# Symbols and Glossary

## Primary Symbols

| Symbol | Name | Description |
|--------|------|-------------|
| $\langle\ \rangle$ | Mark / Cross | The primary distinction; represents TRUE |
| $\emptyset$ | Void | Empty space; represents FALSE |
| $\langle a \rangle$ | Enclosure | Boundary containing form $a$; represents NOT $a$ |
| $ab$ | Juxtaposition | Forms side-by-side; represents $a$ AND $b$ |
| $j$ | Imaginary value | Self-referential form: $j = \langle j \rangle$ |

# Derived Symbols

| Symbol | Definition | Boolean Equivalent |
| --- | --- | --- |
| $\langle\langle a\rangle\langle b\rangle\rangle$ | De Morgan disjunction | $a$ OR $b$ |
| $\langle a\langle b\rangle\rangle$ | Material implication | $a \rightarrow b$ |
| $\langle ab\rangle$ | Sheffer stroke | $a$ NAND $b$ |
| $\langle\langle\langle a\rangle\langle b\rangle\rangle\rangle$ | Peirce arrow | $a$ NOR $b$ |

# Meta-Symbols

| Symbol | Meaning |
| --- | --- |
| $f$ | Truth value of form $f$ |
| $\equiv$ | Semantic equivalence |
| $=$ | Syntactic equality after reduction |
| $\rightarrow$ | Reduces to (single step) |
| $\rightarrow^*$ | Reduces to (multiple steps) |

# Axiom Labels

| Label | Name | Statement |
| --- | --- | --- |
| J1 | Calling / Involution | $\langle\langle a\rangle\rangle = a$ |
| J2 | Crossing / Condensation | $\langle\,\rangle\langle\,\rangle = \langle\,\rangle$ |

# Consequence Labels (C1-C9)

| Label | Name | Statement |
|-------|------|-----------|
| C1 | Position | $\langle\langle a\rangle b\rangle a = a$ |
| C2 | Transposition | $\langle\langle a\rangle\langle b\rangle\rangle c = \langle ac\rangle\langle bc\rangle$ |
| C3 | Generation | $\langle\langle a\rangle a\rangle = \langle\ \rangle$ |
| C4 | Integration | $a \vee \text{TRUE} = \text{TRUE}$ |
| C5 | Occultation | $\langle\langle a\rangle\rangle a = a$ |
| C6 | Iteration | $aa = a$ |
| C7 | Extension | $\langle\langle a\rangle\langle b\rangle\rangle\langle\langle a\rangle b\rangle = a$ |
| C8 | Echelon | $\langle\langle ab\rangle c\rangle = \langle ac\rangle\langle bc\rangle$ |
| C9 | Cross-Transposition | $\langle\langle ac\rangle\langle bc\rangle\rangle = \langle\langle a\rangle\langle b\rangle\rangle c$ |

# Glossary

### Agential Cut

(Barad) An enacted boundary that constitutes the entities it separates; parallels the Spencer-Brown mark as constitutive rather than representational.

### Boundary

A line of demarcation creating inside and outside; the fundamental operation in the calculus of indications.

### Boundary Logic

A logical system built from the primitive act of drawing distinctions (boundaries); synonymous with the calculus of indications and Containment Theory.

### Calling

Axiom J1: Double enclosure returns to the original form. Also known as involution or double negation elimination.

### Calculus of Indications

Spencer-Brown's original name for the formal system of boundary