

Prof. Dr. Alfred Toth

Elements of an imaginary (Eisenstein) Theory of the Night

Ob ich damals war – oder bin: du schreitest
über mich hin, du unendliches Dunkel aus Licht.
Und das Erhabene, das du im Raume bereitest,
nehm ich, Unkenntlicher, an mein waches Gesicht.

Nacht, o erführest du, wie ich dich schaue,
wie mein Wesen zurück im Anlauf weicht,
daß es sich dicht bis zu dir zu werfen getraue;
faß ich es denn, daß die zweimal genommene Braue
über solche Ströme von Aufblick reicht?

Aus den Gedichten an die Nacht

Rainer Maria Rilke (1997, p. 853)

1. It is a strange fact, that the sign as a scheme of action, like the sign as a scheme of representation, both go back to Aristotle (cf. Trabandt 1989, pp. 79 ss.), but do not play any role in Peirce's and Bense's semiotics. However, it is perhaps not by chance that a definition of the sign as a scheme of action is lacking, although the development of the linguistic theory of action falls into the beginnings of the development of theoretical semiotics. However, it is a fact that the sign, in the framework of semiotics, is primarily not a scheme of action, because in its most general definition action means the "changing of a state of world" (Heinrichs 1980, p. 22). But states of world belong, in the terminology of Bense (1975, p. 65), to the "ontological space" of the pre-thetic objects, but not to the "semiotic space" of the thetic signs. In other words: In Peirce's and Bense's notion of the triadic sign which is based on the monocontextual separation between signs and object and where objects can thus only appear as object-relations, signs cannot change states of world, since they, too, can only be perceived as signs. Therefore, according to theoretical semiotics, signs can change signs, and in order to do such changes, a theory of action is not necessary. Thus, in classical monocontextual semiotics, the theory of the semiosis substitutes a theory of action, because signs can never reach their transcendental object and cannot change ontological, but only semiotic states of world.



“The Phantom”, directed by F.W. Murnau (Germany, 1922)

However, it is a fact, too, which is at least known outside of classical semiotics that signs can have effect out of their semiotic space and inside of the ontological space of the object, events, states, etc. For example, a command can start a war. But also the inverse process, thus the changing of signs by objects, is well-known. E.g., the better knowledge of high-energy physics has several times changes atomic models, which had already been believed as correct. Hence, if someone wants to construct a semiotic theory of action that goes beyond a linguistic theory of action based again on (linguistic) signs and that is powerful enough of letting signs influence reality and vice versa, then it is necessary to abolish the border between sign and reality, i.e. to replace moncontextural through polycontextural semiotics.

2. Such a model of a polycontextural semiotics has been displayed by the present author (Toth 2008b) under the name of “Pre-Semiotics”, because the sign model which is the basis,

PZR = (3.a 2.b 1.c 0.d)

contains the object, which is represented by the artificial or natural sign, as a categorial object (0.d) and thus settles one step before thetic semiosis, in the space between the ontological and the semiotic space.

Now I have already shown in Toth (2008a, pp. 177 ss.) that every triadic sign class has 6 permutations. Consequently, every tetradic sign class has 24 permutations. In Toth (2008c, pp. 220 ss.), I have further shown that each of these 24 permutations can be introduced as semiotic schemes of actions. Since each tetradic sign class has a dual reality thematic, we thus get for 15 pre-semiotic dual systems zunächst $15 \cdot 2 \cdot 24 = 720$ tetradic semiotic schemes of action. Furthermore, in Toth (2008c) it had been shown that a tetradic sign class has exactly the following $4 + 15 + 24 + 24 = 67$ partial relations:

monadic partial relations: (.0.), (.1.), (.2.), (.3.).

dyadic partial relations: (0.1), (0.2), (0.3), (1.0), (2.0), (3.0), (1.1), (1.2), (1.3), (2.1), (2.2), (2.3), (3.1), (3.2), (3.3).

triadic partial relations: (0., 2., 1.), (0., 1., 2.), (1., 2., 0.), (1., 0., 2), (2., 1., 0.), (2., 0., 1), (3., 2., 1.), (3., 1., 2.), (2., 3., 1.), (2., 1., 3.), (1., 3., 2.), (1., 2., 3), (0., 3., 2.), (0., 2., 3.), (2., 3., 0.), (2., 0., 3.), (3., 2., 0.), (3., 0., 2.), (0., 3., 1.), (0., 1., 3.), (1., 3., 0.), (1., 0., 3.), (3., 1., 0.), (3., 0., 1.).

tetradic partial relations: (3., 2., 1., 0.), (2., 3., 1., 0.), (2., 1., 3., 0.), (1., 2., 3., 0.), (3., 1., 2., 0.), (1., 3., 2., 0.), (2., 3., 0., 1.), (3., 2., 0., 1.), (2., 1., 0., 3.), (1., 2., 0., 3.), (3., 1., 0., 2.), (1., 3., 0., 2.), (2., 0., 3., 1.), (3., 0., 2., 1.), (2., 0., 1., 3.), (1., 0., 2., 3.), (3., 0., 1., 2.), (1., 0., 3., 2.), (0., 2., 3., 1.), (0., 3., 2., 1.), (0., 1., 2., 3.), (0., 2., 1., 3.), (0., 3., 1., 2.), (0., 1., 3., 2.).

We thus get totally $15 \cdot 2 \cdot 67 = 2'010$ semiotic schemes of actions, which are polycontextural already because of the elimination of the discontextuality between sign and object and the embedding of the object qua categorial object into the sign relation.

3. In Toth (2008c), I have also shown that the pre-semiotic tetradic sign relation is complete regarding to epistemological, logical and ontological relation insofar as we have the following correspondences between logical relations and semiotic categories:

subjective subject (sS)	≅	Thirdness (interpretant relation, I)
objective object (oO)	≅	Secondness (Object relation, O)
subjective object (sO)	≅	Firstness (medium relation, M)
objective subject (oS)	≅	Zeroneess (quality, Q)

Therefore, we can display the above 67 semiotic-numerical partial relations also in the following semiotic-logical form:

Monadic semiotic-logical partial relations:

(sO), (oS), (oO), (sS).

Dyadic semiotic-logical partial relations:

((sO), (oS)); ((sO), (oO)); ((sO), (sS)); ((oS), (sO)); ((oO), (sO)); ((sS), (sO)); ((oS), (oS)); ((oS), (oO)); ((oS), (sS)); ((oO), (oS)); ((oO), (oO)); ((oO), (sS)); ((sS), (oS)); ((sS), (oO)), ((sS), (sS)).

Triadic semiotic-logical partial relations:

((sO), (oO), (oS)); ((sO), (oS)), (oO)); ((oS), (oO), (sO)); ((oS), (sO), (oO)); ((oO), (oS), (sO)); ((oO), (sO), (oS)); ((sS), (oO), (oS)); ((sS), (oS), (oO)); ((oO), (sS), (oS)); ((oO), (oS), (sS)); ((oS), (sS), (oO)); ((oS), (oO), (sS)); ((sO), (sS), (oO)); ((sO), (oO), (sS)); ((oO), (sS), (sO)); ((oO), (sO), (sS)); ((sS), (oO), (sO)); ((sS), (sO), (oO)); ((sO), (sS), (oS)); ((sO), (oS), (sS)); ((oS), (sS), (sO)); ((oS), (sO), (sS)); ((sS), (oS), (sO)); ((sS), (sO), (oS)).

A triadic partial relation of a tetradic semiotic relation is a combinatorial selection of the four pre-semiotic categories (0.), (.1.), (.2.), (.3.) or (sO), (oS), (oO), (sS), respectively. I.e., we thus can either (0., .1., .2.), (.1., .2., .3.), (0., .2., .3.) or (0., .1., .3.) combine to triads. In doing so, we get the following $2 \cdot 24 = 48$ permutations:

(0.d 2.b 1.c) × (c.1 b.2 d.0)	→	((sO), (oO), (oS)) × ((sO), (oO), (oS))
(0.d 1.c 2.b) × (b.2 c.1 d.0)	→	((sO), (oS), (oO)) × ((oO), (sO), (oS))
(1.c 2.b 0.d) × (d.0 b.2 c.1)	→	((oS), (oO), (sO)) × ((oS), (oO), (sO))

(1.c 0.d 2.b) × (b.2 d.0 c.1) → ((oS), (sO), (oO)) × ((oO), (oS), (sO))
 (2.b 1.c 0.d) × (d.0 c.1 b.2) → ((oO), (oS), (sO)) × ((oS), (sO), (oO))
 (2.b 0.d 1.c) × (c.1 d.0 b.2) → ((oO), (sO), (oS)) × ((sO), (oS), (oO))
 (3.a 2.b 1.c) × (c.1 b.2 a.3) → ((sS), (oS), (oS)) × ((sO), (oS), (sS))
 (3.a 1.c 2.b) × (b.2 c.1 a.3) → ((sS), (oS), (oS)) × ((oS), (sO), (sS))
 (2.b 3.a 1.c) × (c.1 a.3 b.2) → ((oS), (sS), (oS)) × ((sO), (sS), (oS))
 (2.b 1.c 3.a) × (a.3 c.1 b.2) → ((oS), (oS), (sS)) × ((sS), (sO), (oS))
 (1.c 3.a 2.b) × (b.2 a.3 c.1) → ((oS), (sS), (oS)) × ((oS), (sS), (sO))
 (1.c 2.b 3.a) × (a.3 b.2 c.1) → ((oS), (oS), (sS)) × ((sS), (oS), (sO))
 (0.d 3.a 2.b) × (b.2 a.3 d.0) → ((sO), (sS), (oS)) × ((oS), (sS), (oS))
 (0.d 2.b 3.a) × (a.3 b.2 d.0) → ((sO), (oS), (sS)) × ((sS), (oS), (oS))
 (2.b 3.a 0.d) × (d.0 a.3 b.2) → ((oS), (sS), (sO)) × ((oS), (sS), (oS))
 (2.b 0.d 3.a) × (a.3 d.0 b.2) → ((oS), (sO), (sS)) × ((sS), (oS), (oS))
 (3.a 2.b 0.d) × (d.0 b.2 a.3) → ((sS), (oS), (sO)) × ((oS), (oS), (sS))
 (3.a 0.d 2.b) × (b.2 d.0 a.3) → ((sS), (sO), (oS)) × ((oS), (oS), (sS))
 (0.d 3.a 1.c) × (c.1 a.3 d.0) → ((sO), (sS), (oS)) × ((sO), (sS), (oS))
 (0.d 1.c 3.a) × (a.3 c.1 d.0) → ((sO), (oS), (sS)) × ((sS), (sO), (oS))
 (1.c 3.a 0.d) × (d.0 a.3 c.1) → ((oS), (sS), (sO)) × ((oS), (sS), (sO))
 (1.c 0.d 3.a) × (a.3 d.0 c.1) → ((oS), (sO), (sS)) × ((sS), (oS), (sO))
 (3.a 1.c 0.d) × (d.0 c.1 a.3) → ((sS), (oS), (sO)) × ((oS), (sO), (sS))
 (3.a 0.d 1.c) × (c.1 d.0 a.3) → ((sS), (sO), (oS)) × ((sO), (oS), (sS))

