Prof. Dr. Alfred Toth

Ontik, Semiotik und Kenogrammatik als Kategorie

1. Im folgenden zeigen wir, daß sich das Tripel von Ontik, Semiotik und Kenogrammatik (vgl. zur Keno- und Morphogrammatik Kronthaler 1986, Kaehr/ Mahler 1992) als Kategorie darstellen läßt. Auf Kronthaler (1992) geht bekanntlich die Idee zurück, die Semiotik auf die Kenogrammatik zurückzuführen. Rein theoretisch betrachtet, stellt sich bei der von der Kenogrammatik vorausgesetzten Proömialrelation das Problem, daß die unterhalb von ihr liegende Ebene der Kenogramme und Morphogramme keine Unterscheidung von Zeichen und Objekt mehr zuläßt, bildet sie doch gerade die gemeinsame abstrakte Struktur von ihnen. Dennoch konnte Kaehr (2009) zeigen, daß es möglich ist, eine polykontexturale Semiotik durch Kontexturierung der Subzeichen zu konstruieren. Ich zeigte in Toth (2019a), daß man auch auf direktem Wege eine polykontexturale Semiotik konstruieren kann, indem man man von einer dyadisch-trichotomischen Zeichenrelation ausgeht, also den Interpretantenzug nicht mehr kategorial, sondern topologisch definiert. Damit lassen sich auch die Modelle von Kaehr und Toth miteinander vereinigen, denn wie in Toth (2019b) gezeigt worden waren, kann die Isomorphie beider Modelle durch Transformation des peirceschen in das topologische Zeichenmodell auf relativ einfache Weise dargestellt werden (vgl. Toth 2019c).

2. Somit stehen wir vor dem, monokontural gesehen, Paradox, daß zwar einerseits die Kenogrammatik keine Unterscheidung von Zeichen und Objekt kennt, daß man andererseits aber die ihnen gemeinsamen Morphogrammsrukturen dennoch mit ontischen und mit semiotischen Werten belegen kann. Man kann somit die folgende Kategorie konstruieren.

$$\begin{tikzcd} \text{Ontik} \arrow[r, "f"] \arrow[dr, "gf"'] & \text{Semiotik} \arrow[d, "g"] \\ & \text{Keno} \end{tikzcd}$$

2.1. Die Abbildungen der Ontik auf die Semiotik

Wir gehen aus von der Abbildung der ontischen Kategorien (vgl. Toth 2019d)

f_1: Mat → (1.1)

f_2: Str → (1.2)

f_3: Obj → (1.3)

f_4: Sys → (2.1)

f_5: Abb → (2.2)

f_6: Rep → (2.3)

2.2. Die Abbildungen der Semiotik auf die Kenogrammatik

Vgl. dazu Toth (2019a, S. 20 ff.)

1. (1.1, 2.1)-System

1.1. R-System

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[○)[○○○]	[(○))[○○○]	[○)[(○○○)]	[(○○○))[○]	[○○○)[(○)]	[(○))[(○○○)]

[○](○○○)	[(○)](○○○)	[○]((○○○))	[(○○○)](○)	[○○○]((○))	[(○)]((○○○))
[○](○○○]	[(○)](○○○]	[○]((○○○)]	[(○○○)](○]	[○○○]((○)]	[(○)]((○○○)]
[○][○○○)	[(○)][○○○)	[○][(○○○))	[(○○○)][○)	[○○○][(○))	[(○)][(○○○))
[○][○○○]	[(○)][○○○]	[○][(○○○)]	[(○○○)][○]	[○○○][(○)]	[(○)][(○○○)].

1.2. R*-System

(○○○)(○)	((○○○))(○)	(○○○)((○))	((○))(○○○)	(○)((○○○))	((○○○))((○))
(○○○)(○]	((○○○))(○]	(○○○)((○)]	((○))(○○○]	(○)((○○○)]	((○○○))((○)]
(○○○)[○)	((○○○))[○)	(○○○)[(○))	((○))[○○○)	(○)[(○○○))	((○○○))[(○))
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(○○○](○)	((○○○)](○)	(○○○]((○))	((○)](○○○)	(○]((○○○))	((○○○)]((○))
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(○○○][○)	((○○○)][○)	(○○○][(○))	((○)][○○○)	(○][(○○○))	((○○○)][(○))
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[○○○)(○)	[(○○○))(○)	[○○○)((○))	[(○))(○○○)	[○)((○○○))	[(○○○))((○))
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[○○○)[○)	[(○○○))[○)	[○○○)[(○))	[(○))[○○○)	[○)[(○○○))	[(○○○))[(○))
[○○○)[○]	[(○○○))[○]	[○○○)[(○)]	[(○))[○○○]	[○)[(○○○)]	[(○○○))[(○)]

