

Prof. Dr. Alfred Toth

Elemente einer trajektischen Systemtheorie

1. In Toth (2025) hatten wir das vollständige System der $3^3 = 27$ ternären (triadisch-trichotomischen) semiotischen Relationen in Form von trajektischen Abbildungen der Form

$$T = (1, 2, 3) \mid (1, 2, 3) \text{ mit } \mid = R((1, 2, 3), (1, 2, 3))$$

dargestellt und die semiotischen Relationen nach dem Vorschlag Walthers für Zeichenklassen (vgl. Walther 1979, S. 79) in Kompositionen dyadischer Teilrelationen zerlegt

$$(3.x, 2.y, 1.z) = (3.x \rightarrow 2.y) \circ (2.y \rightarrow 1.z)$$

$$(z.1, y.2, x.3) = (z.1 \rightarrow y.2) \circ (y.2 \rightarrow x.3).$$

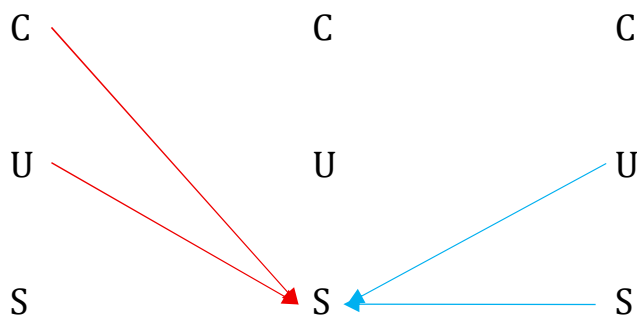
2. In der vorliegenden Arbeit benutzen wir die trajektische Abbildungstheorie als algebraische Grundlage einer ontischen Systemtheorie. Die Systemrelation ist definiert durch (vgl. Toth 2015)

