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Dynamic Sets S1et and Some of their Applications in Physics

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Abstract

The article aims to create new constructive hierarchical mathematical objects for new technologies, particularly for a fundamentally new type of neural network with parallel computing and not the usual parallel computing through sequential computing.

Keywords: Dynamic Set S1et, S1et-Elements, Capacity S1et, S1et-Sets in Themselves, S1et-Elements in Themselves, Sit-Elements, Capacity.

S^1et-Elements

Here, the axiom of regularity (A8) is removed from the axioms of set theory, so we naturally obtain the possibility of using singularities in the form of S1et - sets in themselves, S1et - elements in themselves, which is exactly what we need for new mathematical models for describing complex processes, in particular in physics [1]. Instead of the axiom of regularity, we introduce the following axioms: Axiom R1. ∀B(St_{CoB}^{CoB} =B). Axiom R2. ∀B(ᴟB-^{1}).

Definition 1

The expression $_{D_j}^{C_1}S^1t_{B_1}^{A_k}$, j, k=1,2 (*)

where A_1, A_2 is contained into B_1, D_1, D_2 is expelled from C_1 and for sstructure (*) is performed the next operation- multiplication:

$$_{D_1}^{C_1}S^1t_{B_1}^{A_1} * {}_{D_2}^{C_1}S^1t_{B_1}^{A_2} = {}_{D_1\cup D_2}^{C_1}S^1t_{B_1}^{A_1\cup A_2} \quad (*_1),$$

then we shall call S1et- elements, in case A_1, A_2, B_1, D_1, D_2, C_1 are sets we shall call (*) the dynamical hierarchical set S1et. A_1, A_2, B_1, D_1, D_2, C_1 -are any, in particular, A_i, i=1, 2, may be actions in the right direction, actions with the right goal (action with the so-called target weights, any actions [2].

Definition 2

$_{\vec{D}}^{C}S^1t_{B}^{\vec{A}}$ is called an ordered S1et– element, if some or any elements from A, B, C, D may be by ordered elements.

where some or any elements may be by ordered elements.

S^1et– elements can be elements of a group by multiplication (*1).

S^1et-Capacity in Itself

Definition 3

The S^1et -capacity A in itself and from itself of the null type is the capacity containing itself as an element and expelling oneself out of oneself simultaneously:

$$_A^AS^1t_A^A. \text{ Denote } {S^1}_0^{et} f A.$$

Definition 4

The S^1et -capacity in itself A and from itself B of the first type is the capacity containing A itself as an element and expelling B oneself out of oneself simultaneously:

$$_B^BS^1t_A^A. \text{ Denote } {S^1}_1^{et} f_B^A.$$

Definition 5

The S^1et ^{1}-capacity of the second type is the capacity containing B into A and expelling B oneself out of oneself simultaneously:

$$_B^BS^1t_A^B. \text{ Denote } {S^1}_2^{et} f_B^A.$$

Definition 6

The S^1et ^{1}-capacity of the third type is the capacity containing B itself as an element and the displacement of B from A simultaneously: $_B^AS^1t_B^B$. Denote ${S^1}_3^{et} f_B^A$.

Definition 7

S[1]et -capacity A in itself of the fourth type is the capacity that contains the program that allows it to be generated and it to be degenerated simultaneously. Let's denote $S1^{et}_{4} fA.$

Definition 8

S[1]et -capacity A in itself of the fifth type contains itself in part and expelling oneself in part contains a program that allows it to be generated in part and to be degenerated in part, or both simultaneously. Let us denote $S1^{et}_{5} fA.$

Connection of S[1]et-Elements with S1et-Capacity in Itself

Consider a fifth type of self- capacity. For example, based on $S1^{et}_{5} fA.$

where $A=(a_1,a_2,...,a_n)$ it is possible to consider S[1]et -capacity in itself $S1^{et}_{5} fA.$

with m elements from A, at m<n, which is formed by the form:

$W_{m_n} = (m, (n,1))$ (1)

that is, only m elements are located in the structure $S1^{et}_{5} fA.$

S1et -capacity in itself of the fifth type can be formed for any other structure, not necessarily S1et, only through the obligatory reduction in the number of elements in the structure. In particular, using the form.

$w_{m1\cdots mn}=(m_1, (m_2, (...(m_n, 1)...)))$ **(2)**

Structures more complex than $S1^{et}_{5} fA.$ can be introduced.

Mathematics S[1]et Its

1. Similarly, for the simultaneous execution of various operators: ${}^{F_0 C}_{F_1 D}S^1t^{F_2 A}_{F_3 B}$

   where F_0,F_1,F_2,F_3 are operators.
2. Similarly, for the simultaneous execution of various operators:
3. $j{}^{B}_{D}S^1t^{A}_{B}=\left({}^{B}_{A}S^1t^{A}_{B}*, {}_{D-A}{}^{B}S^1t^{A}_{B}\right), \quad \mu({}^{B}_{D}S^1t^{A}_{B})=\left(\frac{\mu^{s}({}^{B}_{A}S^1t^{A}_{B}*)}{\mu(A)+2\mu(B)-\mu(D-A)}\right)$

   Operations are taking place.
4. ${}^{B}_{A}S^1t^{A}_{B} = \left({}^{B}_{A}S^1t^{B}_{B}*, {}^{B}_{A}S^1t^{A-B}_{B}\right), \quad \mu({}^{B}_{A}S^1t^{A}_{B})=\left(\frac{\mu^{ss}({}^{B}_{A}S^1t^{B}_{B}*)}{2\mu(B)-\mu(A)+\mu(A-B)}\right)$
5. ${}^{B}_{A}S^1t^{A}_{B} = \left({}^{B}_{B}S^1t^{A}_{B}*, {}_{A-B}{}^{B}S^1t^{A}_{B}\right), \quad \mu({}^{B}_{A}S^1t^{A}_{B})=\left(\frac{\mu^{ss}({}^{B}_{B}S^1t^{A}_{B}*)}{2\mu(B)+\mu(A)-\mu(A-B)}\right)$
6. ${}^{B}_{Q}S^1t^{A}_{B} = \left(S1^{et}_{0} fB*, {}_{Q-B}{}^{B}S^1t^{A-B}_{B}\right), \quad \mu({}^{B}_{A}S^1t^{A}_{B})=\left(\frac{\mu^{ss}(S1^{et}_{0} fB*)}{2\mu(B)+\mu(A-B)-\mu(Q-B)}\right)$
7. ${}^{B}_{Q}S^1t^{A}_{B} = \left({}^{B}_{Q}S^1t^{B}_{B}*, {}^{B}_{Q}S^1t^{A-B}_{B}\right), \quad \mu({}^{B}_{A}S^1t^{A}_{B})=\left(\frac{\mu^{ss}({}^{B}_{Q}S^1t^{B}_{B}*)}{2\mu(B)+\mu(A-B)-\mu(Q)}\right)$
8. ${}^{B}_{Q}S^1t^{A}_{B} = \left({}^{B}_{B}S^1t^{A}_{B}*, {}_{Q-B}{}^{B}S^1t^{A}_{B}\right), \quad \mu({}^{B}_{A}S_1t^{A}_{B})=\left(\frac{\mu^{ss}({}^{B}_{B}S^1t^{A}_{B}*)}{2\mu(B)+\mu(A)-\mu(Q-B)}\right)$
9. ${}^{B}_{Q}S^1t^{A}_{B} = \left(S1^{et}_{3} f^{B}_{R}*, {}_{Q-B}{}^{B}S^1t^{A-B}_{B}\right), \quad \mu({}^{B}_{A}S^1t^{A}_{B})=\left(\frac{\mu^{ss}(S1^{et}_{3} f^{B}_{R}*)}{\mu(B)+\mu(A-B)+\mu(R)-\mu(Q-B)}\right)$
10. ${}^{F_3}_{F_4}S^1t^{F_1}_{F_2}$

The concepts of S[1]et – force: ${}^{F_3}_{F_4}S^1t^{F_1}_{F_2}$ -the containment of force F_1 into force F_2 and the displacement of force F_4 from force F_3 simultaneously, S[1]et – energy: ${}^{E_3}_{E_4}S^1t^{E_1}_{E_2}$ -the containment of energy E_1 into energy E_2 and the displacement of energy E_4 from energy E_3 simultaneously.

