

Interrelationen der ternären Randrelation

1. Wie in Toth (2025) aufgezeigt, kann man mit Hilfe von Trajekten 1. und 2. Stufe Interrelationen zwischen Teilrelationen semiotischer Relationen oder zwischen semiotischen Relationen sichtbar machen, die sogar in der algebraischen Diamondtheorie (vgl. Kaehr 2007) verborgen bleiben.

Im folgenden zeigen wir die Interrelationen zwischen den Korrelaten der in Toth (2015) eingeführten ternären Randrelation

$$R^* = (R, A, I),$$

darin R = Rand, A = Außen, I = Innen ist.

2. Trajektische Dualsysteme

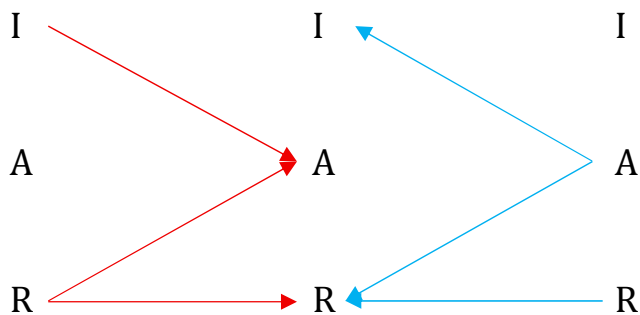
1. Randrelation

$$\begin{array}{ccccc} I.R & A.R & R.R & \times & R.R & R.A & R.I \end{array}$$

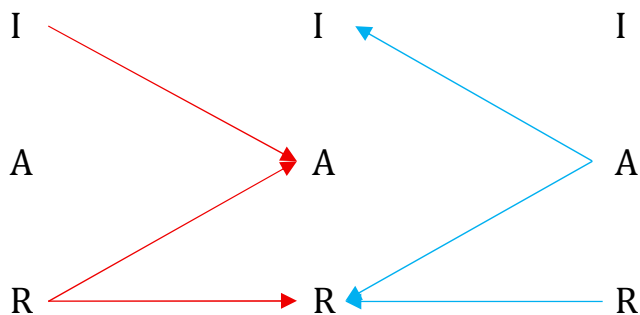
$$\begin{array}{ccccc} I.R & A.R & & & R.R & R.A \end{array}$$