Tetradic semiotic-logical partial relations:

((sS), (oS), (oS), (sO)); ((oS), (sS), (oS), (sO)); ((oS), (oS), (sS), (sO)); ((oS), (oS), (sS), (sO)); ((sS), (oS), (oS), (sO)); ((oS), (sS), (oS), (sO)); ((oS), (sS), (oS), (sO)); ((oS), (sS), (oS), (sO)); ((sS), (oS), (sO), (oS)); ((oS), (oS), (sO), (sS)); ((oS), (oS), (sO), (sS)); ((sS), (oS), (sO), (oS)); ((oS), (sS), (sO), (oS)); ((oS), (sO), (sS), (oS)); ((sS), (sO), (oS), (oS)); ((oS), (sO), (oS), (sS)); ((sS), (sO), (oS), (oS)); ((oS), (sO), (sS), (oS)); ((sO), (oS), (sS), (oS)); ((sO), (sS), (oS), (oS)); ((sO), (oS), (oS), (sS)); ((sO), (oS), (oS), (sS)); ((sO), (oS), (oS), (sS)); ((sO), (oS), (oS), (sS)); ((sO), (sS), (oS), (oS)); ((sO), (oS), (sS), (oS)).

Complete listing of the $2 \cdot 24 = 48$ tetradic permutations:

(3.a 2.b 1.c 0.d) × (d.0 c.1 b.2 a.3) →
 ((sS), (oS), (oS), (sO)) × ((oS), (sO), (oS), (sS))
 (2.b 3.a 1.c 0.d) × (d.0 c.1 a.3 b.2) →

$((oO), (sS), (oS), (sO)) \times ((oS), (sO), (sS), (oO))$
 $(2.b\ 1.c\ 3.a\ 0.d) \times (d.0\ a.3\ c.1\ b.2) \rightarrow$
 $((oO), (oS), (sS), (sO)) \times ((oS), (sS), (sO), (oO))$
 $(1.c\ 2.b\ 3.a\ 0.d) \times (d.0\ a.3\ b.2\ c.1) \rightarrow$
 $((oS), (oO), (sS), (sO)) \times ((oS), (sS), (oO), (sO))$
 $(3.a\ 1.c\ 2.b\ 0.d) \times (d.0\ b.2\ c.1\ a.3) \rightarrow$
 $((sS), (oS), (oO), (sO)) \times ((oS), (oO), (sO), (sS))$
 $(1.c\ 3.a\ 2.b\ 0.d) \times (d.0\ b.2\ a.3\ c.1) \rightarrow$
 $((oS), (sS), (oO), (sO)) \times ((oS), (oO), (sS), (sO))$
 $(2.b\ 3.a\ 0.d\ 1.c) \times (c.1\ d.0\ a.3\ b.2) \rightarrow$
 $((oO), (sS), (sO), (oS)) \times ((sO), (oS), (sS), (oO))$
 $(3.a\ 2.b\ 0.d\ 1.c) \times (c.1\ d.0\ b.2\ a.3) \rightarrow$
 $((sS), (oO), (sO), (oS)) \times ((sO), (oS), (oO), (sS))$
 $(2.b\ 1.c\ 0.d\ 3.a) \times (a.3\ d.0\ c.1\ b.2) \rightarrow$
 $((oO), (oS), (sO), (sS)) \times ((sS), (oS), (sO), (oO))$
 $(1.c\ 2.b\ 0.d\ 3.a) \times (a.3\ d.0\ b.2\ c.1) \rightarrow$
 $((oS), (oO), (sO), (sS)) \times ((sS), (oS), (oO), (sO))$
 $(3.a\ 1.c\ 0.d\ 2.b) \times (b.2\ d.0\ c.1\ a.3)$
 $((sS), (oS), (sO), (oO)) \times ((oO), (oS), (sO), (sS))$
 $(1.c\ 3.a\ 0.d\ 2.b) \times (b.2\ d.0\ a.3\ c.1) \rightarrow$
 $((oS), (sS), (sO), (oO)) \times ((oO), (oS), (sS), (sO))$
 $(2.b\ 0.d\ 3.a\ 1.c) \times (c.1\ a.3\ d.0\ b.2) \rightarrow$
 $((oO), (sO), (sS), (oS)) \times ((sO), (sS), (oS), (oO))$
 $(3.a\ 0.d\ 2.b\ 1.c) \times (c.1\ b.2\ d.0\ a.3) \rightarrow$
 $((sS), (sO), (oO), (oS)) \times ((sO), (oO), (oS), (sS))$
 $(2.b\ 0.d\ 1.c\ 3.a) \times (a.3\ c.1\ d.0\ b.2) \rightarrow$
 $((oO), (sO), (oS), (sS)) \times ((sS), (sO), (oS), (oO))$
 $(1.c\ 0.d\ 2.b\ 3.a) \times (a.3\ b.2\ d.0\ c.1) \rightarrow$
 $((oS), (sO), (oO), (sS)) \times ((sS), (oO), (oS), (sO))$
 $(3.a\ 0.d\ 1.c\ 2.b) \times (b.2\ c.1\ d.0\ a.3) \rightarrow$
 $((sS), (sO), (oS), (oO)) \times ((oO), (sO), (oS), (sS))$
 $(1.c\ 0.d\ 3.a\ 2.b) \times (b.2\ a.3\ d.0\ c.1) \rightarrow$
 $((oS), (sO), (sS), (oO)) \times ((oO), (sS), (oS), (sO))$
 $(0.d\ 2.b\ 3.a\ 1.c) \times (c.1\ a.3\ b.2\ d.0) \rightarrow$
 $((sO), (oO), (sS), (oS)) \times ((sO), (sS), (oO), (oS))$
 $(0.d\ 3.a\ 2.b\ 1.c) \times (c.1\ b.2\ a.3\ d.0) \rightarrow$

$((sO), (sS), (oO), (oS)) \times ((sO), (oO), (sS), (oS))$
 $(0.d\ 1.c\ 2.b\ 3.a) \times (a.3\ b.2\ c.1\ d.0) \rightarrow$
 $((sO), (oS), (oO), (sS)) \times ((sS), (oO), (sO), (oS))$
 $(0.d\ 2.b\ 1.c\ 3.a) \times (a.3\ c.1\ b.2\ d.0) \rightarrow$
 $((sO), (oO), (oS), (sS)) \times ((sS), (sO), (oO), (oS))$
 $(0.d\ 3.a\ 1.c\ 2.b) \times (b.2\ c.1\ a.3\ d.0) \rightarrow$
 $((sO), (sS), (oS), (oO)) \times ((oO), (sO), (sS), (oS))$
 $(0.d\ 1.c\ 3.a\ 2.b) \times (b.2\ a.3\ c.1\ d.0) \rightarrow$
 $((sO), (oS), (sS), (oO)) \times ((oO), (sS), (sO), (oS))$

5. However, as Rudolf Kaehr (2008a, b, c) has shown, a sign relation is not really polycontextural solely by embedding the categorial object into the triadic Peircean sign relation, but the sub-signs constituting the sign relation must be mapped to semiotic contextures. This idea of Kaehr's has, as I have already pointed out before, a splendid impact for the future development of mathematical semiotics. In order to map semiotic contextures as inner environments to the sub-signs of a pre-semiotic tetradic sign relation, we will use the following 4-adic polycontextural semiotic 4x4 matrix:

	0	1	2	3
0	$(0.0)_{3,2,1}$	$(0.1)_{1,3}$	$(0.2)_{1,2}$	$(0.3)_{2,3}$
1	$(1.0)_{3,1}$	$(1.1)_{1,3,4}$	$(1.2)_{1,4}$	$(1.3)_{3,4}$
2	$(2.0)_{2,1}$	$(2.1)_{1,4}$	$(2.2)_{1,2,4}$	$(2.3)_{2,4}$
3	$(3.0)_{3,2}$	$(3.1)_{3,4}$	$(3.2)_{2,4}$	$(3.3)_{2,3,4}$

Since the pre-semiotic sign relation is tetradic, but trichotomic, the four sub-signs to the left of the thick black line can only appear in reality thematics and thus change the order of their contextural numbers from morphismic to hetero-morphismic order. Thus, the above matrix is a “porte-manteau”-matrix of two matrices.

Günther stated: “Being is the birthplace of Thinking, but Nothing is the homeland of the Will. In the Nothing there is nothing to see as long as we do not decide to enter the Nothing and build there a world according to the laws of negativity. God has not yet created this world, and there is not a world plan for it either, as long as the

Thinking did not describe it in a negative language” (Günther 1937, p. 45). “The transparent clearness of the pure notion, that shines like a sunny midday-light over the real live of the concrete consciousness, has its origin out of the transcendental Night of a Will that has not yet become decision and thus not yet living, translucent reality” (Günther 1980, p. 288). We obtain that the night is the reign of the Will. Since the Will needs a negative language to formulate its vocabulary, the negative languages can only consist of directions of actions. The actions, however, we can formulate precisely on the basis of pre-semiotics. Together with the inner environments, we have a real polycontextural pre-semiotics as a theory of a Theory of the Night.