$$S^* = (S, U, C).$$

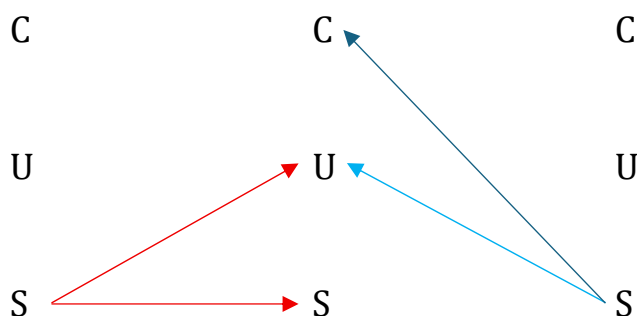
2. Systemrelationen

1. Systemrelation

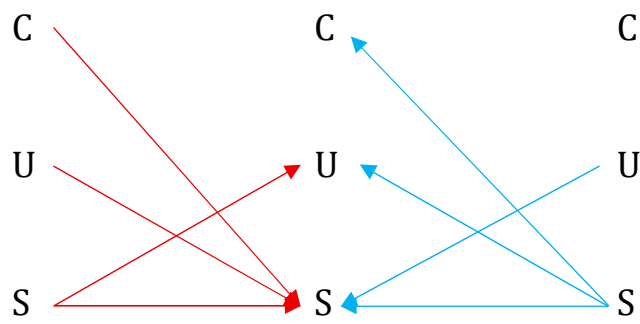
$$S^* = (C.S, U.S, S.S)$$



$$DS^* = (S.S, S.U, S.C)$$

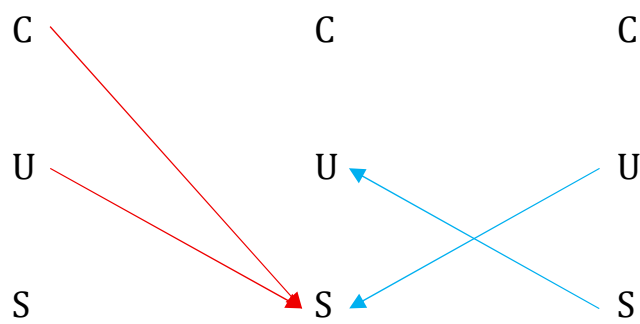


$$DS = [(C.S, U.S, S.S) \times (S.S, S.U, S.C)]$$

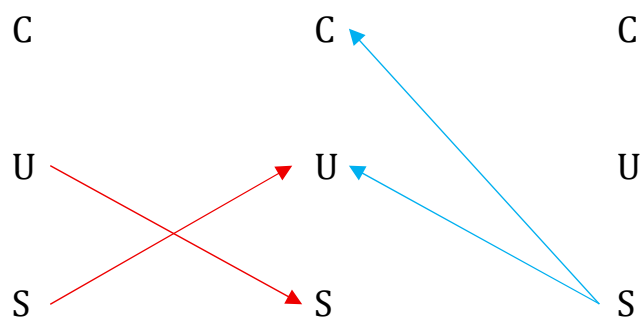


2. Systemrelation

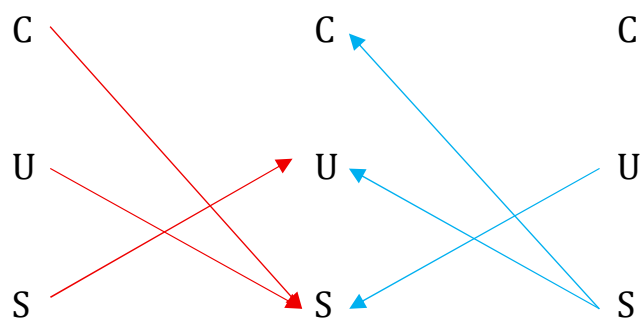
$$S^* = (C.S, U.S, S.U)$$



$$DS^* = (U.S, S.U, S.C)$$

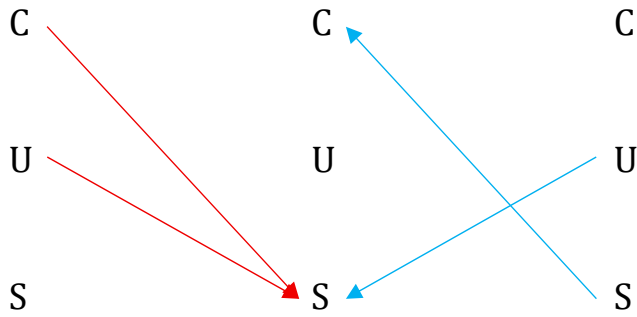


$$DS = [(C.S, U.S, S.U) \times (U.S, S.U, S.C)]$$

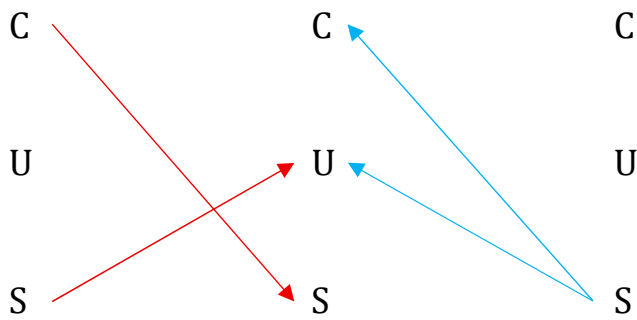


3. Systemrelation

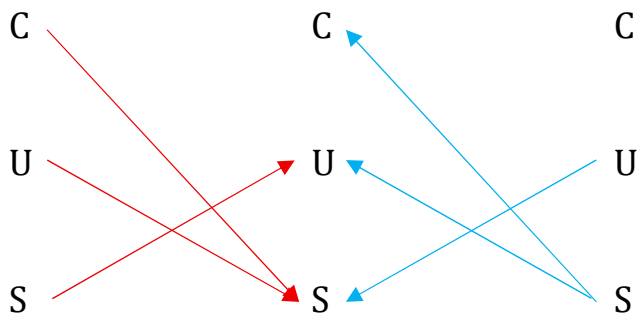
$$S^* = (C.S, U.S, S.C)$$



$$DS^* = (C.S, S.U, S.C)$$

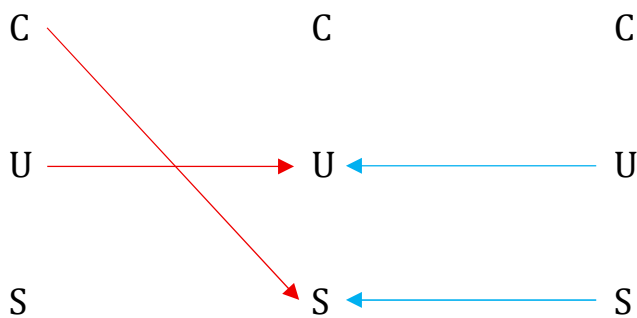


$$DS = [(C.S, U.S, S.C) \times (C.S, S.U, S.C)]$$

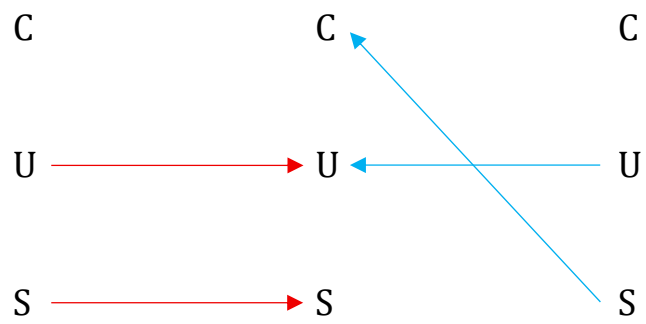


4. Systemrelation

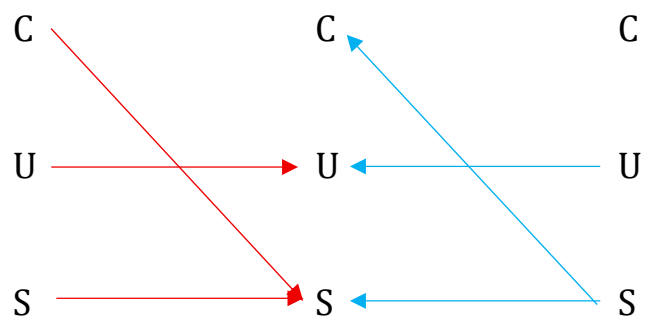
$$S^* = (C.S, U.U, S.S)$$



$$DS^* = (S.S, U.U, S.C)$$

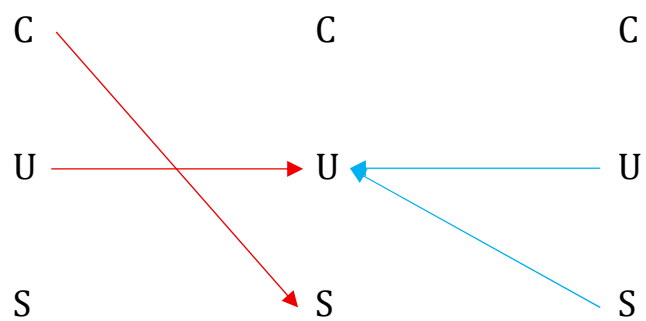


$$DS = [(C.S, U.U, S.S) \times (S.S, U.U, S.C)]$$

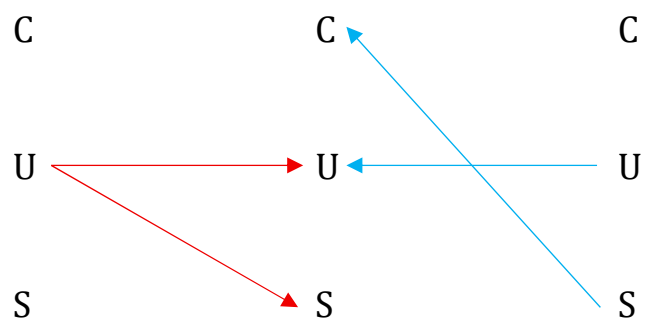


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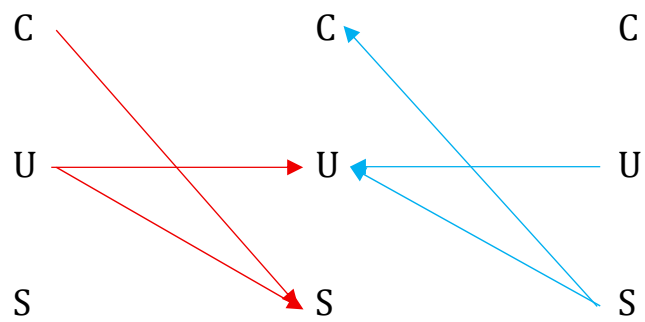
$$S^* = (C.S, U.U, S.U)$$