Consider the concepts of S[1]et -capacity in itself of physical objects A, B. Similar to the concepts of publication: the S[1]et -capacity in itself of the first type is the capacity containing A itself as an element and expelling B oneself out of oneself simultaneously: ${}^{B}_{B}S^1t^{A}_{A}$, S[1]et -capacity in itself of the third type contains itself in part and expelling $S1^{et}_{5} fA$, $S1^{et}_{5} fB.$ contains a program that allows it to be generated and it to be degenerated simultaneously partially, or both:

$$S1^{et}_{0} fA\ ,\ S1^{et}_{2} f^{A}_{B}, S1^{et}_{3} f^{A}_{B}, S1^{et}_{4} fA\ .$$

By analogy, for

Also, you can consider these types of S[1]et -capacity in itself for other objects. $S1^{et}_{i} f$

For example: $S1^{et}_{i} f$ operator A, $S1^{et}_{i} f$ action B, made Q

i=0,1,2,3,4,5 and etc.

Remark. The concept of elements of physics S[1]et is introduced for energy space. The corresponding concept of elements of chemistry S1et is introduced accordingly.

Dynamical S[1]et-Elements

Definition 9

The process of the containment of A(t) into B(t) and the displacement of D(t) from C(t) simultaneously we shall call dynamical S[1]et – element. Let's denote ${}^{C(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}$

$${}^{C(t)}_{D(t)}S^1t(t)^{\overrightarrow{A(t)}}_{B(t)} \qquad \rightarrow \qquad \rightarrow$$

Definition 10

with ordered elements $A(t)$ and $D(t)$ is called

an ordered dynamical S1et – element

$${}^{C_1(t)}_{D_1(t)}S^1t(t)^{A_1(t)}_{B_1(t)} * {}^{C_1(t)}_{D_2(t)}S^1t(t)^{A_2(t)}_{B_1(t)} = {}^{C_1(t)}_{D_1(t)\cup D_2(t)}S^1t(t)^{A_1(t)\cup A_2(t)}_{B_1(t)} \quad (*_2)$$

It is allowed to multiply dynamical S¹et-elements:

where some or any elements may be by ordered elements.

Dynamical S¹et – elements can be elements of a group by multiplication (*2).

Dynamical S¹et -Capacity in Itself

Definition 11

The dynamical S¹et -capacity A(t) in itself and from itself of the null type ${}^{A(t)}_{A(t)}S^1t(t)^{A(t)}_{A(t)}$. Denote $S1^{et}_0(t)fA(t)$. element and expelling oneself out of oneself at time t simultaneously:

Definition 12

The dynamical S²et -capacity in itself A(t) and from itself B(t) of the first ${}^{B(t)}_{B(t)}S^1t^{A(t)}_{A(t)}$ in itself as an element ${}^{B(t)}_{B(t)}S^1t^{A(t)}_{A(t)}$. Denote $S1^{et}_1(t)f^{A(t)}_{B(t)}$. lf at time t simultaneously.

Definition 13

The dynamical S1et 1-capacity of the second type is the process of putt ${}^{B(t)}_{B(t)}S^1t(t)^{B(t)}_{A(t)}$. Denote $S1^{et}_2(t)f^{A(t)}_{B(t)}$ oneself out of oneself at time t simultaneously:

Definition 14

Dynamical S¹et¹-capacity of the third type is the process of a containr ${}^{A(t)}_{B(t)}S^1t^{B(t)}_{B(t)}$. Denote $S1^{et}_3(t)f^{A(t)}_{B(t)}$. he displacement of B(t) from A(t) at time to simultaneously.

Definition 15

Dynamical S¹et -capacity A(t) in itself of the fourth type is the process of a containment of the program that allows it to be generated and it to l$S1^{et}_4(t)fA(t)$. at time t simultaneously through the structure S1et. Let's denote

Definition 16

Dynamical S¹et -capacity A(t) in itself of the fifth type is the process of a containment of itself in part and expelling oneself in part or process of a containment of the program that allows it to be generate $S1^{et}_5(t)fA(t)$. be degenerated in part at time t through the structure S1et, or both simultaneously. Let us denote

Consider dynami $S1^{et}_5(t)fA(t)$. ty A(t) in itself of the fifth type:

For *A(t)=(a_1 (t),a_2* $S1^{et}_5(t)fA(t)$.is possible to consider the dynamical S1et -capacity A(t) in itself of the fifth type:

with m elements and ${}^{C(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}$, which is process to be formed by the for n elements from A(t) are located in the structure

The same for D(t)=(d_*1 (t),d_2 (t),…,d_n (t)*) in it. Dynamical S¹et -capacity in itself of the fifth type can be formed for any other structure, not necessarily S¹et, only through the obliga- $S1^{et}_5(t)fA(t)$. the number of elements in the structure. In particular, using the form (2). Structures more complex than

can be introduced.

Dynamical Mathematics S1et Itself

1 ${}^{F_0(t)C(t)}_{F_1(t)D(t)}S^1t(t)^{F_2(t)A(t)}_{F_3(t)B(t)}$, where $F_0(t), F_1(t), F_2(t), F_3(t)$ s operators.

2. $S1^{et}_j(t)fF(t)A(t)$, j=0,4,5, and $S1^{et}_k(t)f^{A(t)}_{B(t)}$, k=1.2,3, us operators.

where {F(t) ${}^{B(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}$=(${}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)} *$ ${}^{B(t)}_{D(t)-A(t)}S^1t(t)^{A(t)}_{B(t)}$), operators.

3. $\mu({}^{B(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}) = (\ ) = \left(\frac{\mu^s({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)} *)}{\mu(A(t)) + 2\mu(B(t)) - \mu(D(t) - A(t))}\right)$

$${}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)} = (= \left(\begin{matrix}{}^{B(t)}_{A(t)}S^1t(t)^{B(t)}_{B(t)} * \\ {}^{B(t)}_{A(t)}S^1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$$

4. $\mu({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}) = \left(\frac{\mu^{ss}({}^{B(t)}_{A(t)}S^1t(t)^{B(t)}_{B(t)} *)}{2\mu(B(t)) + \mu(A(t) - B(t)) - \mu(A(t))}\right)$

5. ${}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)} = \left(\begin{matrix}{}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)} \\ {}^{B(t)}_{A(t)-B(t)}S^1t(t)^{A(t)}_{B(t)}\end{matrix}\right),$

6. $\mu({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}) = \left(\frac{\mu^{ss}({}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)})}{2\mu(B(t)) + \mu(A(t)) - \mu(A(t) - B(t))}\right)$

7. ${}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)} = \left(\begin{matrix}S1^{et}_0 f(t)B(t) * \\ {}^{B(t)}_{Q(t)-B(t)}S_1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$

8. $\mu({}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}) = \left(\frac{\mu^{ss}(S1^{et}_0 f(t)B(t) *)}{2\mu(B(t)) + \mu(A(t) - B(t)) - \mu(Q(t) - B(t))}\right)$

$${}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)} = \left(\begin{matrix}{}^{B(t)}_{Q(t)}S^1t(t)^{B(t)}_{B(t)} * \\ {}^{B(t)}_{Q(t)}S_1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$$

9. $\mu({}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}) = \left(\frac{\mu^{ss}({}^{B(t)}_{Q(t)}S^1t(t)^{B(t)}_{B(t)} *)}{2\mu(B(t)) + \mu(A(t) - B(t)) - \mu(Q(t))}\right)$