6. Since the action schemata of the 4 monadic semiotic partial relations

$(sO), (oS), (oO), (sS)$

as well as of the 15 dyadic semiotic partial relations

$(sO) \leftrightarrow (oS)$	$(sS) \leftrightarrow (sO)$	$(oO) \leftrightarrow (oO)$
$(sO) \leftrightarrow (oO)$	$(oS) \leftrightarrow (oS)$	$(oO) \leftrightarrow (sS)$
$(sO) \leftrightarrow (sS)$	$(oS) \leftrightarrow (oO)$	$(sS) \leftrightarrow (oS)$
$(oS) \leftrightarrow (sO)$	$(oS) \leftrightarrow (sS)$	$(sS) \leftrightarrow (oO)$
$(oO) \leftrightarrow (sO)$	$(oO) \leftrightarrow (oS)$	$(sS) \leftrightarrow (sS)$

are trivial, we restrict ourselves here to show up the 24 triadic and the 24 tetradic semiotic partial relations for all 15 pre-semiotic sign classes and their reality thematics together with the semiotic contextures from a 4-contextural 4-adic semiotic matrix.

7. After having chosen in Toth (2008d) the so-called Peirce Numbers and in Toth (2011) the surreal numbers as a basis for our “Semiotics of the Night”, in the present study, we choose the complex Eisenberg numbers. Thus, while having enriched the line of real numbers with a sort of “transcendence” in Toth (2011), we enrich here the field of complex numbers, also with a sort of “transcendence”. Yet, the two transcendences are not the same, and this is the reason why the present study, although identical from its basic structure with those of Toth (2008d) and Toth (2011), has been necessary. Therefore, the three approaches at disclosing the Night-structure of semiotics form themselves a Triad which reflects the triadic structure of Peircean semiotics, although it appears in all three studies as a fragment of a “wider” tetradic semiotic structure in order to deal with contextualizing semiotic relations from a non-trivial point of view.

I. Action schemata of the 2 · 24 triadic semiotic partial relations

1. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+1_{1,3,4} \ \omega_{1,3}) \times (-\omega_{3,1} \ \omega+1_{4,3,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ \text{人} \gg (\omega_{1,3}) & \times & \text{人} \gg (-\omega_{3,1}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (-\omega_{3,1}) \\ \text{人} \gg (\omega+1_{1,3,4}) & \times & \text{人} \gg (\omega+1_{4,3,1}) \\ (\omega_{1,3}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (\omega_{1,3}) \end{array} \times \begin{array}{l} (-\omega_{3,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega_{1,3}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (-\omega_{3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega_{1,3}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (-\omega_{3,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega_{1,3}) \end{array} \times \begin{array}{l} (-\omega_{3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega_{1,3}) \end{array} \times \begin{array}{l} (-\omega_{3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega_{1,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (-\omega_{3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{c} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{c} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{c} (\omega_{1,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{c} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (-\omega_{3,1}) \end{array}$$

Interpretative action

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega_{1,3}) \end{array} \times \begin{array}{c} (-\omega_{3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega_{1,3}) \end{array} \times \begin{array}{c} (-\omega_{3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{c} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (\omega_{1,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{c} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (-\omega_{3,1}) \end{array}$$

$$\begin{array}{c} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{c} (\omega_{1,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (-\omega_{3,1}) \end{array}$$

2. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+1_{1,3,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ \omega+1_{4,3,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega_{1,2}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

3. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+1_{1,3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ \omega+1_{4,3,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative Action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+1_{4,3,1}) \\ (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{array} \times \begin{array}{l} (\omega+1_{4,3,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (\omega+1_{1,3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

4. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

5. Pre-Semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{c} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{c} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{c} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{c} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{c} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda 2\omega+1_{4,1}) \\ (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (\omega+2_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{c} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{c} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{c} (\omega+2_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

6. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{c} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+1_{1,4}) \end{array} \times \begin{array}{l} (\omega+2_{4,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ \lambda \gg (\omega+3_{3,4}) & \times & \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (3\omega_{2,3}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (\omega+3_{3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{1,4}) & \times & \lambda \gg (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (\omega+2_{4,1}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (\omega+2_{4,1}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ ((2-\omega_{3,2})) & & (2-\omega_{3,2}) \end{array}$$

7. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (1-\omega_{2,1}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{array}$$

8. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{c} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{c} (2\omega+1_{4,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{c} (2\omega+2_{4,2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{c} (2\omega+2_{4,2,1}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

9. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+3_{4,3} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{c} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{c} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{c} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{c} (3\omega+1_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{c} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+2_{4,2,1}) & & (3\omega_{2,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

10. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (3\omega+2_{4,2}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+1_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega+1_{3,4}) \end{array} \times \begin{array}{l} (\omega+3_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (\omega+3_{4,3}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{3,4}) & \times & \lambda \gg (\omega+3_{4,3}) \\ (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

11. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+1_{4,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (\omega+2_{1,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega_{1,2}) & \times & \lambda \gg (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (2\omega_{1,2}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (1-\omega_{2,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{1,4}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (1-\omega_{2,1}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega_{1,2}) \end{array} \times \begin{array}{l} (1-\omega_{2,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega_{1,2}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (1-\omega_{2,1}) \end{array}$$

12. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{1,2,}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+2_{1,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+1_{4,1}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+2_{1,4}) \end{array} \times \begin{array}{l} (2\omega+1_{4,1}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+2_{1,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ \lambda \gg (3\omega+2_{2,4}) & \times & \lambda \gg (2\omega+3_{4,2}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+1_{4,1}) \\ \lambda \gg (3\omega+2_{2,4}) & \times & \lambda \gg (2\omega+3_{4,2}) \\ (\omega+2_{1,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+2_{2,4}) & \times & \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+2_{2,4}) & \times & \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

13. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (3\omega+1_{4,3}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega_{2,3}) & \times & \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+2_{1,2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2\omega+2_{4,2,1}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+2_{1,2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+2_{1,2,4}) \end{array} \times \begin{array}{l} (2\omega+2_{4,2,1}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

14. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

Medial action

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{l} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

Objectal action

$$\begin{array}{c} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{c} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (3\omega+2_{2,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{c} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{c} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{c} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{c} (2\omega+3_{4,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

Interpretative action

$$\begin{array}{c} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{c} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+2_{2,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2\omega+3_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

15. Pre-semiotic dual system

$$(3\omega+3_{2,3,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ 3\omega+3_{4,3,2})$$

Qualitative action

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+2_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{l} (3\omega+2_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{c} (\omega+3_{3,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{c} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{c} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega_{2,3}) \\ (3\omega+2_{2,4}) \end{array} \times \begin{array}{c} (2\omega+3_{4,2}) \\ \lambda \gg (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

Medial action

$$\begin{array}{c} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{c} (3\omega+3_{2,3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{c} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{c} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (3\omega+3_{2,3,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (2\omega+3_{2,4}) \end{array} \times \begin{array}{c} (3\omega+2_{4,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+3_{2,3,4}) \end{array} \times \begin{array}{c} (3\omega+3_{4,3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (2\omega+3_{2,4}) \\ \lambda \gg (\omega+3_{3,4}) \\ (3\omega+3_{2,3,4}) \end{array} \times \begin{array}{c} (3\omega+3_{4,3,2}) \\ \lambda \gg (3\omega+1_{4,3}) \\ (3\omega+2_{4,2}) \end{array}$$

Objectal action

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (2\omega+3_{2,4}) \\ (3\omega+3_{2,3,4}) \end{array} \times \begin{array}{l} (3\omega+3_{4,3,2}) \\ \lambda \gg (3\omega+2_{4,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+3_{2,3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+3_{4,3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (\omega+3_{3,4}) \\ \lambda \gg (3\omega+3_{2,3,4}) \\ (3\omega_{2,3}) \end{array} \times \begin{array}{l} (2-\omega_{3,2}) \\ \lambda \gg (3\omega+3_{4,3,2}) \\ (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \\ \lambda \gg (3\omega+3_{2,3,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+3_{4,3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \\ \lambda \gg (3\omega+3_{2,3,4}) \\ (\omega+3_{3,4}) \end{array} \times \begin{array}{l} (3\omega+1_{4,3}) \\ \lambda \gg (3\omega+3_{4,3,2}) \\ (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ \wedge \gg (3\omega+3_{2,3,4}) & \times & \wedge \gg (3\omega+3_{4,3,2}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+2_{4,2}) \\ \wedge \gg (3\omega+3_{2,3,4}) & \times & \wedge \gg (3\omega+3_{4,3,2}) \\ (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

II. Action schemata of the 2 · 24 tetradic semiotic partial relations

1. Pre-semiotic dual system

$$(3\omega+1 \ 2\omega+1 \ \omega+1 \ \omega) \times (-\omega \ \omega+1 \ \omega+2 \ \omega+3)$$

Qualitative action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ (\omega+1_{1,4,3}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega_{1,3}) \times (-\omega_{3,1}) \gg & & \Upsilon > (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{aligned}
 (\omega_{1,3}) \gg & \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (\omega+2_{4,1}) \\ \Upsilon \succ (-\omega_{3,1}) \\ (\omega+3_{4,3}) \end{array} \\
 (\omega_{1,3}) \gg & \begin{array}{c} (2\omega+1_{1,4}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \succ (-\omega_{3,1}) \\ (\omega+2_{4,1}) \end{array} \\
 (2\omega+1_{1,4}) \gg & \begin{array}{c} (\omega_{1,3}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \succ (\omega+2_{4,1}) \\ (-\omega_{3,1}) \end{array} \\
 (2\omega+1_{1,4}) \gg & \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (\omega_{1,3}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (-\omega_{3,1}) \\ \Upsilon \succ (\omega+2_{4,1}) \\ (\omega+3_{4,3}) \end{array} \\
 (3\omega+1_{3,4}) \gg & \begin{array}{c} (\omega_{1,3}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (2\omega+1_{1,4}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (\omega+2_{4,1}) \\ \Upsilon \succ (\omega+3_{4,3}) \\ (-\omega_{3,1}) \end{array} \\
 (3\omega+1_{3,4}) \gg & \begin{array}{c} (2\omega+1_{1,4}) \\ \Upsilon \succ (\omega+1_{1,3,4}) \\ (\omega_{1,3}) \end{array} \times (\omega+1_{4,3,1}) \gg \begin{array}{c} (-\omega_{3,1}) \\ \Upsilon \succ (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{array}
 \end{aligned}$$