$$DS^* = (U.S, U.U, S.C)$$

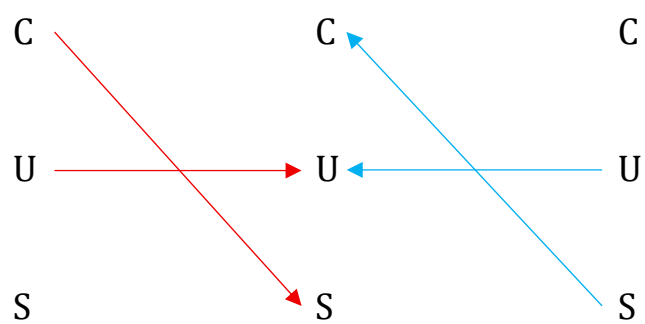


$$DS = [(C.S, U.U, S.U) \times (U.S, U.U, S.C)]$$

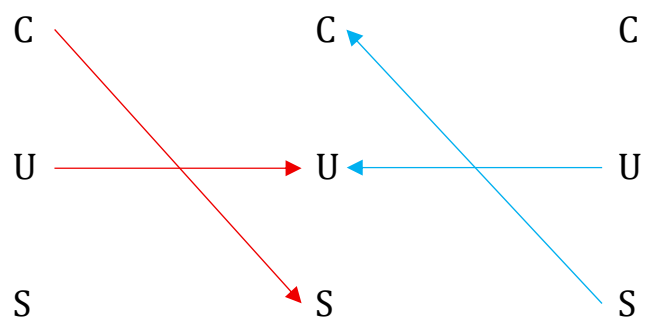


6. Systemrelation

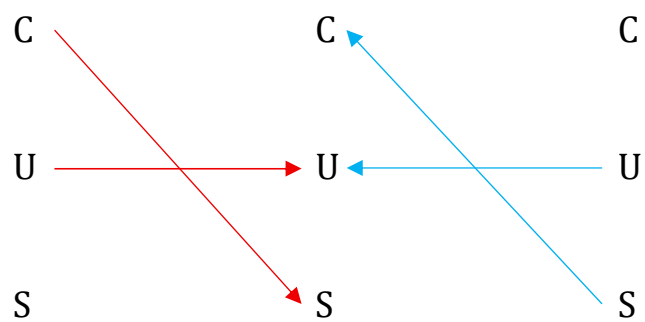
$$S^* = (C.S, U.U, S.C)$$



$$DS^* = (C.S, U.U, S.C)$$

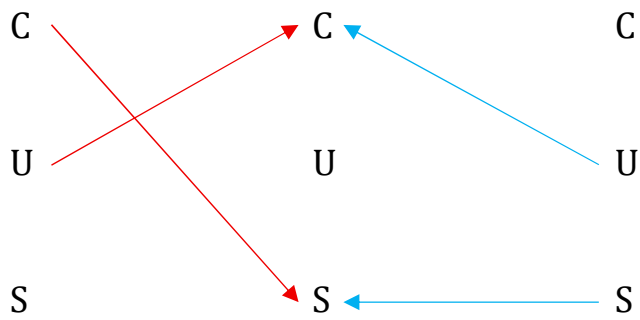


$$DS = [(C.S, U.U, S.C) \times (C.S, U.U, S.C)]$$

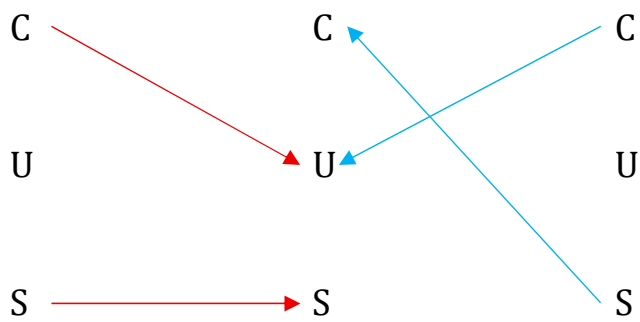


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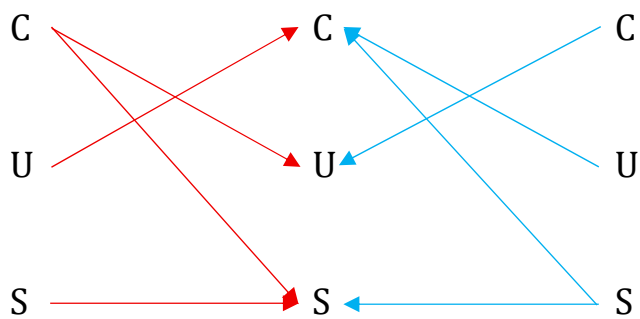
$$S^* = (C.S, U.C, S.S)$$