[○○○](○)	[(○○○)](○)	[○○○]((○))	[(○)](○○○)	[○]((○○○))	[(○○○)]((○))
[○○○](○]	[(○○○)](○]	[○○○]((○)]	[(○)](○○○]	[○]((○○○)]	[(○○○)]((○)]
[○○○][○)	[(○○○)][○)	[○○○][(○))	[(○)][○○○)	[○][(○○○))	[(○○○)][(○))
[○○○][○]	[(○○○)][○]	[○○○][(○)]	[(○)][○○○]	[○][(○○○)]	[(○○○)][(○)]

2. (1.1, 2.2)-System

2.1. R-System

(○)(○○△)	((○))(○○△)	(○)((○○△))	((○○△))(○)	(○○△)((○))	((○))((○○△))
(○)(○○△]	((○))(○○△]	(○)((○○△)]	((○○△))(○]	(○○△)((○)]	((○))((○○△)]
(○)[○○△)	((○))[○○△)	(○)[(○○△))	((○○△))[○)	(○○△)[(○))	((○))[(○○△))
(○)[○○△]	((○))[○○△]	(○)[(○○△)]	((○○△))[○]	(○○△)[(○)]	((○))[(○○△)]

(○](○○△)	((○)](○○△)	(○]((○○△))	((○○△)](○)	(○○△]((○))	((○)]((○○△))
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(○][○○△)	((○)][○○△)	(○][(○○△))	((○○△)][○)	(○○△][(○))	((○)][(○○△))
(○][○○△]	((○)][○○△]	(○][(○○△)]	((○○△)][○]	(○○△][(○)]	((○)][(○○△)]

[○)(○○△)	[(○))(○○△)	[○)((○○△))	[(○○△))(○)	[○○△)((○))	[(○))((○○△))
[○)(○○△]	[(○))(○○△]	[○)((○○△)]	[(○○△))(○]	[○○△)((○)]	[(○))((○○△)]
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[○)[○○△]	[(○))[○○△]	[○)[(○○△)]	[(○○△))[○]	[○○△)[(○)]	[(○))[(○○△)]

[○](○○△)	[(○)](○○△)	[○]((○○△))	[(○○△)](○)	[○○△]((○))	[(○)]((○○△))
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[○][○○△)	[(○)][○○△)	[○][(○○△))	[(○○△)][○)	[○○△][(○))	[(○)][(○○△))
[○][○○△]	[(○)][○○△]	[○][(○○△)]	[(○○△)][○]	[○○△][(○)]	[(○)][(○○△)].

2.2. R*-System

(○○△)(○)	((○○△))(○)	(○○△)((○))	((○))(○○△)	(○)((○○△))	((○○△))((○))
(○○△)(○]	((○○△))(○]	(○○△)((○)]	((○))(○○△]	(○)((○○△)]	((○○△))((○)]
(○○△)[○)	((○○△))[○)	(○○△)[(○))	((○))[○○△)	(○)[(○○△))	((○○△))[(○))
(○○△)[○]	((○○△))[○]	(○○△)[(○)]	((○))[○○△]	(○)[(○○△)]	((○○△))[(○)]
(○○△](○)	((○○△)](○)	(○○△]((○))	((○)](○○△)	(○]((○○△))	((○○△)]((○))
(○○△](○]	((○○△)](○]	(○○△]((○)]	((○)](○○△]	(○]((○○△)]	(○○△]((○)]
(○○△][○)	((○○△)][○)	(○○△][(○))	((○)][○○△)	(○][(○○△))	((○○△)][(○))
(○○△][○]	((○○△)][○]	(○○△][(○)]	((○)][○○△]	(○][(○○△)]	((○○△)][(○)]
[○○△)(○)	[(○○△))(○)	[○○△)((○))	[(○))(○○△)	[○)((○○△))	[(○○△))((○))
[○○△)(○]	[(○○△))(○]	[○○△)((○)]	[(○))(○○△]	[○)((○○△)]	[(○○△))((○)]
[○○△)[○)	[(○○△))[○)	[○○△)[(○))	[(○))[○○△)	[○)[(○○△))	[(○○△))[(○))
[○○△)[○]	[(○○△))[○]	[○○△)[(○)]	[(○))[○○△]	[○)[(○○△)]	[(○○△))[(○)]
[○○△](○)	[(○○△)](○)	[○○△]((○))	[(○)](○○△)	[○]((○○△))	[(○○△)]((○))
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[○○△][○)	[(○○△)][○)	[○○△][(○))	[(○)][○○△)	[○][(○○△))	[(○○△)][(○))
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3. (1.1, 2.3)-System