Objectal action

$$\begin{aligned}
 (\omega_{1,3}) \gg & \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \succ (2\omega+1_{1,4}) \\ (\omega+1_{1,3,4}) \end{array} \times (\omega+2_{4,1}) \gg \begin{array}{c} (\omega+1_{4,3,1}) \\ \Upsilon \succ (-\omega_{3,1}) \\ (\omega+3_{4,3}) \end{array} \\
 (\omega_{1,3}) \gg & \begin{array}{c} (\omega+1_{1,3,4}) \\ \Upsilon \succ (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{array} \times (\omega+2_{4,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \succ (-\omega_{3,1}) \\ (\omega+1_{4,3,1}) \end{array}
 \end{aligned}$$

$$\begin{array}{ccc} (\omega_{1,3}) & & (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) & & (-\omega_{3,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (-\omega_{3,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (\omega_{1,3}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega_{1,3}) & & (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) & & (-\omega_{3,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (-\omega_{3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega_{1,3}) & & (\omega+1_{4,3,1}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (\omega_{1,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (-\omega_{3,1}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ (\omega_{1,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (-\omega_{3,1}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (\omega_{1,3}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (-\omega_{3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (-\omega_{3,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (\omega_{1,3}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (\omega_{1,3}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \Upsilon > (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (-\omega_{3,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (-\omega_{3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\ (\omega_{1,3}) & & (\omega+1_{4,3,1}) \end{array}$$

2. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+1_{1,3,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ \omega+1_{4,3,1} \ \omega+2_{1,4} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (2\omega_{1,2}) \gg \Upsilon > (\omega+1_{1,3,4}) \times & & (\omega+1_{4,3,1}) \gg \Upsilon > (1-\omega_{2,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$(2\omega_{1,2}) \gg \begin{matrix} (2\omega+1_{1,4}) \\ (3\omega+1_{3,4}) \end{matrix} \succ (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \begin{matrix} (\omega+3_{4,3}) \\ (\omega+2_{4,1}) \end{matrix} \succ (1-\omega_{2,1})$$

$$(2\omega+1_{1,4}) \gg \begin{matrix} (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{matrix} \succ (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \begin{matrix} (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{matrix} \succ (\omega+2_{4,1})$$

$$(2\omega+1_{1,4}) \gg \begin{matrix} (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{matrix} \succ (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \begin{matrix} (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{matrix} \succ (\omega+2_{1,4})$$

$$(3\omega+1_{3,4}) \gg \begin{matrix} (2\omega_{1,2}) \\ (2\omega+1_{1,4}) \end{matrix} \succ (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \begin{matrix} (\omega+2_{4,1}) \\ (1-\omega_{2,1}) \end{matrix} \succ (\omega+3_{4,3})$$

$$(3\omega+1_{3,4}) \gg \begin{matrix} (2\omega+1_{1,4}) \\ (2\omega_{1,2}) \end{matrix} \succ (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \begin{matrix} (1-\omega_{2,1}) \\ (\omega+2_{4,1}) \end{matrix} \succ (\omega+3_{4,3})$$

Objectal action

$$(2\omega_{1,2}) \gg \begin{matrix} (3\omega+1_{3,4}) \\ (\omega+1_{1,3,4}) \end{matrix} \succ (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \begin{matrix} (\omega+1_{4,3,1}) \\ (\omega+3_{4,3}) \end{matrix} \succ (1-\omega_{2,1})$$

$$(2\omega_{1,2}) \gg \begin{matrix} (\omega+1_{1,3,4}) \\ (3\omega+1_{3,4}) \end{matrix} \succ (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \begin{matrix} (\omega+3_{4,3}) \\ (\omega+1_{4,3,1}) \end{matrix} \succ (1-\omega_{2,1})$$

$$(\omega+1_{1,3,4}) \gg \begin{matrix} (2\omega_{1,2}) \\ (3\omega+1_{3,4}) \end{matrix} \succ (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \begin{matrix} (\omega+3_{4,3}) \\ (1-\omega_{2,1}) \end{matrix} \succ (\omega+1_{4,3,1})$$

$$(\omega+1_{1,3,4}) \gg \begin{matrix} (3\omega+1_{3,4}) \\ (2\omega_{1,2}) \end{matrix} \succ (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \begin{matrix} (1-\omega_{2,1}) \\ (\omega+3_{4,3}) \end{matrix} \succ (\omega+1_{4,3,1})$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon & \succ & (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon & \succ & (2\omega+1_{1,4}) \times (\omega+2_{4,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (2\omega_{1,2}) & & (\omega+1_{4,3,1}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (2\omega_{1,2}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ (2\omega_{1,2}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+1_{4,3,1}) \\ (2\omega_{1,2}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (1-\omega_{2,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon & \succ & (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (2\omega_{1,2}) & & (\omega+1_{4,3,1}) \end{array}$$

3. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+1_{1,3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ \omega+1_{4,3,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+1_{1,3,4}) \times (\omega+1_{4,3,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc}
(3\omega_{2,3}) & & (\omega+3_{4,3}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (\omega+1_{1,3,4}) \times & & (\omega+1_{4,3,1}) \gg \Upsilon > (\omega+2_{4,1}) \\
(3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\
\\
(3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (\omega+1_{1,3,4}) \times & & (\omega+1_{4,3,1}) \gg \Upsilon > (\omega+2_{4,1}) \\
(3\omega_{2,3}) & & (\omega+3_{4,3}) \\
\\
(3\omega_{2,3}) & & (\omega+2_{4,1}) \\
(3\omega+1_{3,4}) \gg \Upsilon > (\omega+1_{1,3,4}) \times & & (\omega+1_{4,3,1}) \gg \Upsilon > (\omega+3_{4,3}) \\
(2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\
(3\omega+1_{3,4}) \gg \Upsilon > (\omega+1_{1,3,4}) \times & & (\omega+1_{4,3,1}) \gg \Upsilon > (\omega+3_{4,3}) \\
(3\omega_{2,3}) & & (\omega+2_{4,1})
\end{array}$$

Objectal action

$$\begin{array}{ccc}
(3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\
(3\omega_{2,3}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\
(\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\
\\
(\omega+1_{1,3,4}) & & (\omega+3_{4,3}) \\
(3\omega_{2,3}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\
(3\omega+1_{3,4}) & & (\omega+1_{4,3,1}) \\
\\
(3\omega_{2,3}) & & (\omega+3_{4,3}) \\
(\omega+1_{1,3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\
(3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\
\\
(3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\
(\omega+1_{1,3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+1_{4,3,1}) \\
(3\omega_{2,3}) & & (\omega+3_{4,3}) \\
\\
(3\omega_{2,3}) & & (\omega+1_{4,3,1}) \\
(3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\
(\omega+1_{1,3,4}) & & (2-\omega_{3,2})
\end{array}$$

$$\begin{array}{ccc} (\omega+1_{1,3,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (\omega+1_{4,3,1}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (\omega+1_{1,3,4}) & & (\omega+2_{4,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+1_{1,4}) & & (\omega+1_{4,3,1}) \\ (3\omega_{2,3}) & & (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+1_{4,3,1}) \\ (3\omega_{2,3}) & & (\omega+2_{4,1}) \\ (3\omega_{2,3}) & & (\omega+1_{4,3,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\ (\omega+1_{1,3,4}) & & (2-\omega_{3,2}) \\ (2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\ (3\omega_{2,3}) & & (\omega+1_{4,3,1}) \end{array}$$

4. Pre-semiotic system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\ (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{l}
\begin{array}{cc} (2\omega+1_{1,4}) & (\omega+3_{4,3}) \\ (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega_{1,2}) & \times (1-\omega_{2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) & (\omega+2_{4,1}) \end{array} \\
\begin{array}{cc} (3\omega+1_{3,4}) & (2\omega+1_{4,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon \succ (2\omega_{1,2}) & \times (1-\omega_{2,1}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (\omega+2_{1,4}) & (\omega+3_{4,3}) \end{array} \\
\begin{array}{cc} (\omega+2_{1,4}) & (\omega+3_{3,4}) \\ (2\omega+1_{1,4}) \gg \Upsilon \succ (2\omega_{1,2}) & \times (1-\omega_{2,1}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & (2\omega+1_{4,1}) \end{array} \\
\begin{array}{cc} (\omega+2_{1,4}) & (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega_{1,2}) & \times (1-\omega_{2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & (2\omega+1_{4,1}) \end{array} \\
\begin{array}{cc} (2\omega+1_{1,4}) & (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega_{1,2}) & \times (1-\omega_{2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (\omega+2_{1,4}) & (\omega+2_{4,1}) \end{array}
\end{array}$$

Medial action

$$\begin{array}{l}
\begin{array}{cc} (3\omega+1_{3,4}) & (\omega+2_{4,1}) \\ (2\omega_{1,2}) \gg \Upsilon \succ (\omega+2_{1,4}) & \times (2\omega+1_{4,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\ (2\omega+1_{1,4}) & (\omega+3_{4,3}) \end{array} \\
\begin{array}{cc} (2\omega+1_{1,4}) & (\omega+3_{4,3}) \\ (2\omega_{1,2}) \gg \Upsilon \succ (\omega+2_{1,4}) & \times (2\omega+1_{4,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) & (\omega+2_{4,1}) \end{array} \\
\begin{array}{cc} (2\omega_{1,2}) & (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) \gg \Upsilon \succ (\omega+2_{1,4}) & \times (2\omega+1_{4,1}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) & (1-\omega_{2,1}) \end{array} \\
\begin{array}{cc} (3\omega+1_{3,4}) & (1-\omega_{2,1}) \\ (2\omega+1_{1,4}) \gg \Upsilon \succ (\omega+2_{1,4}) & \times (2\omega+1_{4,1}) \gg \Upsilon \succ (\omega+2_{4,1}) \\ (2\omega_{1,2}) & (\omega+3_{4,3}) \end{array}
\end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+2_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times & & (2\omega+1_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times & & (2\omega+1_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega_{1,2}) & & (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\ (2\omega_{1,2}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (1-\omega_{2,1}) \\ (\omega+2_{1,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (\omega+3_{4,3}) \\ (2\omega_{1,2}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+3_{4,3}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (1-\omega_{2,1}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\ (2\omega_{1,2}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+2_{1,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & & (\omega+2_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega_{1,2}) & & (2\omega+1_{4,1}) \end{array}$$