$$\begin{array}{ccccc} A.R & R.R & & & R.A & R.I \end{array}$$

$$= (I.A, R.R) \mid (A.R, R.R) \qquad = (R.R, R.A) \mid (R.R, A.I)$$



$$= (I.A, R.A, R.R, R.R) \qquad = (R.R, R.R, A.R, A.I)$$



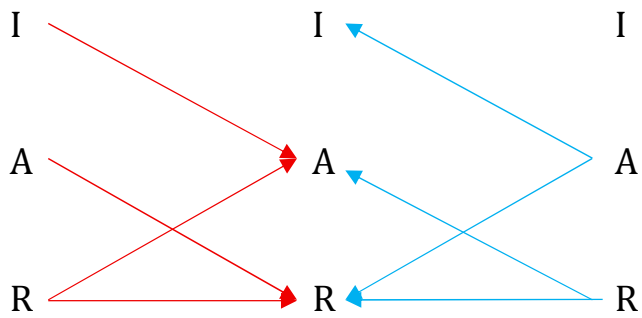
2. Randrelation

I.R A.R R.A $\times$ A.R R.A R.I

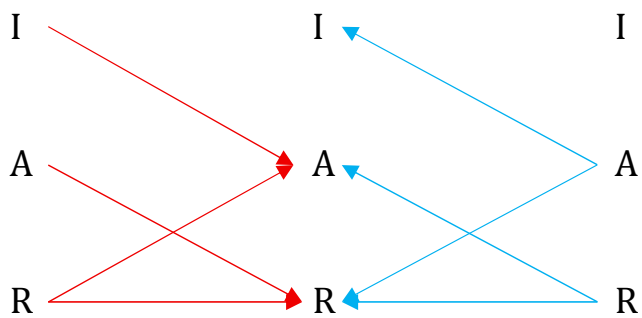
I.R A.R A.R R.A

A.R R.A R.A R.I

$= (I.A, R.R) \mid (A.R, R.A)$ $= (A.R, R.A) \mid (R.R, A.I)$



$= (I.A, R.A, R.R, R.A)$ $= (A.R, R.R, A.R, A.I)$



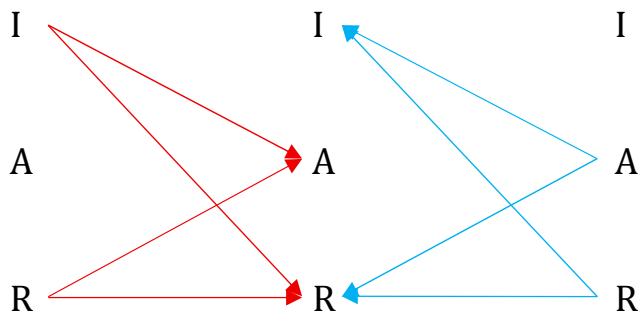
3. Randrelation

I.R A.R R.I $\times$ I.R R.A R.I

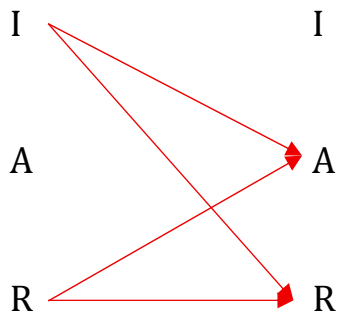
I.R A.R I.R R.A

A.R R.I R.A R.I

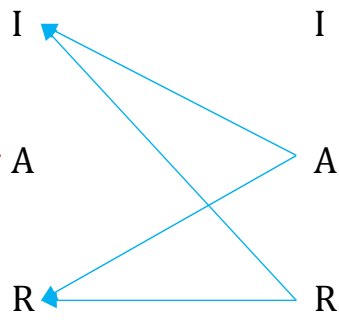
$= (I.A, R.R) \mid (A.R, R.I)$ $= (I.R, R.A) \mid (R.R, A.I)$



$= (I.A, R.A, R.R, R.I)$



$= (I.R, R.R, A.R, A.I)$



4. Randrelation

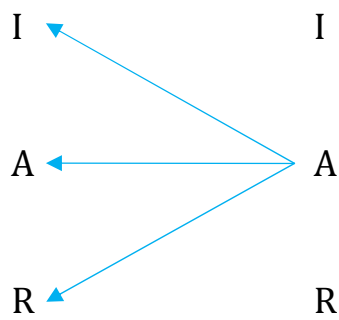
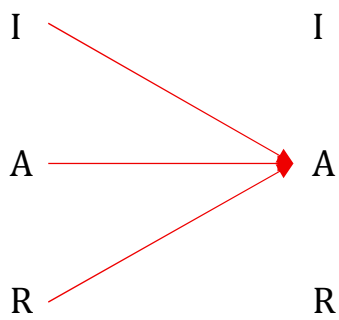
$I.R \quad A.A \quad R.A \quad \times \quad A.R \quad A.A \quad R.I$

$I.R \quad A.A \quad \quad \quad A.R \quad A.A$

$A.A \quad R.A \quad \quad \quad A.A \quad R.I$

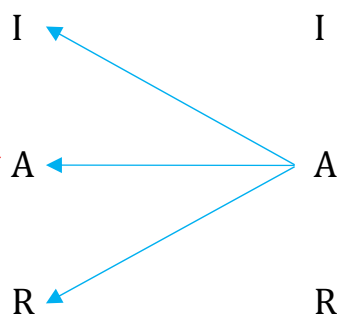
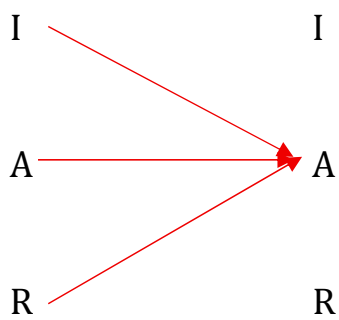
$= (I.A, R.A) \mid (A.R, A.A)$