$$DS^* = (S.S, C.U, S.C)$$

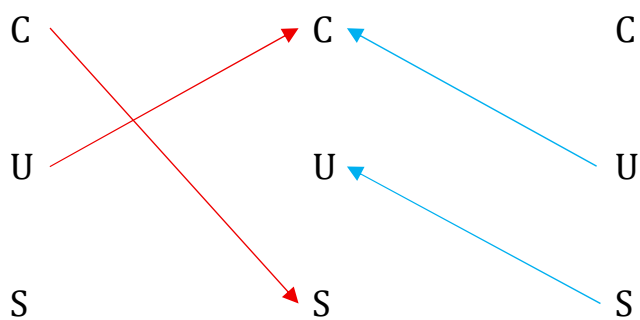


$$DS = [(C.S, U.C, S.S) \times (S.S, C.U, S.C)]$$

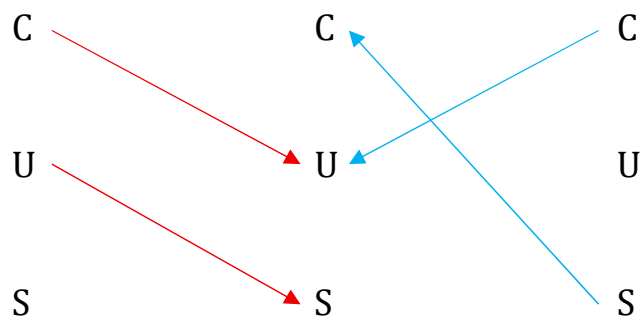


8. Systemrelation

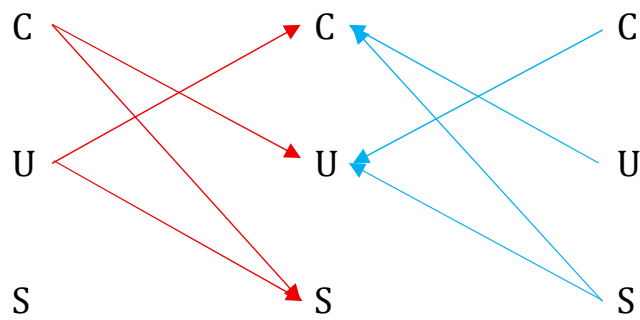
$$S^* = (C.S, U.C, S.U)$$



$$DS^* = (U.S, C.U, S.C)$$

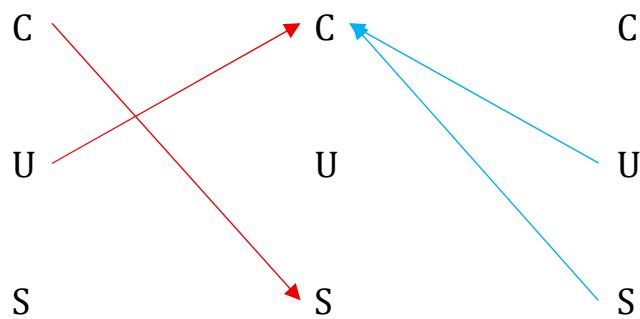


$$DS = [(C.S, U.C, S.U) \times (U.S, C.U, S.C)]$$

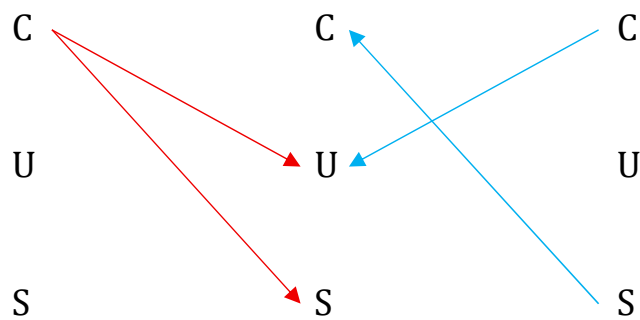


9. Systemrelation

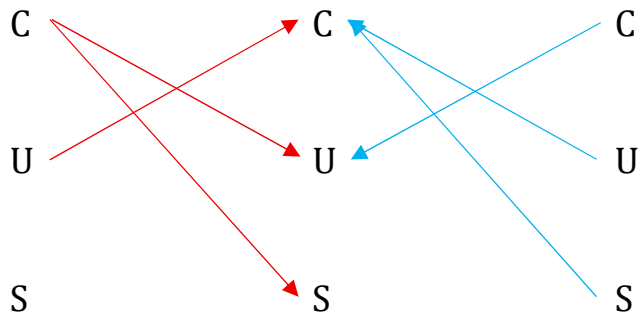
$$S^* = (C.S, U.C, S.C)$$



$$DS^* = (C.S, C.U, S.C)$$

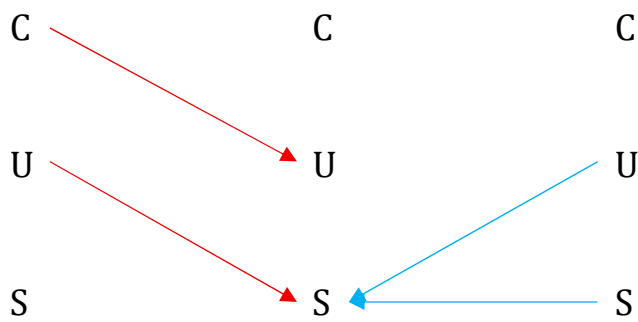


$$DS = [(C.S, U.C, S.C) \times (C.S, C.U, S.C)]$$

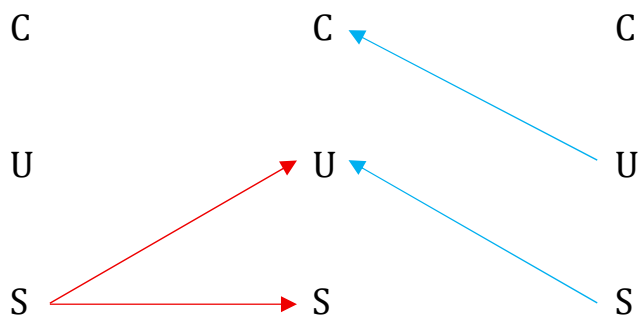


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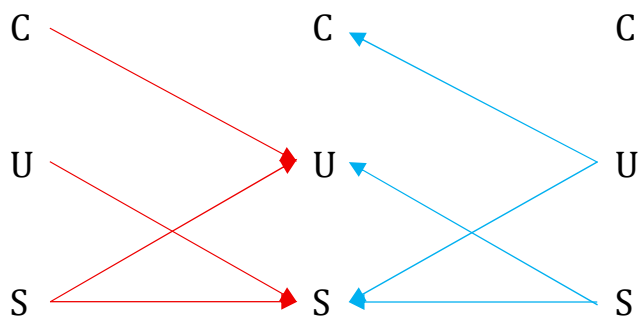
$$S^* = (C.U, U.S, S.S)$$