Interpretative action

$$\begin{array}{ccc}
 (2\omega+1_{1,4}) & & (2\omega+1_{4,1}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (\omega+2_{1,4}) & & (\omega+2_{4,1}) \\
 \\
 (2\omega+1_{1,4}) & & (\omega+2_{4,1}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (2\omega+1_{1,4}) & & (2\omega+1_{4,1}) \\
 \\
 (2\omega_{1,2}) & & (\omega+2_{4,1}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \\
 \\
 (2\omega+1_{1,4}) & & (1-\omega_{2,1}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (2\omega_{1,2}) & & (\omega+2_{4,1}) \\
 \\
 (2\omega_{1,2}) & & (2\omega+1_{4,1}) \\
 (2\omega+1_{1,4}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+2_{4,1}) \\
 (\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
 \\
 (\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
 (2\omega+1_{1,4}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon \succ (\omega+2_{4,1}) \\
 (2\omega_{1,2}) & & (2\omega+1_{4,1})
 \end{array}$$

5. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ \omega+2_{4,1} \ \omega+3_{3,4})$$

Qualitative action

$$\begin{array}{ccc}
 (3\omega+1_{3,4}) & & (\omega+2_{4,1}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\
 \\
 (2\omega+1_{1,4}) & & (\omega+3_{4,3}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (3\omega+1_{3,4}) & & (\omega+2_{4,1})
 \end{array}$$

$$\begin{array}{l}
(2\omega+1_{1,4}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (\omega+2_{1,4}) \end{array} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \begin{array}{c} (2\omega+1_{4,1}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (\omega+2_{4,1}) \\
(2\omega+1_{1,4}) \gg \begin{array}{c} (\omega+2_{1,4}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (2\omega+1_{4,1}) \end{array} \succ (\omega+2_{4,1}) \\
(3\omega+1_{3,4}) \gg \begin{array}{c} (\omega+2_{1,4}) \\ \Upsilon \\ (2\omega+1_{1,4}) \end{array} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \begin{array}{c} (\omega+2_{4,1}) \\ \Upsilon \\ (2\omega+1_{4,1}) \end{array} \succ (\omega+3_{4,3}) \\
(3\omega+1_{3,4}) \gg \begin{array}{c} (2\omega+1_{1,4}) \\ \Upsilon \\ (\omega+2_{1,4}) \end{array} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \begin{array}{c} (2\omega+1_{4,1}) \\ \Upsilon \\ (\omega+2_{4,1}) \end{array} \succ (\omega+3_{4,3})
\end{array}$$

Medial action

$$\begin{array}{l}
(3\omega_{2,3}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (2\omega+1_{1,4}) \end{array} \succ (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \begin{array}{c} (\omega+2_{4,1}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (2-\omega_{3,2}) \\
(3\omega_{2,3}) \gg \begin{array}{c} (2\omega+1_{1,4}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (\omega+2_{4,1}) \end{array} \succ (2-\omega_{3,2}) \\
(2\omega+1_{1,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (\omega+2_{4,1}) \\
(2\omega+1_{1,4}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{array} \succ (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \begin{array}{c} (2-\omega_{3,2}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (\omega+2_{4,1}) \\
(3\omega+1_{3,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (2\omega+1_{1,4}) \end{array} \succ (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \begin{array}{c} (\omega+2_{4,1}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (\omega+3_{4,3})
\end{array}$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times & (2\omega+1_{4,1}) \gg \Upsilon > & (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (2-\omega_{3,2}) \\ (\omega+2_{1,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (2\omega+1_{4,1}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\ (\omega+2_{1,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (\omega+2_{4,1}) \\ (2-\omega_{3,2}) & & \\ (\omega+2_{1,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon > & (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (2\omega+1_{4,1}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (2\omega+1_{4,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & (\omega+3_{3,4}) \gg \Upsilon > & (2-\omega_{3,2}) \\ (\omega+2_{1,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc}
& (\omega+2_{1,4}) & (\omega+2_{4,1}) \\
(3\omega_{2,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\
& (2\omega+1_{1,4}) & (2\omega+1_{4,1}) \\
\\
& (3\omega_{2,3}) & (\omega+2_{4,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
& (2\omega+1_{1,4}) & (2-\omega_{3,2}) \\
\\
& (2\omega+1_{1,4}) & (2-\omega_{3,2}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
& (3\omega_{2,3}) & (\omega+2_{4,1}) \\
\\
& (3\omega_{2,3}) & (2\omega+1_{4,1}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\
& (\omega+2_{1,4}) & (2-\omega_{3,2}) \\
\\
& (\omega+2_{1,4}) & (2-\omega_{3,2}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\
& (3\omega_{2,3}) & (2\omega+1_{4,1})
\end{array}$$

6. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+1_{1,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ \omega+2_{4,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc}
& (3\omega+1_{3,4}) & (\omega+2_{4,1}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
& (2\omega+1_{1,4}) & (\omega+3_{4,3}) \\
\\
& (2\omega+1_{1,4}) & (\omega+3_{3,4}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
& (3\omega+1_{3,4}) & (\omega+2_{4,1}) \\
\\
& (3\omega+1_{3,4}) & (3\omega+1_{4,3}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (\omega+2_{4,1}) \\
& (\omega+3_{3,4}) & (\omega+3_{4,3})
\end{array}$$

$$(2\omega+1_{1,4}) \begin{matrix} (\omega+3_{3,4}) \\ \gg \Upsilon \\ (3\omega+1_{3,4}) \end{matrix} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \begin{matrix} (\omega+3_{4,3}) \\ \gg \Upsilon \\ (3\omega+1_{4,3}) \end{matrix} \succ (\omega+2_{4,1})$$

$$(3\omega+1_{3,4}) \begin{matrix} (\omega+3_{3,4}) \\ \gg \Upsilon \\ (2\omega+1_{1,4}) \end{matrix} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \begin{matrix} (\omega+2_{4,1}) \\ \gg \Upsilon \\ (3\omega+1_{4,3}) \end{matrix} \succ (\omega+3_{4,3})$$

$$(3\omega+1_{3,4}) \begin{matrix} (2\omega+1_{1,4}) \\ \gg \Upsilon \\ (\omega+3_{3,4}) \end{matrix} \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \begin{matrix} (3\omega+1_{4,3}) \\ \gg \Upsilon \\ (\omega+2_{4,1}) \end{matrix} \succ (\omega+3_{4,3})$$

Medial action

$$(3\omega_{2,3}) \begin{matrix} (3\omega+1_{3,4}) \\ \gg \Upsilon \\ (2\omega+1_{1,4}) \end{matrix} \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \begin{matrix} (\omega+2_{4,1}) \\ \gg \Upsilon \\ (\omega+3_{4,3}) \end{matrix} \succ (2-\omega_{3,2})$$

$$(3\omega_{2,3}) \begin{matrix} (2\omega+1_{1,4}) \\ \gg \Upsilon \\ (3\omega+1_{3,4}) \end{matrix} \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \begin{matrix} (\omega+3_{4,3}) \\ \gg \Upsilon \\ (\omega+2_{4,1}) \end{matrix} \succ (2-\omega_{3,2})$$

$$(2\omega+1_{1,4}) \begin{matrix} (3\omega_{2,3}) \\ \gg \Upsilon \\ (3\omega+1_{3,4}) \end{matrix} \succ (\omega+3_{3,4}) \times (3\omega+1_{3,4}) \begin{matrix} (\omega+3_{4,3}) \\ \gg \Upsilon \\ (2-\omega_{3,2}) \end{matrix} \succ (\omega+2_{4,1})$$

$$(2\omega+1_{1,4}) \begin{matrix} (3\omega+1_{3,4}) \\ \gg \Upsilon \\ (3\omega_{2,3}) \end{matrix} \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \begin{matrix} (2-\omega_{3,2}) \\ \gg \Upsilon \\ (\omega+3_{4,3}) \end{matrix} \succ (\omega+2_{4,1})$$

$$(3\omega+1_{3,4}) \begin{matrix} (3\omega_{2,3}) \\ \gg \Upsilon \\ (2\omega+1_{1,4}) \end{matrix} \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \begin{matrix} (\omega+2_{4,1}) \\ \gg \Upsilon \\ (2-\omega_{3,2}) \end{matrix} \succ (\omega+3_{4,3})$$

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon & \succ (\omega+3_{3,4}) \times & (3\omega+1_{4,3}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (\omega+2_{4,1}) \end{array}$$

Objectal action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{1,4}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \\ (\omega+3_{3,4}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (\omega+3_{3,4}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ (\omega+3_{3,4}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (3\omega+1_{3,4}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon & \succ (2\omega+1_{1,4}) \times & (\omega+2_{4,1}) \gg \Upsilon \succ (\omega+3_{3,4}) \\ (3\omega_{2,3}) & & (3\omega+1_{3,4}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+1_{1,4}) & & (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \gg \Upsilon & \succ (3\omega+1_{3,4}) \times & (\omega+3_{3,4}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (\omega+2_{4,1}) \end{array}$$

$$\begin{array}{ccc}
(\omega+3_{3,4}) & & (\omega+2_{4,1}) \\
(3\omega_{2,3}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{3,4}) \gg \Upsilon > (2-\omega_{3,2}) \\
(2\omega+1_{1,4}) & & (3\omega+1_{3,4}) \\
\\
(3\omega_{2,3}) & & (\omega+2_{4,1}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+1_{1,4}) & & (2-\omega_{3,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(3\omega_{2,3}) & & (\omega+2_{4,1}) \\
\\
(3\omega_{2,3}) & & (3\omega+1_{4,3}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{1,4}) \\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
\\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
(2\omega+1_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (\omega+2_{4,1}) \\
(3\omega_{2,3}) & & (3\omega+1_{4,3})
\end{array}$$

7. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
\\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
(\omega+2_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (\omega+3_{4,3})
\end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (2\omega_{1,2}) \times (1-\omega_{2,1}) & \gg \Upsilon > & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega_{1,2}) \times (1-\omega_{2,1}) & \gg \Upsilon > & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (2\omega_{1,2}) \times (1-\omega_{2,1}) & \gg \Upsilon > & (\omega+3_{4,3}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\ (2\omega_{1,2}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\ (2\omega_{1,2}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (2\omega+2_{4,2,1}) \\ (2\omega_{1,2}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) & \gg \Upsilon > & (\omega+3_{4,3}) \\ (2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l}
 \begin{array}{l}
 (3\omega+1_{3,4}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (\omega+3_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega+1_{3,4})
 \end{array}
 \quad
 \begin{array}{l}
 (\omega+3_{4,3}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (2\omega+1_{4,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (2\omega_{1,2}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega+1_{3,4})
 \end{array}
 \quad
 \begin{array}{l}
 (\omega+3_{4,3}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (1-\omega_{2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega+1_{3,4}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (2\omega_{1,2})
 \end{array}
 \quad
 \begin{array}{l}
 (1-\omega_{2,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (\omega+3_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (2\omega_{1,2}) \\
 (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\
 (1-\omega_{2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (2\omega_{1,2})
 \end{array}
 \quad
 \begin{array}{l}
 (1-\omega_{2,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\
 (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

