, 2.3))$$

$$KR^{-1} = ((3.2, 1.2), (2.2, 2.3), (3.2, 1.3))$$

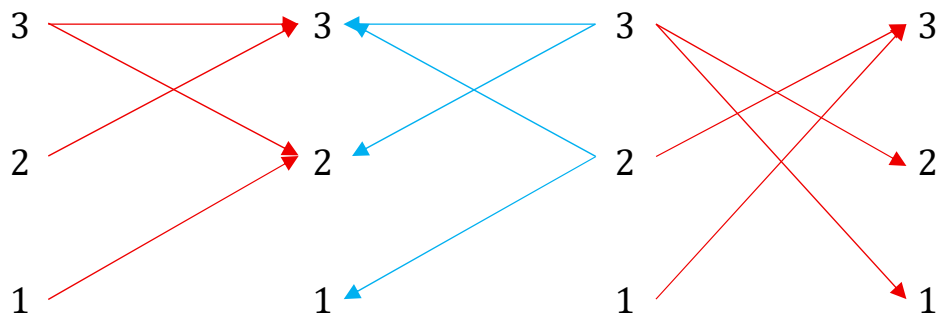


9. Semiotisches Dualsystem

$$3.2 \quad 2.3 \quad 1.3 \quad \times \quad 3.1 \quad 3.2 \quad 2.3$$

$$KR = ((3.2, 2.3), (2.1, 3.3), (3.1, 2.3))$$

$$KR^{-1} = ((3.3, 1.2), (3.2, 2.3), (3.2, 1.3))$$

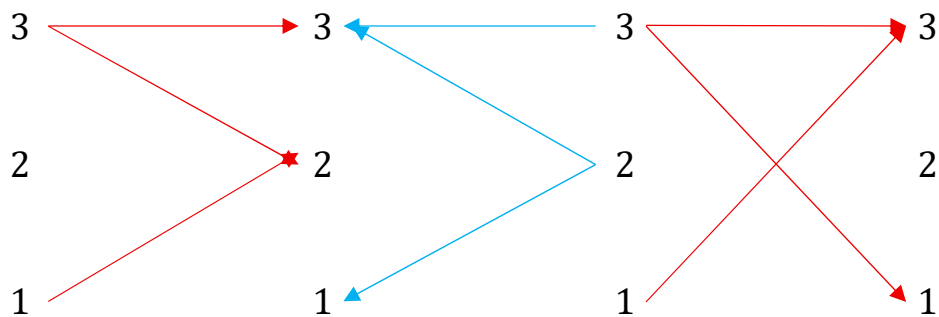


10. Semiotisches Dualsystem

3.3 2.3 1.3 × 3.1 3.2 3.3

$$KR = ((3.2, 3.3), (2.1, 3.3), (3.1, 3.3))$$

$$KR^{-1} = ((3.3, 1.2), (3.3, 2.3), (3.3, 1.3))$$



Literatur

Toth, Alfred, Von Verschränkungen zu Verschlingungen. In: Electronic Journal for Mathematical Semiotics, 2025a

Toth, Alfred, Ternäre Kompositionsrelationen. In: Electronic Journal for Mathematical Semiotics, 2025b

5.10.2025