10. $_{Q(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)} = \begin{pmatrix} _{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)} * \\ _{Q(t)-B(t)}^{B(t)}S_1t(t)_{B(t)}^{A(t)} \end{pmatrix},$

$\mu(_{Q(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)}) = \left(\frac{\mu^{ss}(_{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)} *)}{2\mu(B(t)) + \mu(A(t)) - \mu(Q(t) - (B(t)))}\right)$

11. $_{Q(t)}^{R(t)}S^1t(t)_{B(t)}^{A(t)} = \begin{pmatrix} S^{1et}_{3}f(t)_{R(t)}^{B(t)} * \\ _{Q(t)-B(t)}^{R(t)}S^1t(t)_{B(t)}^{A(t)-B(t)} \end{pmatrix},$

$\mu(_{Q(t)}^{R(t)}S^1t(t)_{B(t)}^{A(t)}) = \left(\frac{\mu^{ss}(S^{1et}_{3}f(t)_{R(t)}^{B(t)} *)}{\mu(B(t)) + \mu(A(t) - B(t)) + \mu(R(t)) - \mu(Q(t) - B(t))}\right)$

$_{F_4(t)}^{F_3(t)}S^1t(t)_{F_2(t)}^{F_1(t)}$

The concepts of dynamical S[1]et – force:

the containment of force $F_1(t)$ into force $F_2(t)$ and the displacement of force $F_4(t)$ from force $F_3(t)$ at time to simultaneously, $_{E_4(t)}^{E_3(t)}S^1t_{E_2(t)}^{E_1(t)}$ dynamical S[1]et – energy:

the containment of energy $E_1(t)$ into energy $E_2(t)$ and the displacement of energy $E_4(t)$ from energy $E_3(t)$ at time to simultaneously.

Consider the concepts of dynamical S[1]et -capacity in itself of physical objects A(t), B(t). Similar to the concepts of publication: the dynamical S1et -capacity in itself of the null type is the dyn $S^{1et}_{0}(t)fA(t) = {}_{A(t)}^{A(t)}S^1t(t)_{A(t)}^{A(t)}$, as an element and expelling oneself out of oneself at time t simultaneously:

dynamical S[1]et -capacity in itself of the fifth type contains itself in part and e $S^{1et}_{k}(t)f_{B(t)}^{A(t)}$ $S^{1et}_{k}(t)f_{B(t)}^{A(t)}$, or contains a program that allows it to b degenerated at time t simultaneously partially, or both:

$S^{1et}_{k}(t)f_{B(t)}^{A(t)}$ $S^{1et}_{k}(t)f_{B(t)}^{A(t)}$, $S^{1et}_{3}(t)f_{B(t)}^{A(t)}, S^{1et}_{4}(t)fA(t)$.

By

$S^{1et}_{i}(t)f$

Also, you can consi $S^{1et}_{i}(t)f$ types of dynamical S1et -capacity in itself for other objects. For example:

B(t), $S^{1et}_{i}(t)f$

(t)f operator A(t),

(t)f action

made Q(t) i=0, 1, 2 ,3, 4, 5 and etc.

Remark. The concept of elements of physics dynamical S[1]et is introduced for energy space. The corresponding concept of elements of chemistry dynamical S1et is introduced accordingly.

S[1]et-Elements for Continual Sets

Here we consider some continual S[1]et -elements and continual self-capacity in itself as an element.

Definition 17

$_{D}^{C}S^1t_{B}^{A}$.

The containment of A into B and the displacement of D from C simultaneously, where A, B, D, C- sets of continual elements w $_{\vec{D}}^{C}S^1t_{B}^{\vec{A}}$ call continual S[1]et – element. Let's denote

Definition 18

with ordered elements A and D, where A, B, D, C- sets of continual ... element.

$_{D_1}^{C_1}S^1t_{B_1}^{A_1} * {}_{D_2}^{C_1}S^1t_{B_1}^{A_2} = {}_{D_1 \cup D_2}^{C_1}S^1t_{B_1}^{A_1 \cup A_2}$ (*3),

It is allowed to multiply continual S1et – elements:

where some or any elements may be by ordered elements.

Continual S1et – elements can be elements of a group by multiplication (*3).

S[1]et -Capacity in Itself for Continual Sets

Definition 19

The continual S1et -c $_{A}^{A}S^1t_{A}^{A}$. Denote $S^{1et}_{0}fA$. and from itself of the null type is the capacity containing itself as an element and expelling oneself out of oneself simultaneously, where A - set of continual elements:

Definition 20

The ordered continual S[1]et -capaci $_{\vec{A}}^{\vec{A}}S^1t_{\vec{A}}^{\vec{A}}$. Denote $S^{1et}_{0}f\vec{A}$ d from itself of the null type is the capacity containing itself as an element and expelling oneself out of oneself simultaneously, where -A ordered set of continual elements:

Definition 21

The continual S1et -capacity in $_{B}^{B}S^1t_{A}^{A}$. Denote $S^{1et}_{1}f_{B}^{A}$. n itself B of the first type is the capacity containing A itself as an element and expelling B oneself out of oneself simultaneously, where A, B- sets of continual elements:

Definition 22

The continual S1et $_{B}^{B}S^1t_{A}^{B}$.. Denote $S^{1et}_{2}f_{B}^{A}$. econd type is the capacity containing B into A and expelling B oneself out of oneself simultaneously, where A, B- sets of continual elements:

Definition 23

The continual S1e $_{B}^{A}S^1t_{B}^{B}$. Denote $S^{1et}_{3}f_{B}^{A}$. third type is the capacity containing B itself as an element and the displacement of B from A simultaneously, where A, B- sets of continual elements:

Definition 24

The continual S1et -capacity A in $S^{1et}_{4}fA$. of the fourth type is the capacity that contains the program that allows it to be generated and it to be degenerated simultaneously, where A- set of continual elements. Let's denote

Definition 25

The continual S1et -capacity A in itself of the fifth type contains itself in part and expellin $S^{1et}_{5}fA$. elf in part or contains a program that allows it to be generated in part and it to be degenerated in part simultaneously, or both, where A- set of continual elements. Let us denote

Definition 26

The ordered continual S1et -capacity in itself $\vec{A}$ and from itself B of the first type is $^{B}_{B}S^1t^{\vec{A}}_{\vec{A}}$. Denote $S^{1}{}^{et}_{1}f^{\vec{A}}_{B}$. ng A itself as an element and expelling B oneself out of oneself simultaneously, where A - ordered set of continual elements, B- set of continual elements:

Definition 27

The ordered continual S1et 1-capacity in itself A and from itself B of the first type $^{\vec{B}}_{\vec{B}}S^1t^{A}_{\vec{A}}$. Denote $S^{1}{}^{et}_{1}f^{A}_{\vec{B}}$. ntaining A itself as an element and expelling B oneself out of oneself simultaneously, where B-ordered set of continual elements, A- set of continual elements:

Definition 28

The ordered continual S[1]et 2-capacity in itself $^{\vec{B}}_{\vec{B}}S^1t^{\vec{A}}_{\vec{A}}$. Denote $S^{1}{}^{et}_{1}f^{\vec{A}}_{\vec{B}}$. self B of the first type is the capacity containing A itself as an element and expelling B oneself out of oneself simultaneously, where A,B-ordered sets of continual elements:

Definition 29

The continual S[1]et[1]-capacity of the second type is the capacity containing B into $\vec{A}$ and expelling B oneself out of oneself simultaneously, where A- ordered set of continual elements, B- set of continual elements:

Definition 30

The continual S1et 2-capac $^{\vec{B}}_{\vec{B}}S^1t^{\vec{B}}_{\vec{A}}$. Denote $S^{1}{}^{et}_{2}f^{A}_{\vec{B}}$. nd type is the capacity containing B into A and expelling B oneself out of oneself simultaneously, where B-ordered set of continual elements, A- set of continual elements:

Definition 31

The continual S1et 3-capacity of the second type is the capacity containing B into A an $^{\vec{B}}_{\vec{B}}S^1t^{\vec{B}}_{\vec{A}}$. Denote $S^{1}{}^{et}_{2}f^{\vec{A}}_{\vec{B}}$. eself out of oneself simultaneously, where A, B -ordered sets of continual elements:

Definition 32

The continual S1et 1-capacity of the third type is the capacity containing B itself as an element and the displacement of B from A simultaneousl $^{\vec{A}}_{\vec{B}}S^1t^{B}_{\vec{B}}$. Denote $S^{1}{}^{et}_{3}f^{\vec{A}}_{B}$. d set of continual elements, B- set of continual elements:

Definition 33

The continual S1et 2-capacity of the third type is the capacity containing B itself as an element and the displacement of B from A simultaneousl $^{A}_{\vec{B}}S^1t^{\vec{B}}_{\vec{B}}$. Denote $S^{1}{}^{et}_{3}f^{A}_{\vec{B}}$. set of continual elements, A- set of continual elements:

Definition 34

The continual S1et 3-capacity of the third type is the capacity containing B itsel $^{\vec{A}}_{\vec{B}}S^1t^{\vec{B}}_{\vec{B}}$. Denote $S^{1}{}^{et}_{3}f^{\vec{A}}_{\vec{B}}$. displacement of B from A simultane ed sets of continual elements:

Definition 35

The ordered continual S[1]et -capacity A in $S^{1}{}^{et}_{4}f\vec{A}$. f the fourth type is the capacity that contains the program that allows it to be generated and it to be degenerated simultaneously, where A - set of continual elements. Let's denote:

Definition 36

The ordered continual S1et -capacity A in itself of the fifth type contains itself in part and expelling oneself in part or contains a program that allows it to be generated in part and it to be degenerated in part $S^{1}{}^{et}_{5}f\vec{A}$. ously, or both simultaneously, where $\vec{A}$ - ordered set of continual elements. Let us denote

$S^{2}{}^{et}_{0}f\overline{\uparrow\text{I}\downarrow^{1}_{-1}}$, $S^{2}{}^{et}_{1}f^{\uparrow\text{I}\downarrow^{1}_{-1}}_{B\downarrow\text{I}\uparrow^{\infty}_{\infty}}$, $S^{2}{}^{et}_{2}f^{\overline{A\downarrow\text{I}\uparrow^{1}_{-1}}}_{B}$, $S^{2}{}^{et}_{3}f^{A\uparrow\text{I}\downarrow^{\infty}_{\infty}}_{B}$, $S^{2}{}^{et}_{4}f\overline{\uparrow\text{I}\downarrow^{a}_{d}}$ etc.

Also we consider next elements

etc.

Connection of S[1]et-Elements with Self-capacity in Itself as an Element

Consider a fifth type of continual self- capacity in itself as an element.

$S^{1}{}^{et}_{5}fA$,

For example,

$S^{1}{}^{et}_{5}fA$,

$S^{1}{}^{et}_{5}fA$, ere A=(a_1,a_2,...,a_n), i.e. a_i - continual elements, i=1, 2, …, n. It's possible to consider the continual self- capacity in itself as a $S^{1}{}^{et}_{5}fA$, t with m continual elements from A, at m<n, s formed by the form (1) , that is, only m continual elements are located in the structure

Ccontinual self-capacity in itself as an element of the fifth type can be formed for any other structure, not necessarily S1et, only through $S^{1}{}^{et}_{5}fA$, atory reduction in the number $S^{1}{}^{et}_{5}fA$, ual elements in the structure. In particular, using the form (2).

The same for Structures more complex than can be introduced.

$^{C}_{DU}S^1t^{AU}_{BU}$,

Mathematics Itself for Continual S[1]et -Elements

1. Simultaneous addition of a sets A, B, C, D with continual elements is realized by , where A, B, C, D may be o $S^{1}{}^{et}_{j}fA$, sets of continual elements. $S^{1}{}^{et}_{i}f^{A}_{B}$,
2. Let's introduce operator to transform capacity to self-consistency in itself as an element: Q S[1]et (A) transforms A to i=0,5, Q S[1]et (A,B) transforms A to where
3. $^{B}_{D}S^1t^{A}_{B}=\left(\begin{matrix}^{B}_{A}S^1t^{A}_{B}\,*\\ _{D-A}^{\;B}S^1t^{A}_{B}\end{matrix}\right)$, $\mu(^{B}_{D}S^1t^{A}_{B})=\left(\begin{matrix}\mu^{s}(^{B}_{A}S^1t^{A}_{B}\,*)\\ \mu(A)+2\mu(B)-\mu(D-A)\end{matrix}\right)$
4. $^{B}_{A}S^1t^{A}_{B}=\left(\begin{matrix}^{B}_{A}S^1t^{B}_{B}\,*\\ ^{B}_{A}S^1t^{A-B}_{B}\end{matrix}\right)$, $\mu(^{B}_{A}S^1t^{A}_{B})=\left(\begin{matrix}\mu^{ss}(^{B}_{A}S^1t^{B}_{B}\,*)\\ 2\mu(B)-\mu(A)+\mu(A-B)\end{matrix}\right)$
5. $^{B}_{A}S^1t^{A}_{B}=\left(\begin{matrix}^{B}_{B}S^1t^{A}_{B}\,*\\ _{A-B}^{\;B}S^1t^{A}_{B}\end{matrix}\right)$, $\mu(^{B}_{A}S^1t^{A}_{B})=\left(\begin{matrix}\mu^{ss}(^{B}_{B}S^1t^{A}_{B}\,*)\\ 2\mu(B)+\mu(A)-\mu(A-B)\end{matrix}\right)$
6. $^{B}_{Q}S^1t^{A}_{B}=\left(\begin{matrix}S^{1}{}^{et}_{0}fB\,*\\ _{Q-B}^{\;B}S^1t^{A-B}_{B}\end{matrix}\right)$, $\mu(^{B}_{A}S^1t^{A}_{B})=\left(\begin{matrix}\mu^{ss}(S^{1}{}^{et}_{0}fB\,*)\\ 2\mu(B)+\mu(A-B)-\mu(Q-B)\end{matrix}\right)$

8. ${}^{B}_{Q}S^1t^A_B = \left(\frac{{}^{B}_{Q}S^1t^B_B *}{{}^{B}_{Q}S^1t^{A-B}_B}\right)$, $\mu({}^{B}_{A}S^1t^A_B)=\left(\frac{\mu^{ss}({}^{B}_{Q}S^1t^B_B *)}{2\mu(B)+\mu(A-B)-\mu(Q)}\right)$

9. ${}^{B}_{Q}S^1t^A_B = \left(\frac{{}^{B}_{B}S^1t^A_B *}{{}^{B}_{Q-B}S^1t^A_B}\right)$, $\mu({}^{B}_{A}S_1t^A_B)=\left(\frac{\mu^{ss}({}^{B}_{B}S^1t^A_B *)}{2\mu(B)+\mu(A)-\mu(Q-B)}\right)$

10. ${}^{R}_{Q}S^1t^A_B = \left(\frac{S1^{et}_3 f^B_R *}{{}^{R}_{Q-B}S^1t^{A-B}_B}\right)$, $\mu({}^{B}_{A}S^1t^A_B)=\left(\frac{\mu^{ss}(S1^{et}_3 f^B_R *)}{\mu(B)+\mu(A-B)+\mu(R)-\mu(Q-B)}\right)$

Dynamical Continual S[1]et-Elements

Also, may be considered dynamical continual S[1]et elements, where may be transfer these definitions, operations using on them by analogy [3].