Interpretative action

$$\begin{array}{l}
 \begin{array}{l}
 (2\omega+2_{1,2,4}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (2\omega+2_{4,2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times \\
 (2\omega+2_{1,2,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+2_{4,2,1}) \\
 (\omega+3_{4,3}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

$$\begin{array}{ccc}
(2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\
\\
(2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\
\\
(2\omega_{1,2}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
\\
(\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(2\omega_{1,2}) & & (2\omega+1_{4,1})
\end{array}$$

8. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
\\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+1_{3,4}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (\omega+3_{4,3}) \\
\\
(\omega+2_{1,4}) & & (\omega+3_{4,3}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(3\omega+1_{3,4}) & & (2\omega+1_{4,1})
\end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l}
 \begin{array}{l}
 (3\omega+1_{3,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (\omega+3_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega+1_{3,4})
 \end{array}
 \quad
 \begin{array}{l}
 (\omega+3_{4,3}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (2\omega+1_{4,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega_{2,3}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega+1_{3,4})
 \end{array}
 \quad
 \begin{array}{l}
 (\omega+3_{4,3}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (2-\omega_{3,2})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega+1_{3,4}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega_{2,3})
 \end{array}
 \quad
 \begin{array}{l}
 (2-\omega_{3,2}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (\omega+3_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega_{2,3}) \\
 (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\
 (2-\omega_{3,2})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (3\omega+1_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times \\
 (3\omega_{2,3})
 \end{array}
 \quad
 \begin{array}{l}
 (2-\omega_{3,2}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (\omega+3_{4,3}) \\
 (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

Interpretative action

$$\begin{array}{l}
 \begin{array}{l}
 (2\omega+2_{1,2,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times \\
 (\omega+2_{1,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+1_{4,1}) \\
 (\omega+3_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (2\omega+2_{4,2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+2_{1,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (3\omega+1_{3,4}) \times \\
 (2\omega+2_{1,2,4})
 \end{array}
 \quad
 \begin{array}{l}
 (2\omega+2_{4,2,1}) \\
 (\omega+3_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

$$\begin{array}{ccc}
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega_{2,3}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (2-\omega_{3,2}) \\
\\
(\omega+2_{1,4}) & & (2-\omega_{3,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(3\omega_{2,3}) & & (2\omega+1_{4,1})
\end{array}$$

9. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+2_{1,2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 2\omega+2_{4,2,1} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
\\
(2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+1_{3,4}) & & (3\omega+1_{3,4}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) & & (\omega+3_{4,3}) \\
\\
(\omega+3_{3,4}) & & (\omega+3_{4,3}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(3\omega+1_{3,4}) & & (3\omega+1_{4,3})
\end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objective action

$$\begin{array}{l}
 (3\omega_{2,3}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (2-\omega_{3,2}) \\
 (3\omega_{2,3}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (2-\omega_{3,2}) \\
 (\omega+3_{3,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (3\omega+1_{4,3}) \\
 (\omega+3_{3,4}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (2-\omega_{3,2}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (3\omega+1_{4,3}) \\
 (3\omega+1_{3,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (\omega+3_{4,3}) \\
 (3\omega+1_{3,4}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{array} \succ (2\omega+2_{1,2,4}) \times \quad (2\omega+2_{4,2,1}) \gg \begin{array}{c} (2-\omega_{3,2}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (\omega+3_{4,3})
 \end{array}$$

Interpretative action

$$\begin{array}{l}
 (3\omega_{2,3}) \gg \begin{array}{c} (2\omega+2_{1,2,4}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (3\omega+1_{3,4}) \times \quad (\omega+3_{4,3}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (2\omega+2_{4,2,1}) \end{array} \succ (2-\omega_{3,2}) \\
 (3\omega_{2,3}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (2\omega+2_{1,2,4}) \end{array} \succ (3\omega+1_{3,4}) \times \quad (\omega+3_{4,3}) \gg \begin{array}{c} (2\omega+2_{4,2,1}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (2-\omega_{3,2})
 \end{array}$$

$$\begin{array}{ccc}
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega_{2,3}) & & (3\omega+1_{4,3}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
\\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(3\omega_{2,3}) & & (3\omega+1_{4,3})
\end{array}$$

10. Pre-semiotic dual system

$$(3\omega+1_{3,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ \omega+3_{4,3})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+1_{3,4}) & & (3\omega+2_{4,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(2\omega+3_{2,4}) & & (\omega+3_{4,3}) \\
\\
(2\omega+3_{2,4}) & & (\omega+3_{4,3}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(3\omega+1_{3,4}) & & (3\omega+2_{4,2}) \\
\\
(3\omega+1_{3,4}) & & (3\omega+1_{4,3}) \\
(2\omega+3_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+2_{4,2}) \\
(\omega+3_{3,4}) & & (\omega+3_{4,3}) \\
\\
(\omega+3_{3,4}) & & (\omega+3_{4,3}) \\
(2\omega+3_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+2_{4,2}) \\
(3\omega+1_{3,4}) & & (3\omega+1_{4,3})
\end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (\omega+3_{4,3}) \\ (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (3\omega+2_{4,2}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (\omega+3_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (\omega+3_{4,3}) \\ (2\omega+3_{2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (3\omega+2_{4,2}) \\ (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+1_{3,4}) & & (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (3\omega+2_{4,2}) \\ (3\omega_{2,3}) & & (\omega+3_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+2_{4,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (\omega+3_{4,3}) \\ (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \\ (3\omega+1_{3,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (\omega+3_{4,3}) \\ (3\omega_{2,3}) & & (3\omega+2_{4,2}) \end{array}$$

Objectal action

$$\begin{array}{l}
 (3\omega_{2,3}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (2-\omega_{3,2}) \\
 (3\omega_{2,3}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (2-\omega_{3,2}) \\
 (\omega+3_{3,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (3\omega+1_{3,4}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (\omega+3_{4,3}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (3\omega+1_{4,3}) \\
 (\omega+3_{3,4}) \gg \begin{array}{c} (3\omega+1_{3,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (2-\omega_{3,2}) \\ \Upsilon \\ (\omega+3_{4,3}) \end{array} \succ (3\omega+1_{4,3}) \\
 (3\omega+1_{3,4}) \gg \begin{array}{c} (3\omega_{2,3}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{array} \succ (\omega+3_{4,3}) \\
 (3\omega+1_{3,4}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{array} \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \begin{array}{c} (2-\omega_{3,2}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (\omega+3_{3,4})
 \end{array}$$

Interpretative action

$$\begin{array}{l}
 (3\omega_{2,3}) \gg \begin{array}{c} (2\omega+3_{2,4}) \\ \Upsilon \\ (\omega+3_{3,4}) \end{array} \succ (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \begin{array}{c} (3\omega+1_{4,3}) \\ \Upsilon \\ (3\omega+2_{4,2}) \end{array} \succ (2-\omega_{3,2}) \\
 (3\omega_{2,3}) \gg \begin{array}{c} (\omega+3_{3,4}) \\ \Upsilon \\ (2\omega+3_{2,4}) \end{array} \succ (3\omega+1_{3,4}) \times (\omega+3_{4,3}) \gg \begin{array}{c} (3\omega+2_{4,2}) \\ \Upsilon \\ (3\omega+1_{4,3}) \end{array} \succ (2-\omega_{3,2})
 \end{array}$$

$$\begin{array}{ccc}
(3\omega_{2,3}) & & (3\omega+2_{4,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(2\omega+3_{2,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+3_{2,4}) & & (2-\omega_{3,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+1_{4,3}) \\
(3\omega_{2,3}) & & (3\omega+2_{4,2}) \\
\\
(3\omega_{2,3}) & & (3\omega+1_{4,3}) \\
(2\omega+3_{2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+2_{4,2}) \\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
\\
(\omega+3_{3,4}) & & (2-\omega_{3,2}) \\
(2\omega+3_{2,4}) \gg \Upsilon > (3\omega+1_{3,4}) \times & & (\omega+3_{4,3}) \gg \Upsilon > (3\omega+2_{4,2}) \\
(3\omega_{2,3}) & & (3\omega+1_{4,3})
\end{array}$$

11. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 2\omega_{1,2}) \times (1-\omega_{2,1} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
(\omega+2_{1,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+1_{4,1}) \\
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+2_{2,4}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (2\omega+3_{4,2}) \\
\\
(\omega+2_{1,4}) & & (2\omega+3_{4,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (2\omega_{1,2}) \times & & (1-\omega_{2,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\
(3\omega+2_{2,4}) & & (2\omega+1_{4,1})
\end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (2\omega_{1,2}) \times (1-\omega_{2,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (2\omega_{1,2}) \times (1-\omega_{2,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\ (2\omega_{1,2}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \end{array} :$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\ (2\omega_{1,2}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (1-\omega_{2,1}) \\ (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (1-\omega_{2,1}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (2\omega_{1,2}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l}
 \begin{array}{cc}
 (3\omega+2_{2,4}) & (2\omega+1_{4,1}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (\omega+2_{1,4}) & (2\omega+3_{4,2})
 \end{array} \\
 \\
 \begin{array}{cc}
 (\omega+2_{1,4}) & (2\omega+3_{4,2}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (3\omega+2_{2,4}) & (2\omega+1_{4,1})
 \end{array} \\
 \\
 \begin{array}{cc}
 (2\omega_{1,2}) & (2\omega+3_{4,2}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (3\omega+2_{2,4}) & (1-\omega_{2,1})
 \end{array} \\
 \\
 \begin{array}{cc}
 (3\omega+2_{2,4}) & (1-\omega_{2,1}) \\
 (\omega+2_{1,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+1_{4,1}) \\
 (2\omega_{1,2}) & (2\omega+3_{4,2})
 \end{array} \\
 \\
 \begin{array}{cc}
 (2\omega_{1,2}) & (2\omega+1_{4,1}) \\
 (3\omega+2_{2,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\
 (\omega+2_{1,2,4}) & (1-\omega_{2,1})
 \end{array} \\
 \\
 \begin{array}{cc}
 (\omega+2_{1,4}) & (1-\omega_{2,1}) \\
 (3\omega+2_{2,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \times & (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\
 (2\omega_{1,2}) & (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