$= (A.A, R.A) \mid (A.R, A.I)$



$= (I.A, R.A, A.R, A.A)$

$= (A.A, R.A, A.R, A.I)$



5. Randrelation

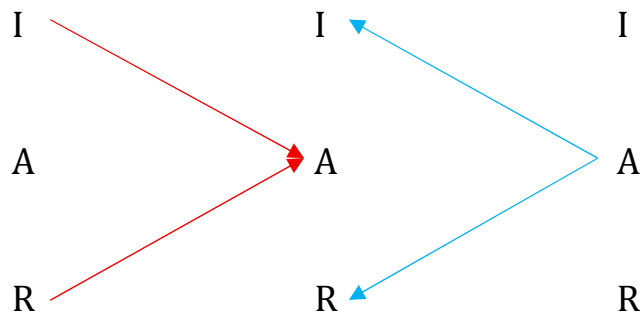
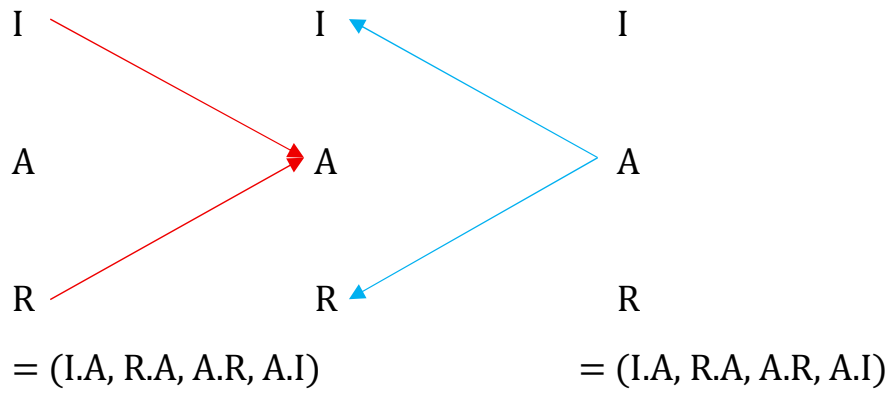
$I.R \quad A.A \quad R.I \quad \times \quad I.R \quad A.A \quad R.I$

$I.R \quad A.A \quad \quad \quad I.R \quad A.A$

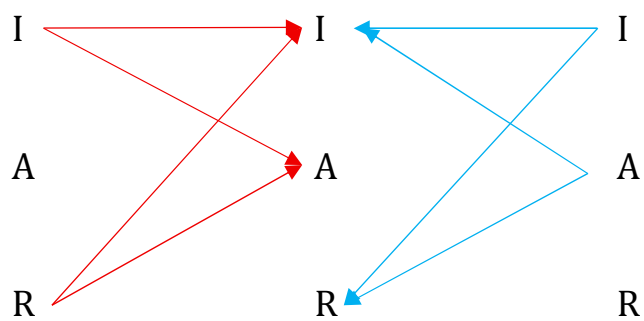
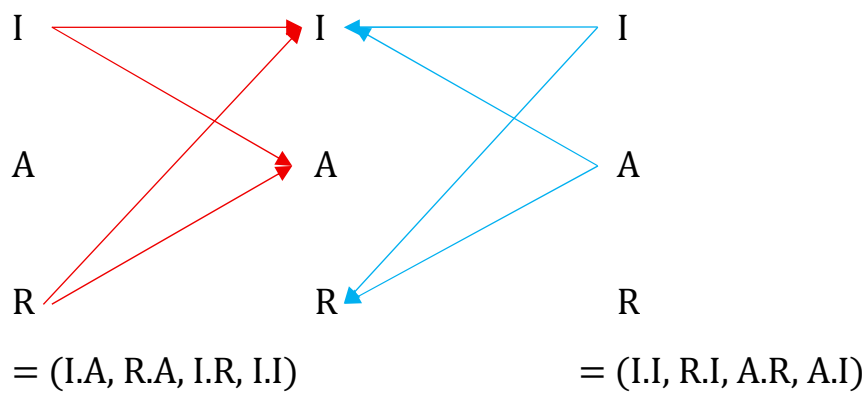
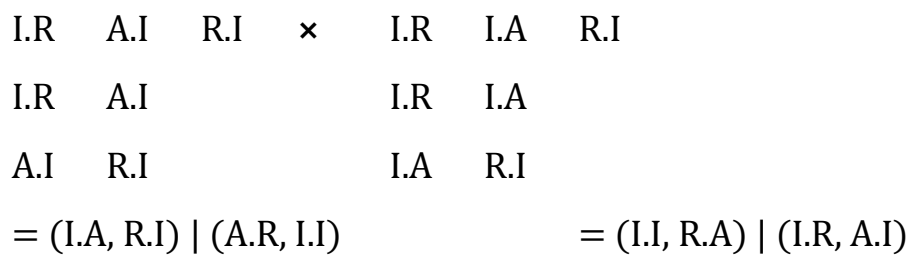
$A.A \quad R.I \quad \quad \quad A.A \quad R.I$