3.1. R-System

(○)(○△□)	((○))(○△□)	(○)((○△□))	((○△□))(○)	(○△□)((○))	((○))((○△□))
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(○)[○△□)	((○))[○△□)	(○)[(○△□))	((○△□))[○)	(○△□)[(○))	((○))[(○△□))
(○)[○△□]	((○))[○△□]	(○)[(○△□)]	((○△□))[○]	(○△□)[(○)]	((○))[(○△□)]

(○](○△□)	((○)](○△□)	(○]((○△□))	((○△□)](○)	(○△□]((○))	((○)]((○△□))
(○](○△□]	((○)](○△□]	(○]((○△□)]	((○△□)](○]	(○△□]((○)]	(○]((○△□)]
(○][○△□)	((○)][○△□)	(○][(○△□))	((○△□)][○)	(○△□][(○))	((○)][(○△□))
(○][○△□]	((○)][○△□]	(○][(○△□)]	((○△□)][○]	(○△□][(○)]	((○)][(○△□)]

[○)(○△□)	[(○))(○△□)	[○)((○△□))	[(○△□))(○)	[○△□)((○))	[(○))((○△□))
[○)(○△□]	[(○))(○△□]	[○)((○△□)]	[(○△□))(○]	[○△□)((○)]	[(○))((○△□)]
[○)[○△□)	[(○))[○△□)	[○)[(○△□))	[(○△□))[○)	[○△□)[(○))	[(○))[(○△□))
[○)[○△□]	[(○))[○△□]	[○)[(○△□)]	[(○△□))[○]	[○△□)[(○)]	[(○))[(○△□)]

[○](○△□)	[(○)](○△□)	[○]((○△□))	[(○△□)](○)	[○△□]((○))	[(○)]((○△□))
[○](○△□]	[(○)](○△□]	[○]((○△□)]	[(○△□)](○]	[○△□]((○)]	[(○)]((○△□)]
[○][○△□)	[(○)][○△□)	[○][(○△□))	[(○△□)][○)	[○△□][(○))	[(○)][(○△□))
[○][○△□]	[(○)][○△□]	[○][(○△□)]	[(○△□)][○]	[○△□][(○)]	[(○)][(○△□)].

3.2. R*-System

(○△□)(○)	((○△□))(○)	(○△□)((○))	((○))(○△□)	(○)((○△□))	((○△□))((○))
(○△□)(○]	((○△□))(○]	(○△□)((○)]	((○))(○△□]	(○)((○△□)]	((○△□))((○)]
(○△□)[○)	((○△□))[○)	(○△□)[(○))	((○))[○△□)	(○)[(○△□))	((○△□))[(○))
(○△□)[○]	((○△□))[○]	(○△□)[(○)]	((○))[○△□]	(○)[(○△□)]	((○△□))[(○)]

(○△□](○)	((○△□)](○)	(○△□]((○))	((○)](○△□)	(○]((○△□))	((○△□)]((○))
(○△□](○]	((○△□)](○]	(○△□]((○)]	((○)](○△□]	(○]((○△□)]	(○△□]((○)]
(○△□][○)	((○△□)][○)	(○△□][(○))	((○)][○△□)	(○][(○△□))	((○△□)][(○))
(○△□][○]	((○△□)][○]	(○△□][(○)]	((○)][○△□]	(○][(○△□)]	((○△□)][(○)]