Definition 37

The process of the containment of A(t) into B(t) and ${}^{C(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}$ placement of D(t) from C(t) at time to simultaneously, where some or any elements may be by ordered elements, we shall call dynamic ${}^{C(t)}_{D(t)}S^1t(t)^{\overrightarrow{A(t)}}_{B(t)}$ ual S2et – element. Let's denote

Definition 38

The process is called an ordered dynamical continual S[2]et – element, if some or any elements from A(t), B(t), C(t), D(t) ...

$${}^{C_1(t)}_{D_1(t)}S^1t(t)^{A_1(t)}_{B_1(t)} * {}^{C_1(t)}_{D_2(t)}S^1t(t)^{A_2(t)}_{B_1(t)} = {}^{C_1(t)}_{D_1(t)\cup D_2(t)}S^1t(t)^{A_1(t)\cup A_2(t)}_{B_1(t)} \quad (*_4),$$

It is allowed to multiply dynamical continual S1et – elements:

where some or any elements may be by ordered dynamical continual elements.

Dynamical continual S1et – elements can be elements of a group by multiplication (*4).

Dynamical Continual Containmint of Oneself

Definition 39

The dynamical continual S1et -capacity A(t) in itself and from itself of the ${}^{A(t)}_{A(t)}S^1t(t)^{A(t)}_{A(t)}$. Denote $S1^{et}_0(t)fA(t)$. ...nt itself as an element an... ...ime to simultaneously, where A(t) – S1et of dynamical continual elements:

Definition 40

The ordered dynamical continual S1et -capacity A(t) in itself and from itself of the null type is the capacity containing itself as an element a ${}^{\overrightarrow{A(t)}}_{\overrightarrow{A(t)}}S^1t(t)^{\overrightarrow{A(t)}}_{\overrightarrow{A(t)}}$. Denote $S1^{et}_0(t)f\vec{A}(t)$ ...self at time t simultaneously, w... ...mical continual elements:

Definition 41

The dynamical continual S1et -capacity in itself A(t) and from itself B(t) of the first type is the process of a containment of A(t) itself as an element and expelling B(t) oneself out of oneself at tim ${}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{A(t)}$. Denote $S1^{et}_1(t)f^{A(t)}_{B(t)}$. ...)- sets of dynamical continual elements.

Definition 42

The dynamical continual S1et 1-capacity of the second type is the process of pu... B(t) into A(t) and expelling B(t) oneself out of oneself at ${}^{B(t)}_{B(t)}S^1t(t)^{B(t)}_{A(t)}$. Denote $S1^{et}_2(t)f^{A(t)}_{B(t)}$), B(t)- sets of dynamical continual elements:

Definition 43

The dynamical continual S1et 1-capacity of the third type is the process of a cont ${}^{A(t)}_{B(t)}S^1t(t)^{B(t)}_{B(t)}$. Denote $S1^{et}_3(t)f^{A(t)}_{B(t)}$ lement and the displacement of B... ...neously, where A, B- sets of dynamical continual elements:

Definition 44

The dynamical continual S1et -capacity A(t) in itself of the fourth type is the proc... $S1^{et}_4(t)fA(t)$. ...ainment of the program that allows it to be gener... ...o be degenerated at time t simultaneously, where A(t)- set of dynamical continual elements. Let's denote

Definition 45

The dynamical continual S1et -capacity A(t) in itself of the fifth type is the process of a containment of itself in part and expelling oneself in part or contains a pro $S1^{et}_5(t)fA(t)$. ...ws it to be generated and it to be degenerated at time t through the structure S1et, or both simultaneously, where A(t)- set of dynamical continual elements. Let us denote

Definition 46

The ordered dynamical continual S1et -capacity in itself A(t) and from itself B(t) of the first type is the process of a containment of A(${}^{B(t)}_{B(t)}S^1t(t)^{\overrightarrow{A(t)}}_{\overrightarrow{A(t)}}$. Denote $S1^{et}_1(t)f^{\overrightarrow{A(t)}}_{B(t)}$ ...d expelling B(t) oneself out of oneself ..., where A(t)- ordered set of dynamical continual elements, B(t)- set of dynamical continual elements:

Definition 47

The ordered dynamical continual S1et 1-capacity in itself $\overrightarrow{A(t)}$ and from itself B(t) of the first type is the process of a containment of A(${}^{\overrightarrow{B(t)}}_{\overrightarrow{B(t)}}S^1t(t)^{A(t)}_{A(t)}$. Denote $S1^{et}_1(t)f^{A(t)}_{\overrightarrow{B(t)}}$ ... and expelling B(t) oneself out of oneself a... ...usly, where B(t) -ordered set of dynamical continual elements, A- set of dynamical continual elements:

Definition 48

The ordered dynamical continual S[1]et [2]-capacity in itself A(t) and from itself B(t) of the first type is the process of a containment of A(t) it ${}^{\overrightarrow{B(t)}}_{\overrightarrow{B(t)}}S^1t(t)^{\overrightarrow{A(t)}}_{\overrightarrow{A(t)}}$. Denote $S1^{et}_1(t)f^{\overrightarrow{A(t)}}_{\overrightarrow{B(t)}}$ ...ng B(t) oneself out of oneself at ti... ..., where A(t), B(t)-ordered sets of dynamical continual elements:

Definition 49

The dynamical continual S[1]et [1]-capacity of the second type is the process of a containment B(t) into A(t) and expelling

B(t) oneself out of oneself at time to simultaneously, where A (t)- ordered set $ {}^{B(t)}_{B(t)}S^1t(t)^{B(t)}_{A(t)}$. Denote $S^{1et}_{2}(t)f^{A(t)}_{B(t)}$ ments, B(t) - set of dynamical continual elements:

Definition 50

The dynamical continual S1et 2-capacity of the second type is the process of a containment B(t) into A(t) and expelling B(t) oneself out of ... taneously, where B(t) -ordered set o $ {}^{B(t)}_{B(t)}S^1t^{B(t)}_{A(t)}$. Denote $S^{1et}_{2}(t)f^{A(t)}_{B(t)}$ nents, A(t) - set of dynamical continual elements:

Definition 51

The dynamical continual S^{1}et^3-capacity of the second type is the proce ... and expelling B(t) onesel $ {}^{B(t)}_{B(t)}S^1t(t)^{B(t)}_{A(t)}$. Denote $S^{1et}_{2}(t)f^{A(t)}_{B(t)}$. ieously, where A(t),B(t)-or ... ements:

Definition 52

The dynamical continual S^{1}et ^{1}-capacity of the third type is the process of a containment of B(t) itself as an element and the displace ... $ {}^{A(t)}_{B(t)}S^1t(t)^{B(t)}_{B(t)}$. Denote $S^{1et}_{3}(t)f^{A(t)}_{B(t)}$ ıultaneously, where A(t) ... lements, B(t) - set of dynamical continual elements.

Definition 53

The dynamical continual S1et 2-capacity of the third type is the process of a containment of B(t) itself as an element and the displacement of B(t) from A(t) at time to simultaneously, where B(t) ordered set of dynamical continual elements, A(t) - set of dyn $ {}^{A(t)}_{B(t)}S^1t(t)^{B(t)}_{B(t)}$. Denote $S^{1et}_{3}(t)f^{A(t)}_{B(t)}$.

Definition 54

The dynamical continual S1et 3-capacity of the third type is the proces ... n element and the displac $ {}^{A(t)}_{B(t)}S^1t(t)^{B(t)}_{B(t)}$. Denote $S^{1et}_{3}(t)f^{A(t)}_{B(t)}$ simultaneously where A(t) ... inual elements:

Definition 55

The ordered dynamical continual S1et -capacity $\overrightarrow{A(t)}$ in itself of the fourth type is tl $S^{1et}_{4}(t)f\overrightarrow{A(t)}$ ıat contains the program that allows it to be genera... o be degenerated at time to simultaneously, where A(t)- S1et of dynamical continual elements. Let's denote

Definition 56

The ordered dynamical continual S1et -capacity A(t) in itself of the fifth type is the process of a containment of itself in part and expelling oneself in part or contains a program that allows it to be generated in $S^{1et}_{5}(t)f\overrightarrow{A(t)}$ be degenerated in part at time t, or both simultane... A(t) - ordered S1et of dynamical continual elements. Let us denote

$$S^{1et}_{0}(t)f\overrightarrow{\uparrow I\downarrow^{1}_{-1}},\ S^{1et}_{1}(t)f^{\uparrow I\downarrow^{1}_{-1}}_{B(t)\downarrow I\uparrow^{\infty}_{-\infty}},\ S^{1et}_{2}(t)f^{\overrightarrow{A(t)\downarrow I\uparrow^{1}_{-1}}}_{B(t)},$$

Also we consider some elements:

$$S^{1et}_{3}(t)f^{A(t)\uparrow I\downarrow^{\infty}_{-\infty}}_{B(t)},\ S^{1et}_{4}(t)f\overrightarrow{\uparrow I\downarrow^{a(t)}_{d(t)}}$$

[3] and etc.

