

Prof. Dr. Alfred Toth

Intern prozipative semiotische Dualsysteme

1. Gegeben sei ein Paar von Dyaden

$$R = ((a.b), (c.d)),$$

dann können wir folgende Typen von Antizipationen unterscheiden, die wir nun genauer differenzieren.

1. Prozipation: externe: $((a.b), (c.d)) \rightarrow ((a.c), (b.d))$

interne: $((a.b), (c.d)) \rightarrow ((b.d), (a.c))$

2. Rezipation: externe: $((a.b), (c.d)) \rightarrow ((d.b), (c.a))$

interne: $((a.b), (c.d)) \rightarrow ((c.a), (d.b))$

(vgl. Toth 2025).

2. Im folgenden bestimmen wir die intern prozipativen Dualsysteme des vollständigen Systems der $3^3 = 27$ ternären semiotischen Relationen.

$$\begin{array}{ccc} 3.1 & 2.1 & 1.1 \\ \downarrow & & \downarrow \\ 1.1 & 3.2 & | \end{array} \quad \begin{array}{ccc} 1.1 & 2.1 & \\ \times & & \\ 1.2 & 1.1 & | \end{array} \quad \begin{array}{ccc} 1.2 & 1.3 & \\ & & \\ 2.3 & 1.1 & \end{array}$$

$$\begin{array}{ccc} 3.1 & 2.1 & 1.2 \\ \downarrow & & \downarrow \\ 1.1 & 3.2 & | \end{array} \quad \begin{array}{ccc} 2.1 & 1.2 & 1.3 \\ \times & & \\ 1.2 & 2.1 & | \end{array} \quad \begin{array}{ccc} 1.2 & 1.3 & \\ & & \\ 2.3 & 1.1 & \end{array}$$

$$\begin{array}{ccc} 3.1 & 2.1 & 1.3 \\ \downarrow & & \downarrow \\ 1.1 & 3.2 & | \end{array} \quad \begin{array}{ccc} 3.1 & 1.2 & 1.3 \\ \times & & \\ 1.2 & 3.1 & | \end{array} \quad \begin{array}{ccc} 1.2 & 1.3 & \\ & & \\ 2.3 & 1.1 & \end{array}$$

$$\begin{array}{ccc} 3.1 & 2.2 & 1.1 \\ \downarrow & & \downarrow \\ 1.2 & 3.2 & | \end{array} \quad \begin{array}{ccc} 1.1 & 2.2 & 1.3 \\ \times & & \\ 1.2 & 1.2 & | \end{array} \quad \begin{array}{ccc} 1.2 & 1.3 & \\ & & \\ 2.3 & 2.1 & \end{array}$$

3.1	2.2	1.2			×	2.1	2.2	1.3			
	↓						↓				
1.2	3.2		2.2	2.1		1.2	2.2		2.3	2.1	

3.1	2.2	1.3			×	3.1	2.2	1.3			
	↓						↓				
1.2	3.2		2.3	2.1		1.2	3.2		2.3	2.1	

3.1	2.3	1.1			×	1.1	3.2	1.3			
	↓						↓				
1.3	3.2		3.1	2.1		1.2	1.3		2.3	3.1	

3.1	2.3	1.2			×	2.1	3.2	1.3			
	↓						↓				
1.3	3.2		3.2	2.1		1.2	2.3		2.3	3.1	

3.1	2.3	1.3			×	3.1	3.2	1.3			
	↓						↓				
1.3	3.2		3.3	2.1		1.2	3.3		2.3	3.1	

3.2	2.1	1.1			×	1.1	1.2	2.3			
	↓						↓				
2.1	3.2		1.1	2.1		1.2	1.1		2.3	1.2	

3.2	2.1	1.2			×	2.1	1.2	2.3			
	↓						↓				
2.1	3.2		1.2	2.1		1.2	2.1		2.3	1.2	

3.2	2.1	1.3			×	3.1	1.2	2.3		
	↓						↓			
2.1	3.2		1.3	2.1		1.2	3.1		2.3	1.2
3.2	2.2	1.1			×	1.1	2.2	2.3		
	↓						↓			
2.2	3.2		2.1	2.1		1.2	1.2		2.3	2.2
3.2	2.2	1.2			×	2.1	2.2	2.3		
	↓						↓			
2.2	3.2		2.2	2.1		1.2	2.2		2.3	2.2
3.2	2.2	1.3			×	3.1	2.2	2.3		
	↓						↓			
2.2	3.2		2.3	2.1		1.2	3.2		2.3	2.2
3.2	2.3	1.1			×	1.1	3.2	2.3		
	↓						↓			
2.3	3.2		3.1	2.1		1.2	1.3		2.3	3.2
3.2	2.3	1.2			×	2.1	3.2	2.3		
	↓						↓			
2.3	3.2		3.2	2.1		1.2	2.3		2.3	3.2
3.2	2.3	1.3			×	3.1	3.2	2.3		
	↓						↓			
2.3	3.2		3.3	2.1		1.2	3.3		2.3	3.2

3.3	2.1	1.1		×	1.1	1.2	3.3			
	↓					↓				
3.1	3.2		1.1	2.1		1.2	1.1		2.3	1.3
3.3	2.1	1.2		×	2.1	1.2	3.3			
	↓					↓				
3.1	3.2		1.2	2.1		1.2	2.1		2.3	1.3
3.3	2.1	1.3		×	3.1	1.2	3.3			
	↓					↓				
3.1	3.2		1.3	2.1		1.2	3.1		2.3	1.3
3.3	2.2	1.1		×	1.1	2.2	3.3			
	↓					↓				
3.2	3.2		2.1	2.1		1.2	1.2		2.3	2.3
3.3	2.2	1.2		×	2.1	2.2	3.3			
	↓					↓				
3.2	3.2		2.2	2.1		1.2	2.2		2.3	2.3
3.3	2.2	1.3		×	3.1	2.2	3.3			
	↓					↓				
3.2	3.2		2.3	2.1		1.2	3.2		2.3	2.3
2.2	3.3	1.1		×	1.1	3.3	2.2			
	↓					↓				
2.3	2.3		3.1	3.1		1.3	1.3		3.2	3.2

3.3	2.3	1.2			×	2.1	3.2	3.3		
	↓						↓			
3.3	3.2		3.2	2.1		1.2	2.3		2.3	3.3

3.3	2.3	1.3			×	3.1	3.2	3.3		
	↓						↓			
3.3	3.2		3.3	2.1		1.2	3.3		2.3	3.3

Die allgemeine Struktur der Transformationsschemata zwischen semiotischen Dualsystemen und ihren dualen Trajekten lautet also:

a.b	c.d	e.f			×	f.e	d.c	b.a		
	↓						↓			
b.d	a.c		d.f	c.e		e.c	f.d		c.a	d.b

Literatur

Toth, Alfred, Prozipative und rezipative Matrizen. In: Electronic Journal for Mathematical Semiotics, 2025

24.12.2025