[○△□)(○)	[(○△□))(○)	[○△□)((○))	[(○))(○△□)	[○)((○△□))	[(○△□))((○))
[○△□)(○]	[(○△□))(○]	[○△□)((○)]	[(○))(○△□]	[○)((○△□)]	[(○△□))((○)]
[○△□)[○)	[(○△□))[○)	[○△□)[(○))	[(○))[○△□)	[○)[(○△□))	[(○△□))[(○))
[○△□)[○]	[(○△□))[○]	[○△□)[(○)]	[(○))[○△□]	[○)[(○△□)]	[(○△□))[(○)]

[○△□](○)	[(○△□)](○)	[○△□]((○))	[(○)](○△□)	[○]((○△□))	[(○△□)]((○))
[○△□](○]	[(○△□)](○]	[○△□]((○)]	[(○)](○△□]	[○]((○△□)]	[(○△□)]((○)]
[○△□][○)	[(○△□)][○)	[○△□][(○))	[(○)][○△□)	[○][(○△□))	[(○△□)][(○))
[○△□][○]	[(○△□)][○]	[○△□][(○)]	[(○)][○△□]	[○][(○△□)]	[(○△□)][(○)]

4. (1.2, 2.1)-System

4.1. R-System

(○○)(○○○)	((○○))(○○○)	(○○)((○○○))	((○○○))(○○)	(○○○)((○○))	((○○))((○○○))
(○○)(○○○]	((○○))(○○○]	(○○)((○○○)]	((○○○))(○○]	(○○○)((○○)]	((○○))((○○○)]
(○○)[○○○)	((○○))[○○○)	(○○)[(○○○))	((○○○))[○○)	(○○○)[(○○))	((○○))[(○○○))
(○○)[○○○]	((○○))[○○○]	(○○)[(○○○)]	((○○○))[○○]	(○○○)[(○○)]	((○○))[(○○○)]

(○○](○○○)	((○○)](○○○)	(○○]((○○○))	((○○○)](○○)	(○○○]((○○))	((○○)]((○○○))
(○○](○○○]	((○○)](○○○]	(○○]((○○○)]	((○○○)](○○]	(○○○]((○○)]	(○○]((○○○)]
(○○][○○○)	((○○)][○○○)	(○○][(○○○))	((○○○)][○○)	(○○○][(○○))	((○○)][(○○○))
(○○][○○○]	((○○)][○○○]	(○○][(○○○)]	((○○○)][○○]	(○○○][(○○)]	((○○)][(○○○)]

[○○)(○○○)	[(○○))(○○○)	[○○)((○○○))	[(○○○))(○○)	[○○○)((○○))	[(○○))((○○○))
[○○)(○○○]	[(○○))(○○○]	[○○)((○○○)]	[(○○○))(○○]	[○○○)((○○)]	[(○○))((○○○)]
[○○)[○○○)	[(○○))[○○○)	[○○)[(○○○))	[(○○○))[○○)	[○○○)[(○○))	[(○○))[(○○○))
[○○)[○○○]	[(○○))[○○○]	[○○)[(○○○)]	[(○○○))[○○]	[○○○)[(○○)]	[(○○))[(○○○)]

[○○](○○○)	[(○○)](○○○)	[○○]((○○○))	[(○○○)](○○)	[○○○]((○○))	[(○○)]((○○○))
[○○](○○○]	[(○○)](○○○]	[○○]((○○○)]	[(○○○)](○○]	[○○○]((○○)]	[(○○)]((○○○)]
[○○][○○○)	[(○○)][○○○)	[○○][(○○○))	[(○○○)][○○)	[○○○][(○○))	[(○○)][(○○○))
[○○][○○○]	[(○○)][○○○]	[○○][(○○○)]	[(○○○)][○○]	[○○○][(○○)]	[(○○)][(○○○)].