Dynamical Conti $ {}^{F_0(t)C(t)}_{F_1(t)D(t)}S^1t(t)^{F_2(t)A(t)}_{F_3(t)B(t)}$ tself

1. Similarly, for the simultaneous execution of various operators:

$S^{1et}_{j}(t)fF(t)A(t)$ rators. $S^{1et}_{k}(t)f^{A(t)}_{B(t)}$

2. Simil $(F_0(t),F_1(t),F_2(t),F_3(t))$ eous execution of various operators:

3. $ {}^{B(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}=\left(\begin{matrix} {}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}* \\ {}^{B(t)}_{D(t)-A(t)}S^1t(t)^{A(t)}_{B(t)}\end{matrix}\right),\mu\left({}^{B(t)}_{D(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^s\left({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}*\right)}{\mu(A(t))+2\mu(B(t))-\mu(D(t)-A(t))}\right)$

4. $ {}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}=(=\left(\begin{matrix} {}^{B(t)}_{A(t)}S^1t(t)^{B(t)}_{B(t)}* \\ {}^{B(t)}_{A(t)}S^1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$

5. $\mu\left({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^{ss}\left({}^{B(t)}_{A(t)}S^1t(t)^{B(t)}_{B(t)}*\right)}{2\mu(B(t))+\mu(A(t)-B(t))-\mu(A(t))}\right)$

6. $ {}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}=\left(\begin{matrix} {}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)} \\ {}^{B(t)}_{A(t)-B(t)}S^1t(t)^{A(t)}_{B(t)}\end{matrix}\right),$

7. $\mu\left({}^{B(t)}_{A(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^{ss}\left({}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)}\right)}{2\mu(B(t))+\mu(A(t))-\mu(A(t)-B(t))}\right)$

8. $ {}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}=\left(\begin{matrix} S^{1et}_{0}f(t)B(t)* \\ {}^{B(t)}_{Q(t)-B(t)}S_1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$

$\mu\left({}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^{ss}\left(S^{1et}_{0}f(t)B(t)*\right)}{2\mu(B(t))+\mu(A(t)-B(t))-\mu(Q(t)-B(t))}\right)$

9. $ {}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}=\left(\begin{matrix} {}^{B(t)}_{Q(t)}S^1t(t)^{B(t)}_{B(t)}* \\ {}^{B(t)}_{Q(t)}S_1t(t)^{A(t)-B(t)}_{B(t)}\end{matrix}\right),$

$\mu\left({}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^{ss}\left({}^{B(t)}_{Q(t)}S^1t(t)^{B(t)}_{B(t)}*\right)}{2\mu(B(t))+\mu(A(t)-B(t))-\mu(Q(t))}\right)$

10. $ {}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}=\left(\begin{matrix} {}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)}* \\ {}^{B(t)}_{Q(t)-B(t)}S_1t(t)^{A(t)}_{B(t)}\end{matrix}\right),$

$\mu\left({}^{B(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}\right)=\left(\frac{\mu^{ss}\left({}^{B(t)}_{B(t)}S^1t(t)^{A(t)}_{B(t)}*\right)}{2\mu(B(t))+\mu(A(t))-\mu(Q(t)-(B(t)))}\right)$

11. $\,^{R(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)} = \left(\begin{matrix} S1^{et}_3 f(t)^{B(t)}_{R(t)} * \\ \,^{R(t)}_{Q(t)-B(t)}S^1t(t)^{A(t)-B(t)}_{B(t)} \end{matrix} \right),$

$$\mu(\,^{R(t)}_{Q(t)}S^1t(t)^{A(t)}_{B(t)}) = \left(\frac{\mu^{ss}(S1^{et}_3 f(t)^{B(t)}_{R(t)} *)}{\mu(B(t)) + \mu(A(t)-B(t)) + \mu(R(t)) - \mu(Q(t)-B(t))} \right)$$

Connection of I $S1^{et}_5(t)f\overrightarrow{A^n(t)}$, Continual S²et-Elements with Dynamical Containmint of Oneself

Consider a fifth type of dynamical $S1^{et}_5(t)f\overrightarrow{A^m(t)}$ ntainment of oneself. For example, where $\{A^n(t)\}=(a_1(t),a_2(t),...,a_n(t))$, i.e. n - continual elements, it is possible to consider the dynamical containment of oneself $S1^{et}_5(t)f\overrightarrow{A^n(t)}$, ith m continual elements from $\{A^n(t)\}$, at m<n, which is process to be formed by the form (1) [1] , that is, only m continual elements from {A^n (t)} are located in the structure Dynamical continual containments of oneself of the fifth type can be formed for any other $S1^{et}_5(t)f\overrightarrow{A^n(t)}$, ot necessarily S1et, only through the obligatory reduction in the number of continal elements in the structure. In particular, using the form (2) [2]. Structures more complex than can be introduced.

Dynamical Continual S¹et-Elements with Target Weights

Also, may be considered dynamical continual S1et -elements with target weights, where may be transfer these definitions, operations using on them by analogy [3].

Definition 57

The process of the containment of A(t) with target weights $\{g_1(t)\}$ into B(t) and the displacement of D(t) with target weights $\{g_2(t)\}$ from C(t) $\,^{C(t)}_{D(t)\{g_2(t)\}}S^1t(t)^{A(t)\{g_1(t)\}}_{B(t)}$ ısly, where some or any elements may ntinual elements, we shall call dynamical continual S2et – element with target weigh $\,^{C(t)}_{D(t)\{g_2(t)\}}S^1t(t)^{A(t)\{g_1(t)\}}_{B(t)}$

Definition 58

The process is called an ordered dynamical continual S1et – element with target weights $\{g_1(t)\}$ or $\{g_2(t)\}$ at time t, or both simultaneously, if some or any elements from A, B, C, D may be by ordered dynamical continual elements with target weights.

I $\,^{C_1(t)}_{D_1(t)\{g_2(t)\}}S^1t(t)^{A_1(t)\{g_1(t)\}}_{B_1(t)} * \,^{C_1(t)}_{D_2(t)\{g_2(t)\}}S^1t(t)^{A_2(t)\{g_1(t)\}}_{B_1(t)} =$ ements w $\,^{C_1(t)}_{(D_1(t)\cup D_2(t))\{g_2(t)\}}S^1t(t)^{(A_1(t)\cup A_2(t))\{g_1(t)\}}_{B_1(t)} (*_5),$

where some or any elements may be by ordered dynamical continual elements with target weights or dynamical continual elements with target weights, or both.

Dynamical continual S¹et – elements with target weights can be elements of a group by multiplication (*5).