Interpretative action

$$\begin{array}{l}
 \begin{array}{cc}
 (2\omega+2_{1,2,4}) & (2\omega+1_{4,1}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (\omega+2_{1,4}) & (2\omega+2_{4,2,1})
 \end{array} \\
 \\
 \begin{array}{cc}
 (\omega+2_{1,4}) & (2\omega+2_{4,2,1}) \\
 (2\omega_{1,2}) \gg \Upsilon \succ (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon \succ (1-\omega_{2,1}) \\
 (2\omega+2_{1,2,4}) & (2\omega+1_{4,1})
 \end{array}
 \end{array}$$

$$\begin{array}{ccc}
(2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\
\\
(2\omega+2_{1,2,4}) & & (1-\omega_{2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(2\omega_{1,2}) & & (2\omega+2_{4,2,1}) \\
\\
(2\omega_{1,2}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
\\
(\omega+2_{1,4}) & & (1-\omega_{2,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(2\omega_{1,2}) & & (2\omega+1_{4,1})
\end{array}$$

12. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+2_{1,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 2\omega+1_{4,1} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+2_{2,4}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (2\omega+3_{4,2}) \\
\\
(\omega+2_{1,4}) & & (2\omega+3_{4,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(3\omega+2_{2,4}) & & (2\omega+1_{4,1})
\end{array}$$

$$\begin{array}{ccc} (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+1_{4,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (\omega+2_{1,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+2_{1,4}) \times (2\omega+1_{4,1}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$(3\omega_{2,3}) \gg \begin{matrix} (3\omega+2_{2,4}) \\ \Upsilon \\ (\omega+2_{1,4}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2\omega+1_{4,1}) \\ \Upsilon \\ (2\omega+3_{4,2}) \end{matrix} \succ (2-\omega_{3,2})$$

$$(3\omega_{2,3}) \gg \begin{matrix} (\omega+2_{1,4}) \\ \Upsilon \\ (3\omega+2_{2,4}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2\omega+3_{4,2}) \\ \Upsilon \\ (2\omega+1_{4,1}) \end{matrix} \succ (2-\omega_{3,2})$$

$$(\omega+2_{1,4}) \gg \begin{matrix} (3\omega_{2,3}) \\ \Upsilon \\ (3\omega+2_{2,4}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2\omega+3_{4,2}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{matrix} \succ (2\omega+1_{4,1})$$

$$(\omega+2_{1,4}) \gg \begin{matrix} (3\omega+2_{2,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2-\omega_{3,2}) \\ \Upsilon \\ (2\omega+3_{4,2}) \end{matrix} \succ (2\omega+1_{4,1})$$

$$(3\omega+2_{2,4}) \gg \begin{matrix} (3\omega_{2,3}) \\ \Upsilon \\ (\omega+2_{1,4}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2\omega+1_{4,1}) \\ \Upsilon \\ (2-\omega_{3,2}) \end{matrix} \succ (2\omega+3_{4,2})$$

$$(3\omega+2_{2,4}) \gg \begin{matrix} (\omega+2_{1,4}) \\ \Upsilon \\ (3\omega_{2,3}) \end{matrix} \succ (2\omega+2_{1,2,4}) \times (2\omega+2_{4,2,1}) \gg \begin{matrix} (2-\omega_{3,2}) \\ \Upsilon \\ (2\omega+1_{4,1}) \end{matrix} \succ (2\omega+3_{4,2})$$

Interpretative action

$$(3\omega_{2,3}) \gg \begin{matrix} (2\omega+2_{1,2,4}) \\ \Upsilon \\ (\omega+2_{1,4}) \end{matrix} \succ (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \begin{matrix} (2\omega+1_{4,1}) \\ \Upsilon \\ (2\omega+2_{4,2,1}) \end{matrix} \succ (2-\omega_{3,2})$$

$$(3\omega_{2,3}) \gg \begin{matrix} (\omega+2_{1,4}) \\ \Upsilon \\ (2\omega+2_{1,2,4}) \end{matrix} \succ (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \begin{matrix} (2\omega+2_{4,2,1}) \\ \Upsilon \\ (2\omega+1_{4,1}) \end{matrix} \succ (2-\omega_{3,2})$$

$$\begin{array}{ccc}
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\
(\omega+2_{1,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+1_{4,1}) \\
(3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega_{2,3}) & & (2\omega+1_{4,1}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(\omega+2_{1,4}) & & (2-\omega_{3,2}) \\
\\
(\omega+2_{1,4}) & & (2-\omega_{3,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & (2\omega+3_{4,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(3\omega_{2,3}) & & (2\omega+1_{4,1})
\end{array}$$

13. Pre-semiotic system

$$(3\omega+2_{2,4} \ 2\omega+2_{1,2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 2\omega+2_{4,2,1} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc}
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (3\omega+1_{4,3}) \\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
\\
(2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\
(\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (3\omega+1_{4,3}) \\
(3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\
\\
(3\omega+2_{2,4}) & & (3\omega+1_{4,3}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\
\\
(\omega+3_{3,4}) & & (2\omega+3_{4,2}) \\
(2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & (2-\omega_{3,2}) \gg \Upsilon > & (2\omega+2_{4,2,1}) \\
(3\omega+2_{2,4}) & & (3\omega+1_{4,3})
\end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (3\omega+1_{4,3}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (\omega+3_{3,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2\omega+3_{4,2}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (3\omega+2_{2,4}) & & (2\omega+2_{4,2,1}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+2_{1,2,4}) & & (2-\omega_{3,2}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (3\omega_{2,3}) & & (2\omega+2_{4,2,1}) \end{array}$$

Objectal action

$$\begin{array}{l}
 \begin{array}{l}
 (3\omega+2_{2,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \\
 (\omega+3_{3,4})
 \end{array}
 \times
 \begin{array}{l}
 (3\omega+1_{4,3}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (2\omega+3_{4,2})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+3_{3,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \\
 (3\omega+2_{2,4})
 \end{array}
 \times
 \begin{array}{l}
 (2\omega+3_{4,2}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (3\omega+1_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega_{2,3}) \\
 (\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \\
 (3\omega+2_{2,4})
 \end{array}
 \times
 \begin{array}{l}
 (2\omega+3_{4,2}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
 (2-\omega_{3,2})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega+2_{2,4}) \\
 (\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+2_{1,2,4}) \\
 (3\omega_{2,3})
 \end{array}
 \times
 \begin{array}{l}
 (2-\omega_{3,2}) \\
 (2\omega+2_{4,2,1}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
 (3\omega+1_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (2\omega+2_{1,2,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (3\omega+2_{2,4}) \\
 (\omega+3_{3,4})
 \end{array}
 \times
 \begin{array}{l}
 (3\omega+1_{4,3}) \\
 (2\omega+3_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (2\omega+2_{4,2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (\omega+3_{3,4}) \\
 (3\omega_{2,3}) \gg \Upsilon \succ (3\omega+2_{2,4}) \\
 (2\omega+2_{1,2,4})
 \end{array}
 \times
 \begin{array}{l}
 (2\omega+2_{4,2,1}) \\
 (2\omega+3_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
 (3\omega+1_{4,3})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega_{2,3}) \\
 (\omega+3_{3,4}) \gg \Upsilon \succ (3\omega+2_{2,4}) \\
 (2\omega+2_{1,2,4})
 \end{array}
 \times
 \begin{array}{l}
 (2\omega+2_{4,2,1}) \\
 (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
 (2-\omega_{3,2})
 \end{array} \\
 \\
 \begin{array}{l}
 (2\omega+2_{1,2,4}) \\
 (\omega+3_{3,4}) \gg \Upsilon \succ (3\omega+2_{2,4}) \\
 (3\omega_{2,3})
 \end{array}
 \times
 \begin{array}{l}
 (2-\omega_{3,2}) \\
 (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
 (2\omega+2_{4,2,1})
 \end{array} \\
 \\
 \begin{array}{l}
 (3\omega_{2,3}) \\
 (2\omega+2_{1,2,4}) \gg \Upsilon \succ (3\omega+2_{2,4}) \\
 (\omega+3_{3,4})
 \end{array}
 \times
 \begin{array}{l}
 (3\omega+1_{4,3}) \\
 (2\omega+3_{4,2}) \gg \Upsilon \succ (2\omega+2_{4,2,1}) \\
 (2-\omega_{3,2})
 \end{array}
 \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ (2\omega+2_{1,2,4}) \gg \Upsilon > (3\omega+2_{2,4}) \times & & (2\omega+3_{4,2}) \gg \Upsilon > (2\omega+2_{4,2,1}) \\ (3\omega_{2,3}) & & (3\omega+1_{4,3}) \end{array}$$

14. Pre-semiotic dual system

$$(3\omega+2_{2,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ 2\omega+3_{4,2})$$

Qualitative action

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (2\omega+3_{4,2}) \\ (\omega+3_{3,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+1_{4,3}) \\ (3\omega+2_{2,4}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2\omega+3_{4,2}) \\ (2\omega+3_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (3\omega+2_{4,2}) \\ (3\omega+2_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \\ (3\omega+2_{2,4}) \gg \Upsilon > (3\omega_{2,3}) \times & & (2-\omega_{3,2}) \gg \Upsilon > (2\omega+3_{4,2}) \\ (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \end{array}$$

Medial action

$$\begin{array}{ccc} (3\omega+2_{2,4}) & & (3\omega+2_{4,2}) \\ (3\omega_{2,3}) \gg \Upsilon > (\omega+3_{3,4}) \times & & (3\omega+1_{4,3}) \gg \Upsilon > (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & (2\omega+3_{4,2}) \end{array}$$

$$\begin{array}{l}
(3\omega_{2,3}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
\quad \quad \quad (2\omega+3_{2,4}) \quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (2\omega+3_{4,2}) \\
\quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (2\omega+3_{4,2}) \\
(2\omega+3_{2,4}) \gg \Upsilon \succ \omega+3_{3,4} \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\
\quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (2-\omega_{3,2}) \\
(2\omega+3_{2,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\
\quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (2-\omega_{3,2}) \\
\quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (3\omega+2_{4,2}) \\
(3\omega+2_{2,4}) \gg \quad \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\
\quad \quad \quad (2\omega+3_{2,4}) \quad \quad \quad (2-\omega_{3,2}) \\
(3\omega+2_{2,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\
\quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (2-\omega_{3,2}) \quad \quad \quad (3\omega+2_{4,2})
\end{array}$$