4.2. R*-System

(○○○)(○○)	((○○○))(○○)	(○○○)((○○))	((○○))(○○○)	(○○)((○○○))	((○○○))((○○))
(○○○)(○○]	((○○○))(○○]	(○○○)((○○)]	((○○))(○○○]	(○○)((○○○)]	((○○○))((○○)]
(○○○)[○○)	((○○○))[○○)	(○○○)[(○○))	((○○))[○○○)	(○○)[(○○○))	((○○○))[(○○))
(○○○)[○○]	((○○○))[○○]	(○○○)[(○○)]	((○○))[○○○]	(○○)[(○○○)]	((○○○))[(○○)]

(○○○](○○)	((○○○)](○○)	(○○○]((○○))	((○○)](○○○)	(○○]((○○○))	((○○○)]((○○))
(○○○](○○]	((○○○)](○○]	(○○○]((○○)]	((○○)](○○○]	(○○]((○○○)]	(○○○]((○○)]
(○○○][○○)	((○○○)][○○)	(○○○][(○○))	((○○)][○○○)	(○○][(○○○))	((○○○)][(○○))
(○○○][○○]	((○○○)][○○]	(○○○][(○○)]	((○○)][○○○]	(○○][(○○○)]	((○○○)][(○○)]

[○○○)(○○)	[(○○○))(○○)	[○○○)((○○))	[(○○))(○○○)	[○○)((○○○))	[(○○○))((○○))
[○○○)(○○]	[(○○○))(○○]	[○○○)((○○)]	[(○○))(○○○]	[○○)((○○○)]	[(○○○))((○○)]
[○○○)[○○)	[(○○○))[○○)	[○○○)[(○○))	[(○○))[○○○)	[○○)[(○○○))	[(○○○))[(○○))
[○○○)[○○]	[(○○○))[○○]	[○○○)[(○○)]	[(○○))[○○○]	[○○)[(○○○)]	[(○○○))[(○○)]

[○○○](○○)	[(○○○)](○○)	[○○○]((○○))	[(○○)](○○○)	[○○]((○○○))	[(○○○)]((○○))
[○○○](○○]	[(○○○)](○○]	[○○○]((○○)]	[(○○)](○○○]	[○○]((○○○)]	[(○○○)]((○○)]
[○○○][○○)	[(○○○)][○○)	[○○○][(○○))	[(○○)][○○○)	[○○][(○○○))	[(○○○)][(○○))
[○○○][○○]	[(○○○)][○○]	[○○○][(○○)]	[(○○)][○○○]	[○○][(○○○)]	[(○○○)][(○○)]

5. (1.2, 2.2)-System

5.1. R*-System

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[○○)[○○△) [(○○))[○○△) [○○)[(○○△)) [(○○△))[○○) [○○△)[(○○)) [(○○))[(○○△))
[○○)[○○△] [(○○))[○○△] [○○)[(○○△)] [(○○△))[○○] [○○△)[(○○)] [(○○))[(○○△)]

[○○](○○△) [(○○)](○○△) [○○]((○○△)) [(○○△)](○○) [○○△]((○○)) [(○○)]((○○△))
[○○](○○△] [(○○)](○○△] [○○]((○○△)] [(○○△)](○○] [○○△]((○○)] [(○○)]((○○△)]
[○○][○○△) [(○○)][○○△) [○○][(○○△)) [(○○△)][○○) [○○△][(○○)) [(○○)][(○○△))
[○○][○○△] [(○○)][○○△] [○○][(○○△)] [(○○△)][○○] [○○△][(○○)] [(○○)][(○○△)].

5.2. R*-System

(○○△)(○○) ((○○△))(○○) (○○△)((○○)) ((○○))(○○△) (○○)((○○△)) ((○○△))((○○))
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(○○△)[○○) ((○○△))[○○) (○○△)[(○○)) ((○○))[○○△) (○○)[(○○△)) ((○○△))[(○○))
(○○△)[○○] ((○○△))[○○] (○○△)[(○○)] ((○○))[○○△] (○○)[(○○△)] ((○○△))[(○○)]

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[○○△)[○○) [(○○△))[○○) [○○△)[(○○)) [(○○))[○○△) [○○)[(○○△)) [(○○△))[(○○))
[○○△)[○○] [(○○△))[○○] [○○△)[(○○)] [(○○))[○○△] [○○)[(○○△)] [(○○△))[(○○)]

[○○△](○○) [(○○△)](○○) [○○△]((○○)) [(○○)](○○△) [○○]((○○△)) [(○○△)]((○○))
[○○△](○○] [(○○△)](○○] [○○△]((○○)] [(○○)](○○△] [○○]((○○△)] [(○○△)]((○○)]
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6. (1.2, 2.3)-System