$$DS^* = (S.S, S.U, U.C)$$

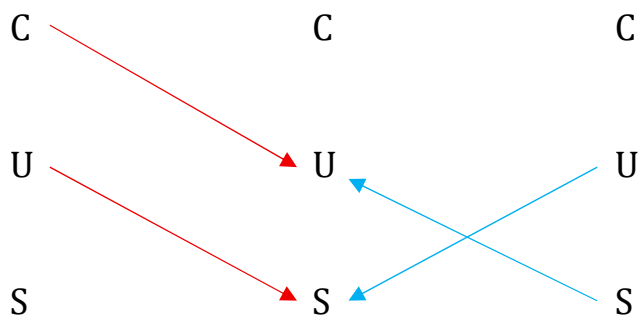


$$DS = [(C.U, U.S, S.S) \times (S.S, S.U, U.C)]$$

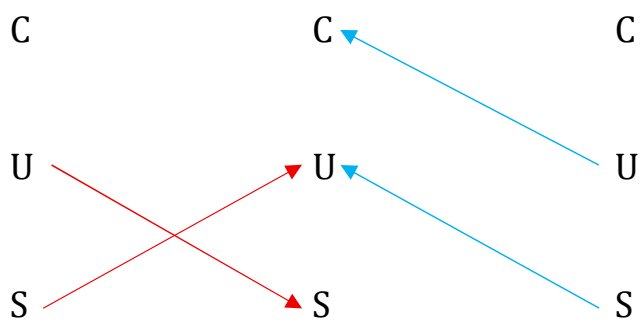


11. Systemrelation

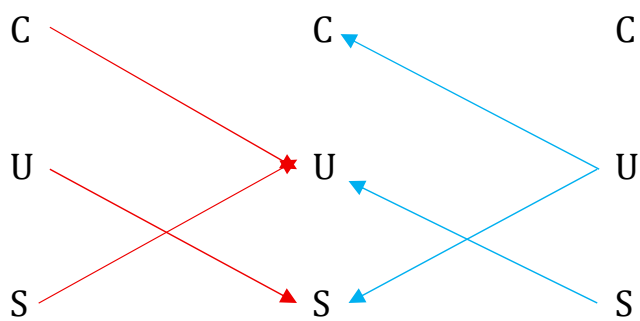
$$S^* = (C.U, U.S, S.U)$$



$$DS^* = (U.S, S.U, U.C)$$

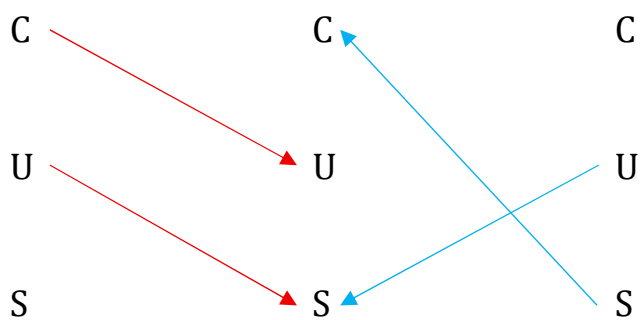


$$DS = [(C.U, U.S, S.U) \times (U.S, S.U, U.C)]$$

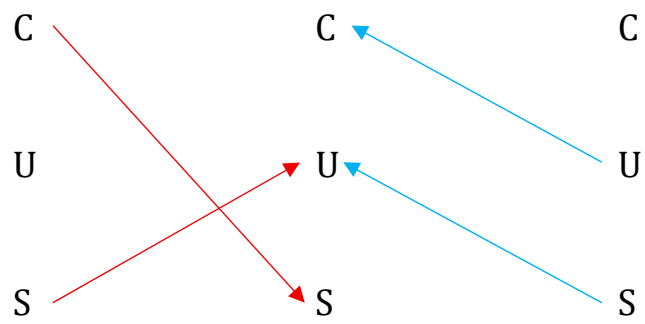


12. Systemrelation

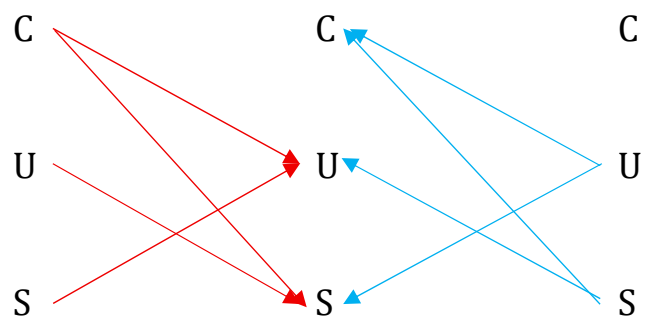
$$S^* = (C.U, U.S, S.C)$$



$$DS^* = (C.S, S.U, U.C)$$

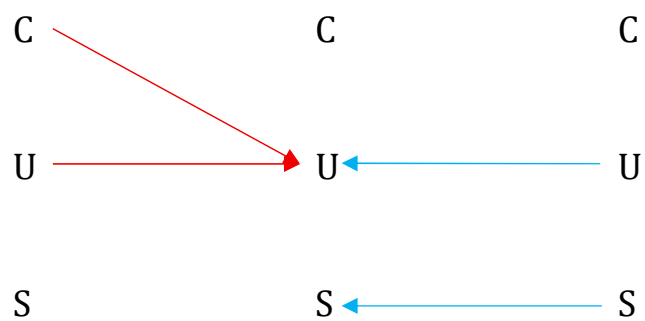


$$DS = [(C.U, U.S, S.C) \times (C.S, S.U, U.C)]$$

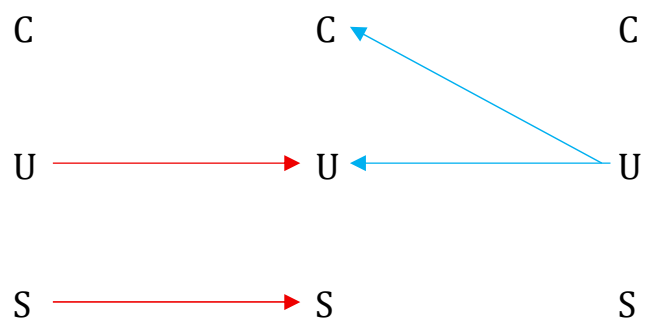


13. Systemrelation

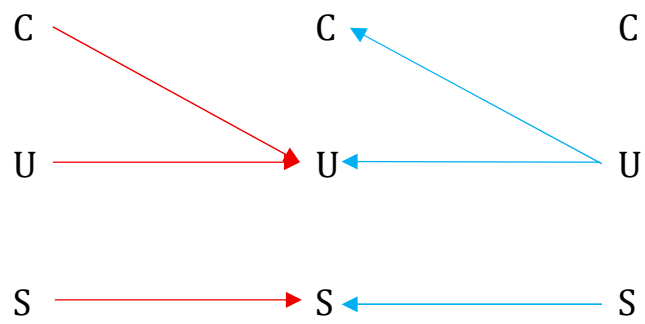
$$S^* = (C.U, U.U, S.S)$$



$$DS^* = (S.S, U.U, U.C)$$

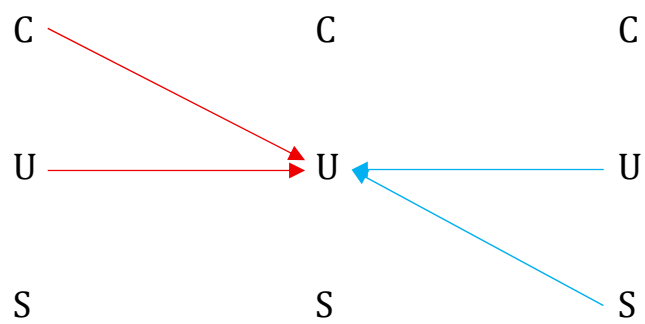


$$DS = [(C.U, U.U, S.S) \times (S.S, U.U, U.C)]$$

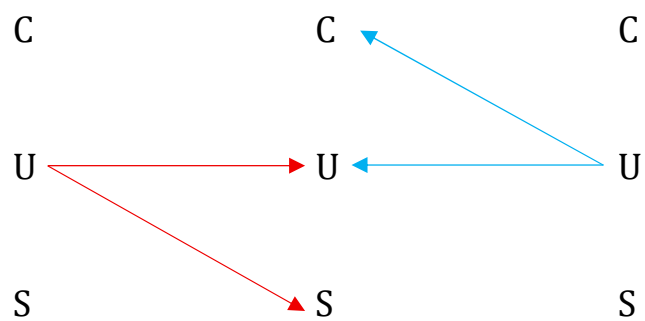


14. Systemrelation

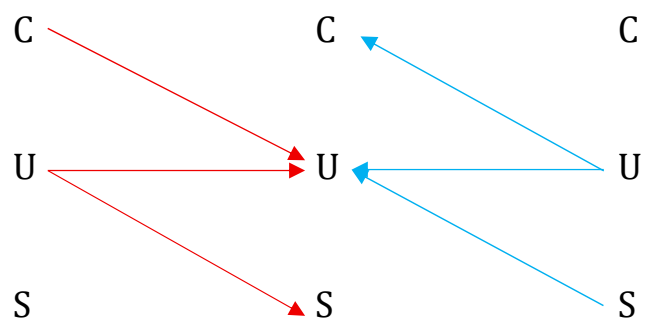
$$S^* = (C.U, U.U, S.U)$$



$$DS^* = (U.S, U.U, U.C)$$

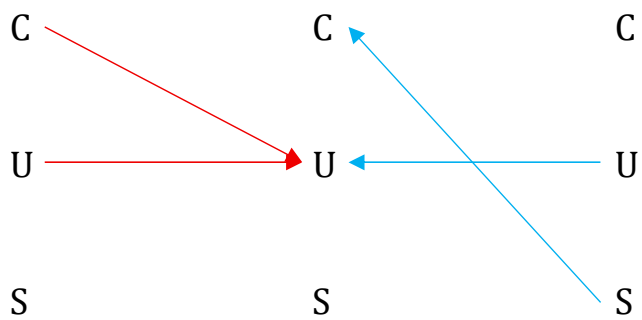


$$DS = [(C.U, U.U, S.U) \times (U.S, U.U, U.C)]$$

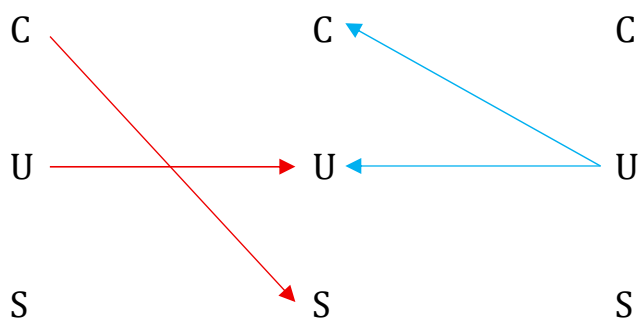


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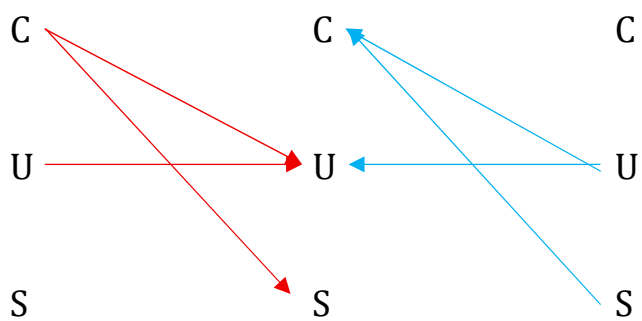
$$S^* = (C.U, U.U, S.C)$$