$= (I.A, R.A) \mid (A.R, A.I)$

$= (I.A, R.A) \mid (A.R, A.I)$



6. Randrelation



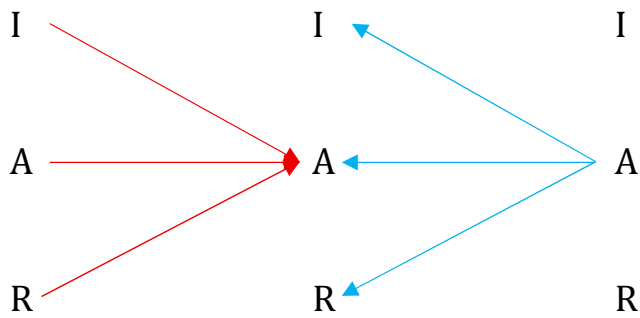
7. Randrelation

I.A A.A R.A $\times$ A.R A.A A.I

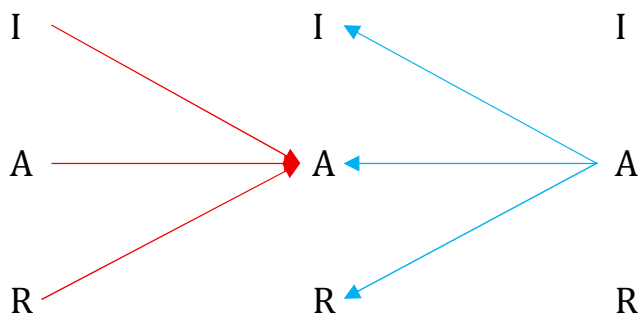
I.A A.A A.R A.A

A.A R.A A.A A.I

$= (I.A, A.A) \mid (A.R, A.A)$ $= (A.A, R.A) \mid (A.A, A.I)$



$= (I.A, A.A, A.R, A.A)$ $= (A.A, R.A, A.A, A.I)$



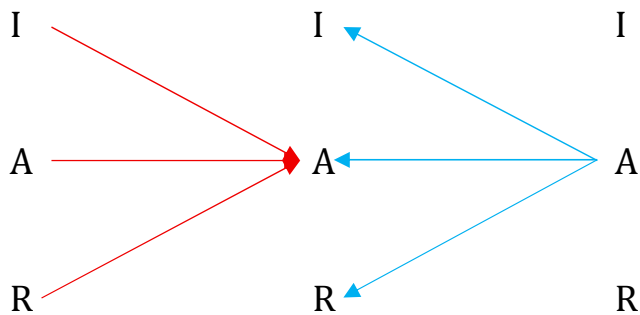
8. Randrelation

I.A A.A R.I $\times$ I.R A.A A.I

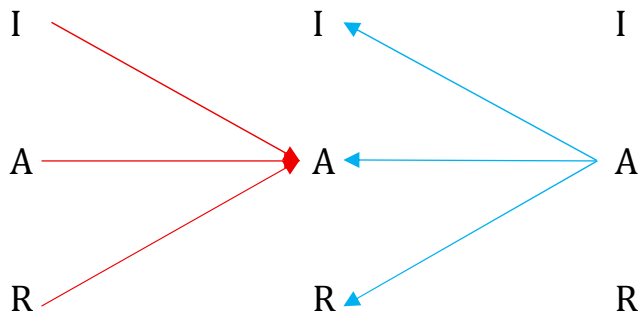
I.A A.A I.R A.A

A.A R.I A.A A.I

$= (I.A, A.A) \mid (A.R, A.I)$ $= (I.A, R.A) \mid (A.A, A.I)$



$= (I.A, A.A, A.R, A.I)$ $= (I.A, R.A, A.A, A.I)$



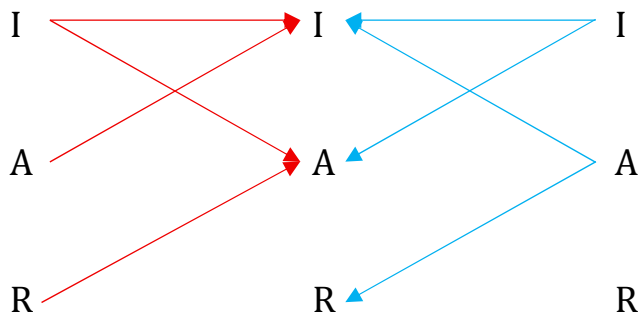
9. Randrelation

I.A A.I R.I × I.R I.A A.I