6.1. R-System

(○○)(○△□) ((○○))(○△□) (○○)((○△□)) ((○△□))(○○) (○△□)((○○)) ((○○))((○△□))
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(○○)[○△□) ((○○))[○△□) (○○)[(○△□)) ((○△□))[○○) (○△□)[(○○)) ((○○))[(○△□))
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(○○][○△□) ((○○)][○△□) (○○][(○△□)) ((○△□)][○○) (○△□][(○○)) ((○○)][(○△□))
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[○○)(○△□) [(○○))(○△□) [○○)((○△□)) [(○△□))(○○) [○△□)((○○)) [(○○))((○△□))
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[○○)[○△□] [(○○))[○△□] [○○)[(○△□)] [(○△□))[○○] [○△□)[(○○)] [(○○))[(○△□)]

[○○](○△□) [(○○)](○△□) [○○]((○△□)) [(○△□)](○○) [○△□]((○○)) [(○○)]((○△□))
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[○○][○△□] [(○○)][○△□] [○○][(○△□)] [(○△□)][○○] [○△□][(○○)] [(○○)][(○△□)].

6.2. R*-System

(○△□)(○○) ((○△□))(○○) (○△□)((○○)) ((○○))(○△□) (○○)((○△□)) ((○△□))((○○))
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[○△□)[○○) [(○△□))[○○) [○△□)[(○○)) [(○○))[○△□) [○○)[(○△□)) [(○△□))[(○○))
[○△□)[○○] [(○△□))[○○] [○△□)[(○○)] [(○○))[○△□] [○○)[(○△□)] [(○△□))[(○○)]

[○△□](○○) [(○△□)](○○) [○△□]((○○)) [(○○)](○△□) [○○]((○△□)) [(○△□)]((○○))

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[○△□][○○) [(○△□)][○○) [○△□][(○○)) [(○○)][○△□) [○○][(○△□)) [(○△□)][(○○))

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7. (1.3, 2.1)-System

7.1. R-System

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7.2. R*-System

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8. (1.3, 2.2)-System

8.1. R-System

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[○△)[○○△] [(○△))[○○△] [○△)[(○○△)] [(○○△))[○△] [○○△)[(○△)] [(○△))[(○○△)]

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[○△](○○△] [(○△)](○○△] [○△]((○○△)] [(○○△)](○△] [○○△]((○△)] [(○△)]((○○△)]
[○△][○○△) [(○△)][○○△) [○△][(○○△)) [(○○△)][○△) [○○△][(○△)) [(○△)][(○○△))
[○△][○○△] [(○△)][○○△] [○△][(○○△)] [(○○△)][○△] [○○△][(○△)] [(○△)][(○○△)].

8.2. R*-System

(○○△)(○△) ((○○△))(○△) (○○△)((○△)) ((○△))(○○△) (○△)((○○△)) ((○○△))((○△))
(○○△)(○△] ((○○△))(○△] (○○△)((○△)] ((○△))(○○△] (○△)((○○△)] ((○○△))((○△)]
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9. (1.3, 2.3)-System

9.1. R-System

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9.2. R*-System

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Literatur

Kaehr, Rudolf, Sketch on semiotics in diamonds. In: ThinkArt Lab, 3.3.2009

Kaehr, Rudolf/Mahler, Thomas, Morphogrammatik. Klagenfurt 1992

Kronthaler, Engelbert, Grundlegung einer Mathematik der Qualitäten. Frankfurt am Main 1986

Kronthaler, Engelbert, Zahl – Zeichen – Begriff. In: Semiosis 65-68, 1992, S. 282-302

Toth, Alfred, Grundlegung einer polykontexturalen Semiotik. Tucson, AZ, 2019 (= 2019a)

Toth, Alfred, Semiotische Automaten mit kontextrueirten Subzeichen 1-2. In: Electronic Journal for Mathematical Semiotics, 2019b

Toth, Alfred, Bijektive Abbildung der kaehrschen kontexturellen Semiotik auf die polykontxturale Semiotik . In: Electronic Journal for Mathematical Semiotics, 2019c

Toth, Alfred, Anfänge einer polykontexturalen Ontik. In: Electronic Journal for Mathematical Semiotics, 2019d

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