$$DS^* = (C.S, U.U, U.C)$$

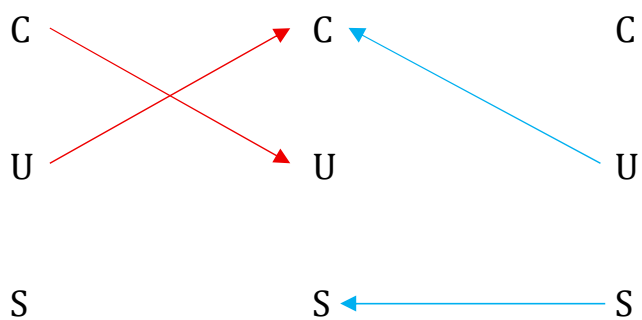


$$DS = [(C.U, U.U, S.C) \times (C.S, U.U, U.C)]$$

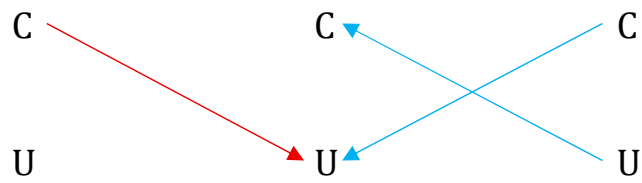


16. Systemrelation

$$S^* = (C.U, U.C, S.S)$$

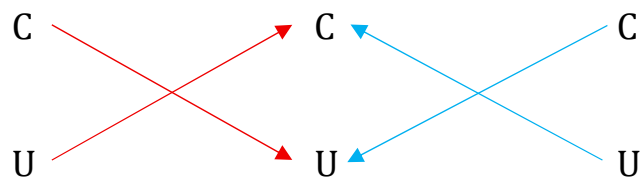


$$DS^* = (S.S, C.U, U.C)$$



$$S \longrightarrow S$$

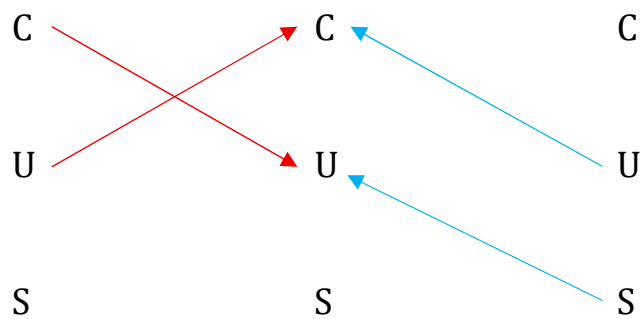
$$DS = [(C.U, U.C, S.S) \times (S.S, C.U, U.C)]$$



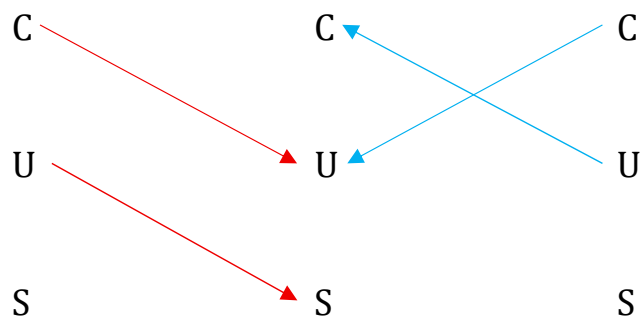
$$S \longrightarrow S \longleftarrow S$$

17. Systemrelation

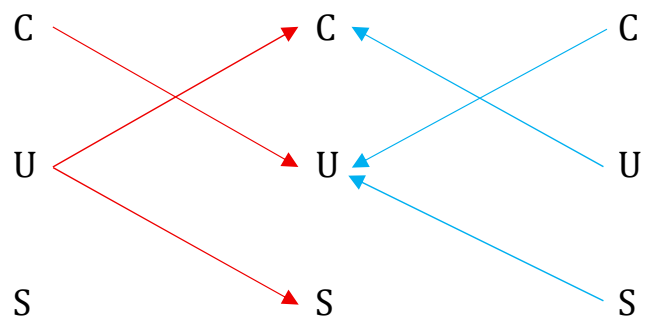
$$S^* = (C.U, U.C, S.U)$$



$$DS^* = (U.S, C.U, U.C)$$

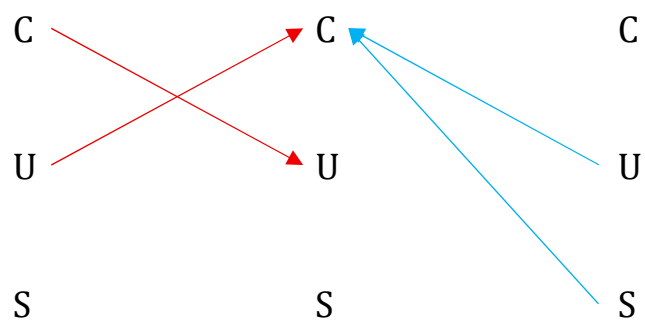


$$DS = [(C.U, U.C, S.U) \times (U.S, C.U, U.C)]$$

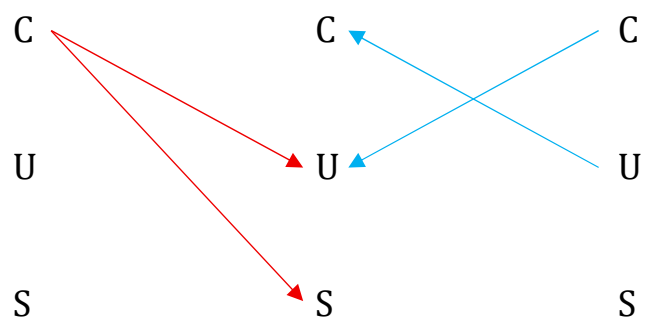


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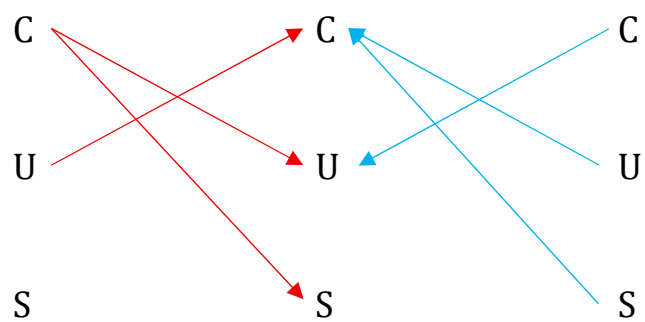
$$S^* = (C.U, U.C, S.C)$$



$$DS^* = (C.S, C.U, U.C)$$

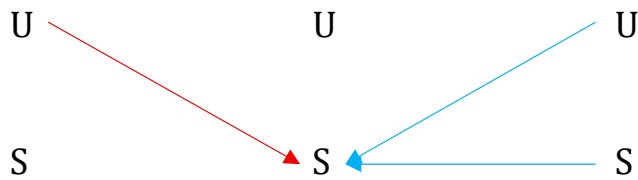


$$DS = [(C.U, U.C, S.C) \times (C.S, C.U, U.C)]$$

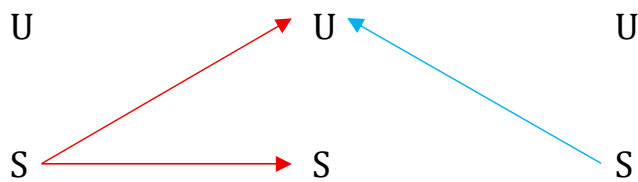
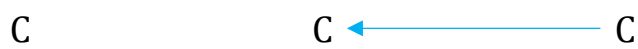