Dynamical Continual Containmint of Oneself with Target Weights

Definition 59

The dynamical continual S¹et -capacity A(t) in itself and from itself with target weights {g(t)} of the null type is the process of a containment itself as an element with target weights {g(t)} and expelling oneself out c $S1^{et}_0(t)fA(t)\{g(t)\}$ weights{g(t)} at time to simultaneously, some dynamical continual elements or some ordered dynamical continual elements, or both. Denote

Definition 60

The dynamical continual S2et -capacity A(t) in itself with target weights {g(t)} of the fourth type is the process that contains the program that allows it to be generated with target weights {g(t)} and it to be deg Denote $S1^{et}_4(t)fA(t)\{g(t)\}$. s {g(t)} at time t simultaneously, dynamical continual elements or some ordered dynamical continual elements, or both. Denote

Definition 61

The ordered dynamical continual S1et -capacity A(t) in itself of the fifth type with target weights {g(t)} is the process of a containment of itself in part with target weights {g(t)} and expelling oneself in part with target weights {g(t)} or contains a program that allows it to be generated in part with target weights {g(t)} and it to be degenerated in part with target weights {g(t)} at t $S1^{et}_5(t)fA(t)\{g(t)\}$, or both simultaneously, where A(t) - Set of some dynamical continual elements or some ordered dynamical continual elements, or both . Denote

Definition 62

The dynamical continual S¹et -capacity in itself with target weights $\{g_1(t)\}$ and from itself B(t) with target weights $\{g_2(t)\}$ of the first type is the process of a containment of A(t) itself as an element A(t) and expelling B(t) oneself with target weights $\{g_2(t)\}$ out of oneself at time t simultaneously, where some $\,^{B(t)}_{t)\{g_2(t)\}}S^1t(t)^{A(t)\{g_1(t)\}}_{A(t)}$. Denote $S1^{et}_1(t)f^{A(t)\{g_1(t)\}}_{B(t)\{g_2(t)\}}$. elements with target weights, or both.

Definition 63

The dynamical continual S1et 1-capacity with target weights of the second type is the process of putting B(t) with target weights {g1(t)} into A(t) and expelling B(t) oneself with target weights {g2(t)} out of oneself at time t simultaneously, d $\,^{B(t)}_{B(t)\{g_2(t)\}}S^1t(t)^{B(t)\{g_1(t)\}}_{A(t)}$. Denote $S1^{et}_2(t)f^{A(t)}_{B(t)\{g_1(t)\},\{g_2(t)\}}$.

Definition 64

The dynamical continual S1et 1-capacity of the third type with target weights is the process of a containment of B(t) itself as an element with target weights {g1(t)} and the displacement of B(t) with target weights {g1(t)} from A(t) at time to simultaneously , where some or any elements from A(t), B(t) may be $\,^{A(t)}_{B(t)\{g_1(t)\}}S^1t(t)^{B(t)\{g_1(t)\}}_{B(t)}$. Denote $S1^{et}_3(t)f^{A(t)}_{B(t)\{g_1(t)\}}$

$S1_0^{et}(t)f\overrightarrow{\uparrow\mathrm{I}\downarrow_{-1}^{1}\{g(t)\}}$, $S1_1^{et}(t)f_{B(t)\downarrow\mathrm{I}\uparrow_{\infty}^{\infty}}^{\uparrow\mathrm{I}\downarrow_{-1}^{1}\{g(t)\}}$, $S1_2^{et}(t)f_{B(t)}^{\overrightarrow{A(t)\downarrow\mathrm{I}\uparrow_{-1}^{1}\{g(t)\}}}$, $S1_3^{et}(t)f_{B(t)\{g(t)\}}^{A(t)\uparrow\mathrm{I}\downarrow_{\infty}^{\infty}}$, $S1_4^{et}(t)f\overrightarrow{\uparrow\mathrm{I}\downarrow_{d(t)\{g2(t)\}}^{a(t)\{g1(t)\}}}$ etc.

Mathematics $_{F_1(t)D(t)g_2(t)}^{F_0(t)C(t)}S^1t(t)_{F_3(t)B(t)}^{F_2(t)A(t)}$ Continual S[1]et-Elements with Target V

1. Similarly, for the simultaneous execution of various operators:

   where $S1_j^{et}(t)fF(t)A(t)$, j=0,4,5, and $S1_k^{et}(t)f_{B(t)g_2(t)}^{A(t)}$,

2. Similarly, for the simultaneous execution of various operators:

1. $_{D(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}=\left(\begin{matrix}_{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}*\\ _{(D(t)-A(t))g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\end{matrix}\right)$, $\mu\left(_{D(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)=\left(\dfrac{\mu^s\left(_{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)}*\right)}{\mu(A(t)g_1(t))+2\mu(B(t))-\mu((D(t)-A(t))g_1(t))}\right)$

2. $_{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)}=\left(\begin{matrix}_{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{B(t)}*\\ _{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)-B(t)}\end{matrix}\right)$,

   $\mu\left(_{A(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)}\right)=\left(\dfrac{\mu^{ss}\left(_{A(t)}^{B(t)}S^1t(t)_{B(t)}^{B(t)}*\right)}{2\mu(B(t))+\mu(A(t)-B(t))-\mu(A(t)g_1(t))}\right)$

3. $_{A(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}=\left(\begin{matrix}_{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\\ _{A(t)-B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\end{matrix}\right)$,

   $\mu\left(_{A(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)=\left(\dfrac{\mu^{ss}\left(_{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)}{2\mu(B(t))+\mu(A(t)g_1(t))-\mu(A(t)-B(t))}\right)$

4. $_{Q(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}=\left(\begin{matrix}S1_0^{et}f(t)B(t)g_1(t)*\\ _{(Q(t)-B(t))g_1(t)}^{B(t)}S_1t(t)_{B(t)}^{(A(t)-B(t))g_1(t)}\end{matrix}\right)$,

   $\mu\left(_{Q(t)g_1(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)=\left(\dfrac{\mu^{ss}\left(S1_0^{et}f(t)B(t)g_1(t)*\right)}{2\mu(B(t))+\mu((A(t)-B(t)(g_1(t))-\mu((Q(t)-B(t))g_1(t))}\right)$

5. $_{Q(t)g_2(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}=\left(\begin{matrix}_{Q(t)g_2(t)}^{B(t)}S^1t(t)_{B(t)}^{B(t)g_1(t)}*\\ _{Q(t)g_2(t)}^{B(t)}S_1t(t)_{B(t)}^{(A(t)-B(t))g_1(t)}\end{matrix}\right)$,

   $\mu\left(_{Q(t)g_2(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)=\left(\dfrac{\mu^{ss}\left(_{Q(t)g_2(t)}^{B(t)}S^1t(t)_{B(t)}^{B(t)g_1(t)}*\right)}{2\mu(B(t))+\mu((A(t)-B(t))g_1(t))-\mu(Q(t)g_2(t))}\right)$

6. $_{Q(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}=\left(\begin{matrix}_{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}*\\ _{Q(t)-B(t)}^{B(t)}S_1t(t)_{B(t)}^{A(t)g_1(t)}\end{matrix}\right)$,

   $\mu\left(_{Q(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}\right)=\left(\dfrac{\mu^{ss}\left(_{B(t)}^{B(t)}S^1t(t)_{B(t)}^{A(t)g_1(t)}*\right)}{2\mu(B(t))+\mu(A(t)g_1(t))-\mu(Q(t)-(B(t)))}\right)$

7. $_{Q(t)}^{R(t)g_1(t)}S^1t(t)_{B(t)}^{A(t)}=\left(\begin{matrix}S1_3^{et}f(t)_{R(t)g_1(t)}^{B(t)}*\\ _{Q(t)-B(t)}^{R(t)}S^1t(t)_{B(t)}^{A(t)-B(t)}\end{matrix}\right)$,

   $\mu\left(_{Q(t)}^{R(t)g_1(t)}S^1t(t)_{B(t)}^{A(t)}\right)=\left(\dfrac{\mu^{ss}\left(S1_3^{et}f(t)_{R(t)g_1(t)}^{B(t)}*\right)}{\mu(B(t))+\mu(A(t)-B(t))+\mu(R(t)g_1(t))-\mu(Q(t)-B(t))}\right)$

Connection of Dynamical Continual S[1]et-Elements with Target Weights with Dynamical Containmint of Oneself with Target Weights

Consider a fifth t $S1_5^{et}(t)fA(t)\{g(t)\}$, ial containment of oneself with target weights g(t). For example, based on

where A=(a₁ (t),a $S1_5^{et}(t)fA(t)\{g(t)\}$, continual elements with target weights{g($S1_5^{et}(t)fA(t)\{g(t)\}$, possible to consider the dynamical containment of oneself with target weights

with m continual elements $S1_5^{et}(t)fA(t)\{g(t)\}$, (t)} from A, at m<n, which is process to ... (1) , that is, only m continual elements with target weights{g(t)} from A are located in the structure

Dynamical containments of oneself with target weights of the fifth type can be formed for any other structure, not necessarily S2et, only thr $S1_5^{et}(t)fA(t)\{g(t)\}$, eduction in the number of continual elem ...ghts in the structure. In particular, using the form (2). Structures more complex than

can be introduced.