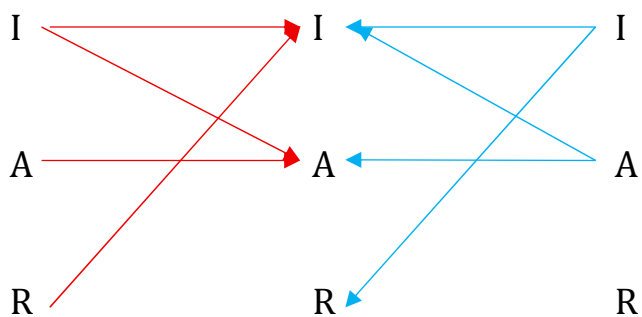
I.A A.I I.R I.A

A.I R.I I.A A.I

$= (I.A, A.I) \mid (A.R, I.I)$ $= (I.I, R.A) \mid (I.A, A.I)$



$= (I.A, A.A, I.R, I.I)$ $= (I.I, R.I, A.A, A.I)$



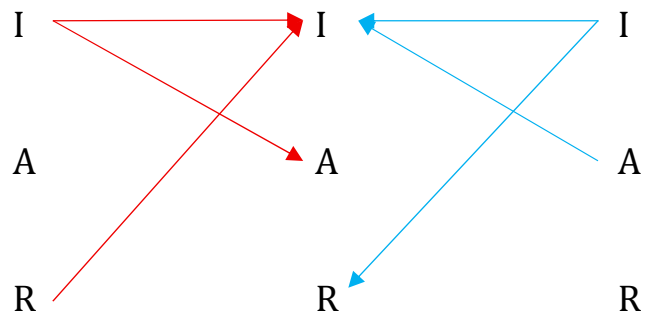
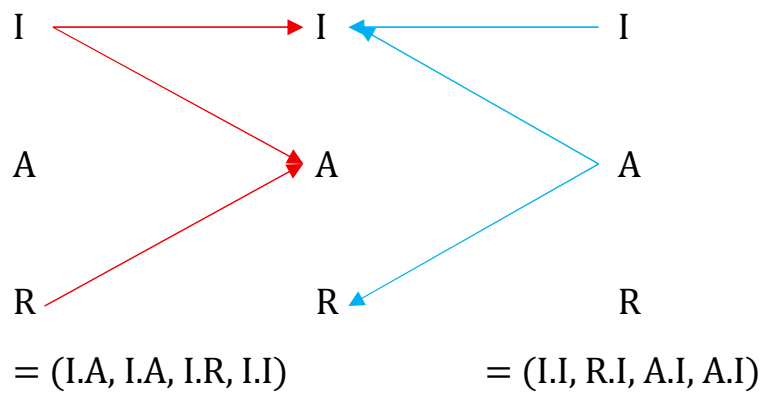
10. Randrelation

I.I A.I R.I × I.R I.A I.I

I.I A.I I.R I.A

A.I R.I I.A I.I

$= (I.A, I.I) \mid (A.R, I.I)$ $= (I.I, R.A) \mid (I.I, A.I)$



Literatur

Kaehr, Rudolf, The Book of Diamonds. Glasgow, U.K. 2007

Toth, Alfred, Adessivität, Adjazenz und Exessivität. In: Electronic Journal for Mathematical Semiotics, 2015

Toth, Alfred, Das 2-stufig trajektische System der zehn semiotischen Dualsysteme. In: Electronic Journal for Mathematical Semiotics, 2025

2.9.2025