19. Systemrelation

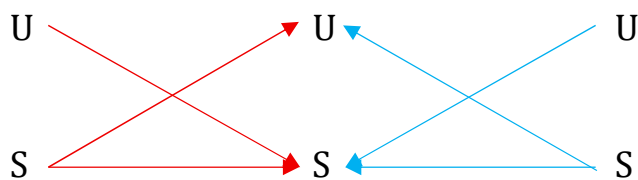
$$S^* = (C.C, U.S, S.S)$$



$$DS^* = (S.S, S.U, C.C)$$

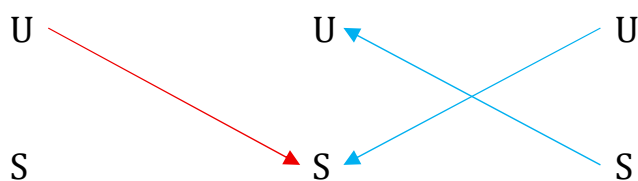


$$DS = [(C.C, U.S, S.S) \times (S.S, S.U, C.C)]$$

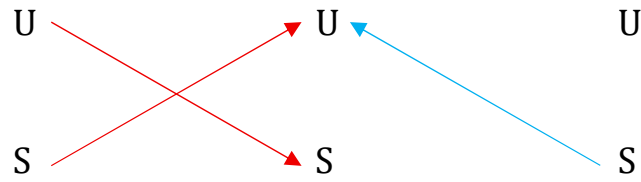
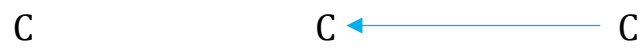


20. Systemrelation

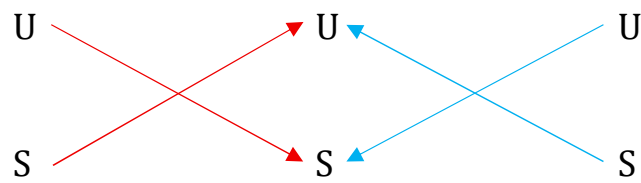
$$S^* = (C.C, U.S, S.U)$$



$$DS^* = (U.S, S.U, C.C)$$

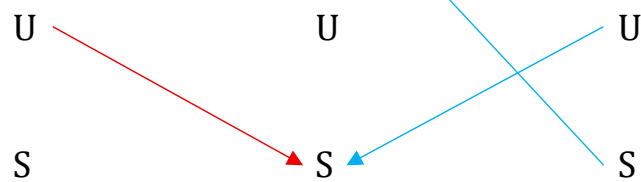


$$DS = [(C.C, U.S, S.U) \times (U.S, S.U, C.C)]$$

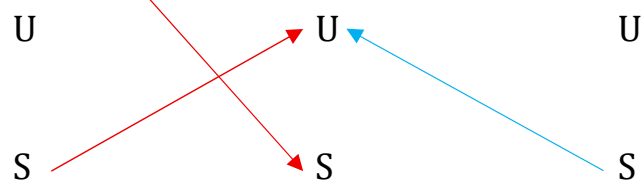
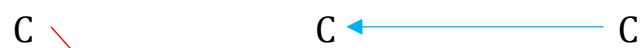