Objectal action

$$\begin{array}{l}
(3\omega_{2,3}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
\quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (\omega+3_{3,4}) \quad \quad \quad (3\omega+2_{4,2}) \quad \quad \quad (2\omega+3_{4,2}) \\
(3\omega_{2,3}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\
\quad \quad \quad (\omega+3_{3,4}) \quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (2\omega+3_{4,2}) \quad \quad \quad (3\omega+1_{4,3}) \\
(\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
\quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (2\omega+3_{4,2}) \quad \quad \quad (2-\omega_{3,2}) \\
(\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\
\quad \quad \quad (3\omega+2_{2,4}) \quad \quad \quad (3\omega_{2,3}) \quad \quad \quad (2-\omega_{3,2}) \quad \quad \quad (2\omega+3_{4,2})
\end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ (3\omega+2_{2,4}) \gg \Upsilon & \succ & (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ (3\omega+2_{2,4}) \gg \Upsilon & \succ & (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (2\omega+3_{4,2}) \\ (3\omega_{2,3}) & & (3\omega+1_{4,3}) \end{array}$$

Interpretative action

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \\ (3\omega_{2,3}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (3\omega+2_{4,2}) \\ (3\omega_{2,3}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (2\omega+3_{2,4}) & & (2-\omega_{3,2}) \\ (\omega+3_{3,4}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (3\omega_{2,3}) & & (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{ccc} (3\omega_{2,3}) & & (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) & & (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccc} (\omega+3_{3,4}) & & (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) \gg \Upsilon & \succ & (3\omega+2_{2,4}) \times (2\omega+3_{4,2}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (3\omega_{2,3}) & & (3\omega+1_{4,3}) \end{array}$$

15. Pre-semiotic dual system

$$(3\omega+3_{2,3,4} \ 2\omega+3_{2,4} \ \omega+3_{3,4} \ 3\omega_{2,3}) \times (2-\omega_{3,2} \ 3\omega+1_{4,3} \ 3\omega+2_{4,2} \ 3\omega+3_{4,3,2})$$

Qualitative action

$$\begin{array}{l} (3\omega+3_{2,3,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \gg \Upsilon \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (3\omega+3_{2,3,4}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) \end{array}$$

$$\begin{array}{l} (2\omega+3_{2,4}) \gg \Upsilon \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (3\omega+3_{2,3,4}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+3_{4,3,2}) \\ (2\omega+3_{2,4}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+3_{4,3,2}) \\ (\omega+3_{3,4}) \end{array}$$

$$\begin{array}{l} (3\omega+3_{2,3,4}) \gg \Upsilon \succ (3\omega_{2,3}) \times (2-\omega_{3,2}) \gg \Upsilon \succ (3\omega+3_{4,3,2}) \\ (\omega+3_{3,4}) \end{array}$$

Medial action

$$\begin{array}{l} (3\omega_{2,3}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) \end{array}$$

$$\begin{array}{l} (3\omega_{2,3}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (3\omega+2_{4,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ (2\omega+3_{2,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (3\omega+2_{2,4}) \quad (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (3\omega+3_{2,3,4}) \\ (2\omega+3_{2,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+2_{4,2}) \\ (3\omega_{2,3}) \quad (2-\omega_{3,2}) \quad (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ (3\omega+3_{2,3,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+3_{4,3,2}) \\ (2\omega+3_{2,4}) \quad (3\omega+2_{4,2}) \quad (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (2\omega+3_{2,4}) \\ (3\omega+3_{2,3,4}) \gg \Upsilon \succ (\omega+3_{3,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+3_{4,3,2}) \\ (3\omega_{2,3}) \quad (2-\omega_{3,2}) \quad (3\omega+2_{4,2}) \end{array}$$

Objectal action

$$\begin{array}{c} (3\omega+3_{2,3,4}) \\ (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (\omega+3_{3,4}) \quad (3\omega+2_{4,2}) \quad (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{c} (\omega+3_{3,4}) \\ (3\omega_{2,3}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (2-\omega_{3,2}) \\ (3\omega+3_{2,3,4}) \quad (3\omega+3_{4,3,2}) \quad (3\omega+1_{4,3}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ (\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (3\omega+1_{4,3}) \\ (3\omega+3_{2,3,4}) \quad (3\omega+3_{4,3,2}) \quad (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{c} (3\omega+3_{2,3,4}) \\ (\omega+3_{3,4}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+2_{4,2}) \gg \Upsilon \succ (3\omega+1_{3,4}) \\ (3\omega_{2,3}) \quad (2-\omega_{3,2}) \quad (3\omega+3_{4,3,2}) \end{array}$$

$$\begin{array}{c} (3\omega_{2,3}) \\ (3\omega+3_{2,3,4}) \gg \Upsilon \succ (2\omega+3_{2,4}) \times (3\omega+1_{4,3}) \gg \Upsilon \succ (3\omega+3_{2,3,4}) \\ (\omega+3_{3,4}) \quad (3\omega+2_{4,2}) \quad (2-\omega_{3,2}) \end{array}$$

$$\begin{array}{ccccc} (\omega+3_{3,4}) & & & (2-\omega_{3,2}) & \\ (3\omega+3_{2,3,4}) \gg \Upsilon & \succ & (2\omega+3_{2,4}) \times & (3\omega+2_{4,2}) \gg \Upsilon & \succ & (3\omega+3_{4,3,2}) \\ (3\omega_{2,3}) & & & (3\omega+1_{4,3}) & \end{array}$$

Interpretative action

$$\begin{array}{ccccc} (2\omega+3_{2,4}) & & & (3\omega+1_{4,3}) & \\ (3\omega_{2,3}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (2-\omega_{3,2}) \\ (\omega+3_{3,4}) & & & (3\omega+2_{4,2}) & \end{array}$$

$$\begin{array}{ccccc} (\omega+3_{3,4}) & & & (3\omega+2_{4,2}) & \\ (3\omega_{2,3}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (2-\omega_{3,2}) \\ (2\omega+3_{2,4}) & & & (3\omega+1_{4,3}) & \end{array}$$

$$\begin{array}{ccccc} (3\omega_{2,3}) & & & (3\omega+2_{4,2}) & \\ (\omega+3_{3,4}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (3\omega+1_{4,3}) \\ (2\omega+3_{2,4}) & & & (2-\omega_{3,2}) & \end{array}$$

$$\begin{array}{ccccc} (2\omega+3_{2,4}) & & & (2-\omega_{3,2}) & \\ (\omega+3_{3,4}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (3\omega+1_{4,3}) \\ (3\omega_{2,3}) & & & (3\omega+2_{4,2}) & \end{array}$$

$$\begin{array}{ccccc} (3\omega_{2,3}) & & & (3\omega+1_{4,3}) & \\ (2\omega+3_{2,4}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (3\omega+2_{4,2}) \\ (\omega+3_{3,4}) & & & (2-\omega_{3,2}) & \end{array}$$

$$\begin{array}{ccccc} (\omega+3_{3,4}) & & & (2-\omega_{3,2}) & \\ (2\omega+3_{2,4}) \gg \Upsilon & \succ & (3\omega+3_{2,3,4}) \times & (3\omega+3_{4,3,2}) \gg \Upsilon & \succ & (3\omega+2_{4,2}) \\ (3\omega_{2,3}) & & & (3\omega+1_{4,3}) & \end{array}$$

Therefore, we have given all possible words of vocabulary of a 4-contextural 4-adic negative language in semiotic form. This is the semiotic world according Günther we had to build by opening the curtain and enter the semiotic meontics, the reign of volition and semiotic action.

Bibliography

- Bense, Max, Semiotische Prozesse und Systeme. Baden-Baden 1975
- Günther, Gotthard/Schelsky, Helmut, Christliche Metaphysik und das Schicksal des modernen Bewusstseins. Leipzig 1937
- Günther, Gotthard, Beiträge zur Grundlegung einer operationsfähigen Dialektik. Bd. 3. Hamburg 1980
- Heinrichs, Johannes, Reflexionstheoretische Semiotik. Bonn 1980
- Kaehr, Rudolf, Diamond Semiotics.
<http://www.thinkartlab.com/pkl/lola/Diamond%20Semiotics/Diamond%20Semiotics.pdf> (2008a)
- Kaehr, Rudolf, Toth's semiotic diamonds.
<http://www.thinkartlab.com/pkl/lola/Toth-Diamanten/Toth-Diamanten.pdf> (2008b)
- Kaehr, Rudolf, Triadic diamonds.
<http://www.thinkartlab.com/pkl/lola/Triadic%20Diamonds/Triadic%20Diamonds.pdf> (2008c)
- Kaehr, Rudolf, Quadralectic Diamonds. Semiotic Studies with Toth's "Theory of the Night".
<http://www.thinkartlab.com/pkl/lola/Quadralectic%20Diamonds/Quadralectic%20Diamonds.pdf> (2011)
- Rilke, Rainer Maria, Die Gedichte. Frankfurt am Main 1997
- Toth, Alfred, Semiotische Strukturen und Prozesse. Klagenfurt 2008 (2008a)
- Toth, Alfred, Semiotics and Pre-Semiotics. 2 vols. Klagenfurt 2008 (2008b)
- Toth, Alfred, Entwurf einer handlungstheoretischen Semiotik. Klagenfurt 2008 (2008c)
- Toth, Alfred, Elements of a Theory of the Night. Part I (Peirce numbers). In: Electronic Journal for Mathematical Semiotics, <http://www.mathematical-semiotics.com/pdf/Elem.%20Theory%20Night.pdf> (2008d).
- Toth, Alfred, Elements of a Surreal Theory of the Night. Part II (Conway numbers). In: Electronic Journal for Mathematical Semiotics, <http://www.mathematical-semiotics.com/pdf/Surreale%20Nacht.pdf> (2011)
- Trabant, Jürgen, Zeichen des Menschen. Frankfurt am Main 1989

4.5.2011