21. Systemrelation

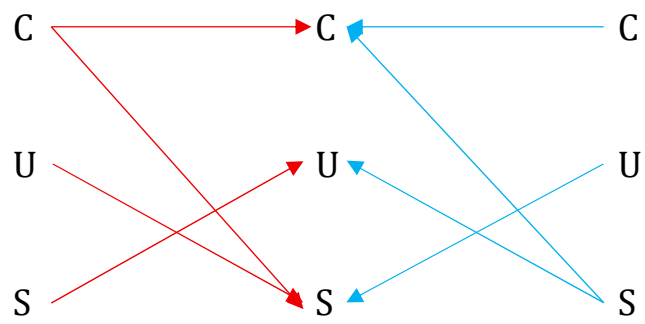
$$S^* = (C.C, U.S, S.C)$$



$$DS^* = (C.S, S.U, C.C)$$

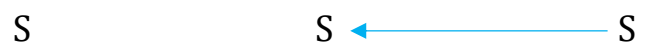


$$DS = [(C.C, U.S, S.C) \times (C.S, S.U, C.C)]$$

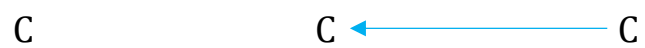


22. Systemrelation

$$S^* = (C.C, U.U, S.S)$$



$$DS^* = (S.S, U.U, C.C)$$



$$DS = [(C.C, U.U, S.S) \times (S.S, U.U, C.C)]$$

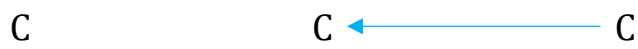


23. Systemrelation

$$S^* = (C.C, U.U, S.U)$$



$$DS^* = (U.S, U.U, C.C)$$



$$DS = [(C.C, U.U, S.U) \times (U.S, U.U, C.C)]$$

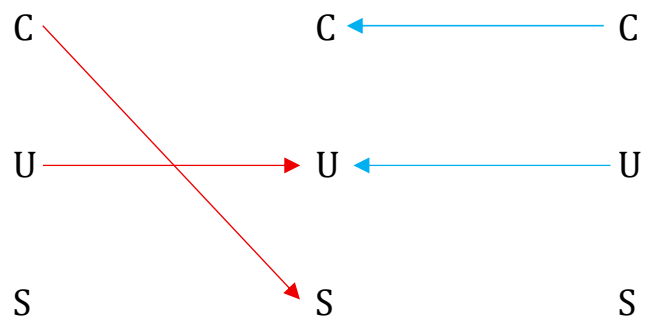


24. Systemrelation

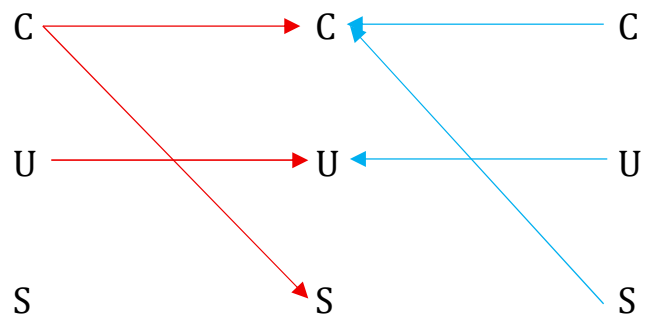
$$S^* = (C.C, U.U, S.C)$$



$$DS^* = (C.S, U.U, C.C)$$

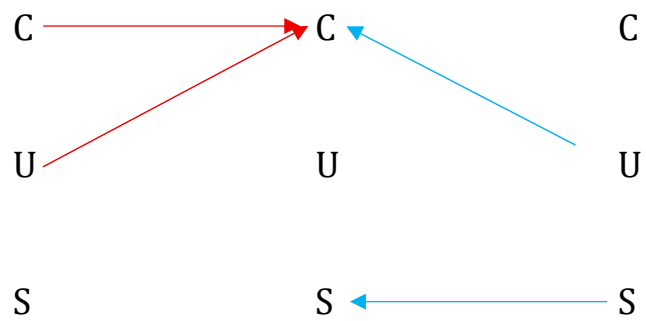


$$DS = [(C.C, U.U, S.C) \times (C.S, U.U, C.C)]$$

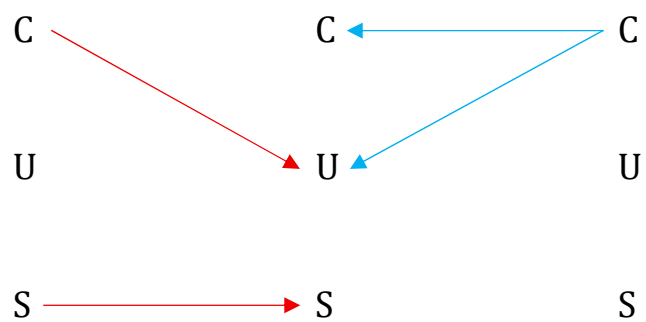


25. Systemrelation

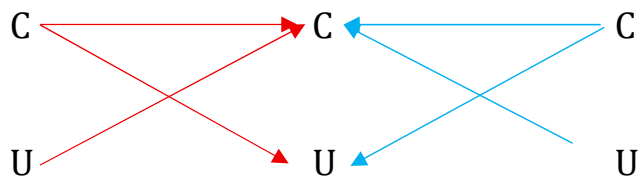
$$S^* = (C.C, U.C, S.S)$$



$$DS^* = (S.S, C.U, C.C)$$



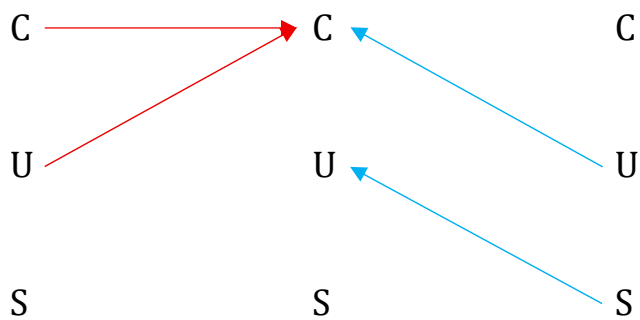
$$DS = [(C.C, U.C, S.S) \times (S.S, C.U, C.C)]$$



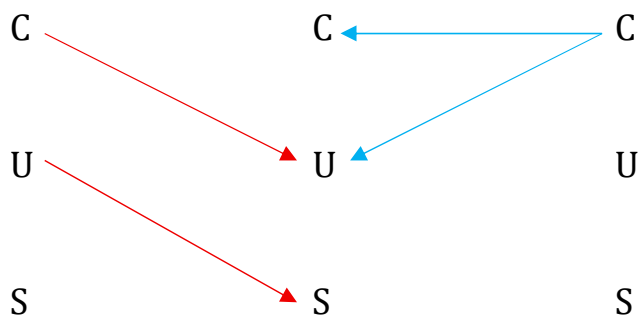
$$S \longrightarrow S \longleftarrow S$$

26. Systemrelation

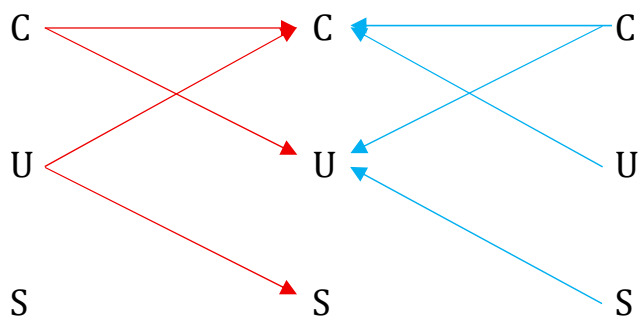
$$S^* = (C.C, U.C, S.U)$$



$$DS^* = (U.S, C.U, C.C)$$

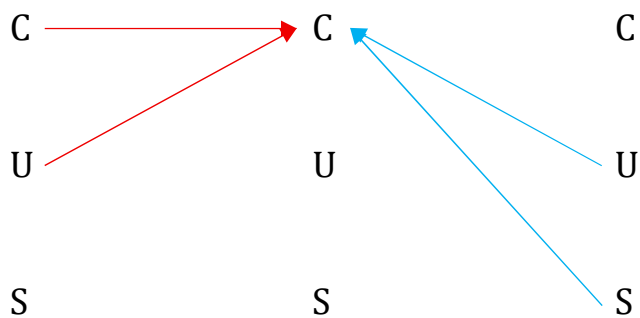


$$DS = [(C.C, U.C, S.U) \times (U.S, C.U, C.C)]$$

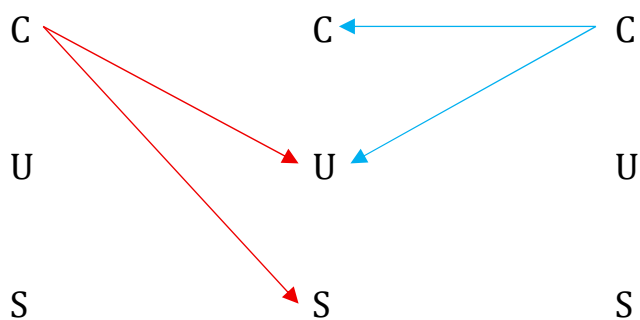


27. Systemrelation

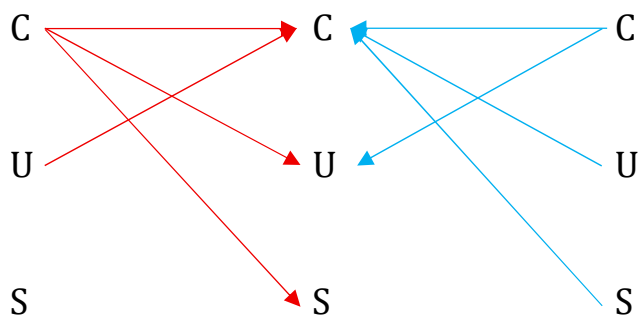
$$S^* = (C.C, U.C, S.C)$$



$$DS^* = (C.S, C.U, C.C)$$



$$DS = [(C.C, U.C, S.C) \times (C.S, C.U, C.C)]$$



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