Supplement

We consider S[1]et-logic: consider the functional f(Q), which gives a numerical value for the truth of the statement Q from

$f({}_D^CS^1t)+f(S^1t_B^A)-f({}_D^CS^1t\cap S^1t_B^A)=$

$\left(\dfrac{f^{os^1}(C\cap D-Co(C\cap D))+f^{s^1}(A\cap B)+f^{-s^1}\left({}_{C-C\cap D}^{\{\}}S^1t\right)}{f(A)+f(B)-f(A\cap B)+f(D)-f(C)}\right)-f({}_D^CS^1t\cap{}_D^CS^1t)$, $f^{s^1}(x)$

the value of self-truth for self- statement *x*, *Co*(*x*) – content of x, f^{os1}(x)- the value of oself-truth for oself- statement x ; for dependent statements: f(A*B)=f(A)*f(B/A)=f(B)*f(A/B), where f(B/A) ... nt B at the statement A

$f({}_D^CS^1t\cap S^1t_B^A)=f({}_D^CS^1t)*f(S^1t_B^A/{}_D^CS^1t)=f(S^1t_B^A)*f({}_D^CS^1t/S^1t_B^A)$.

for dependent statements:

Adding the tru $f(A)=\sum_{k=1}^{n}f(B_k)*f(A/B_k)$, nt propositions: f(A+B) =F(A)+f(B). The formula of complete truth:

$\sum_{k=1}^{n}f(B_k)$

B1, B2,...,Bn full group of hypotheses-statements:

=1("yes").

Remark

A statement can be ${}_D^CS^1t_B^A$ is p $({}_D^CS^1t_B^A)$, denote ${}_D^CS^1p_B^A$. value as a probability.

In particular, ${}_D^CS^1p_B^A$ for joint events $S^1t_B^A$, ${}_D^CS^1t$, A, B, C, D, ${}_D^CS^1t_B^A$:

$p({}_D^CS^1t_B^A)=p({}_D^CS^1t)+p(S^1t_B^A)-p(S^1t_B^A\cap{}_D^CS^1t)=$

$\left(\dfrac{p^{os^1}(C\cap D-Co(C\cap D))+p^{s^1}(A\cap B)+p^{-s^1}\left({}_{C-C\cap D}^{\{\}}S^1t\right)}{p(A)+p(B)-p(A\cap B)+p(D)-p(C)}\right)-p(S^1t_B^A\cap{}_D^CS^1t)$,

$p({}^C_DS^1t\cap S^1t^A_B)$ =p(${}^C_DS^1t$)*p($S^1t^A_B/{}^C_DS^1t$)= p($S^1t^A_B$)*p(${}^C_DS^1t/S^1t^A_B$).

for dependent events:

p^{s1} (*x*)- the value of self-P for self- event *x, Co(x)* – content of x,

$St^{\{q({}^a_aSt^a_a)\, St^{E_q}_{W_q\, q({}^a_aSt^a_a)},\ St^{\{El^{dr},\, q({}^a_aSt^a_a)\}}_{d_r}\}}$

Er f(r, a(E_q)) = St_{t_0}

${}^a_aSt^a_a$

internal energy of a living organism, q- a gap in the energy cocoon of a living organism, r-the position of the assemblage point dr on the energy cocoon of a living organism, W_q- energy prominences from the gap in the cocoon of a living organism, Eq-external energy entering the gap in the cocoon of a living organism, El^{dr} - a bundle of fibers of external energy self-capacities, collected at the point of assembly of the cocoon of a living organism.

${}^A_ASt$ will be called anti-capacity from oneself. For example, “white hole” in physics is such simple anti-capacity. The concepts of “white hole” and “black hole” were formulated by the physicists proceeding from the physics subjects –usual energies level. The mathematics allows to find deeply and to formulate the concepts singular points in the Universe proceeding from levels of more thin energies. The experiments of Nobel laureates in 2022-year Asle Ahlen, Clauser John, Zeilinger Anton correspond to the concept of the Universe as its self-containment in itself. The connection between the elements of self-containment in itself is a property of self-containment in itself and therefore does not disappear when their location in it changes. The energy of self-containment in itself is closed on itself.

Hypothesis

The containment of the galaxy in oneself as spiral curl and the expelling her out of oneself defines its existence. A self-consistency in itself as an element A is the god of A, the self-consistency in itself as an element the globe—the god of the globe, the self-consistency in itself as an element man-- the god of the man, the self-consistency in itself as an element of the universe-- the god of the universe, the containment of A into oneself is spirit of A, the containment of the globe into oneself is is spirit of globe, the containment of the man into oneself is spirit of the man (soul), the containment of the universe into oneself is spirit of the universe. We may consider the next axiom: any holding capacity is the capacity of oneself in itself. This is for each energy capacity. The Chinese book of Changes “I Ching” uses a structure similar to (*) implicitB: $St_x^{\{\Delta_1 B,\dots,\Delta_n B\}}$

Using $v_{cpst}(t,\Delta t) = St_x^{\{\frac{\Delta_1 B}{\Delta t}\dots\frac{\Delta_n B}{\Delta t}\}}$; $v_{st} = \lim_{\Delta t\to 0} v_{cpst}(t,\Delta t)$ the mathematics $a_{st} = \frac{dv_{st}}{dt}$]. we introduce the concept of Sit – the change in physical quantity .

Then the mean Sit - velocity will be and Sit-velocity at time t Sit – acceleration

In normal use, simply Sitx reduce to result a sum at point x of space, and when using Sitx with "target weights", we get, depending on the "target weights", one or another modification, namely, for example, the velocity v_{st}^f(with a "target weight" f) in the case when two velocities v_1, v_2 are involved in the set $\{v_1\, f, v_2\}$ for $v_{st}^f = St_x^{\wedge\{v\_1\, f, v\_2\}}$, f – instantaneous replacement we get an instantaneous substitution v_1 by v_2 at point x of space at time t_0.

Consider, in particular, some examples: 1) $St^e_{\{x\_1,x\_2\}}$ describes the presence of the same electron e at two different points x_1, x_2. 2) The nuclei of atoms can be considered as Sit elements.

Similarly, the concepts of Sit - force, Sit - energy are introduced. For example, $E_{st}^f = St_x^{\{E1\, f, E2\}}$ it would mean the instantaneous replacement of energy E1 by E2 at time t0. Two aspects of Sit– energy should be distinguished: 1) carrying out the desired "target weight", 2) the fixing result of it. Do not confuse energy - Sit (this is the node of energies) with Sit – energy that generates the node of energies, usually with the "target weights". In the case of ordinary energies, the energy node is carried out automatically. In fact, sit – elements are all ordinary, but with "target weights" they become peculiar. Here you need the necessary kind of energy to perform them. As a rule, this energy lies in the region itself. This is natural, since it’s much easier to control the elements of the k level by the elements of the more highly structured k +1 level. Consider the concepts of capacity in itself of physical objects. The question arises about the self-energy of the object. In particular, according to the results of the publication [4]. « St_B^B will mean S_1f B.» In particular, it allows you to determine the self-energy of DNA through St^{DNA}_{DNA}, St^Q_Q - self-energy Q. The law of self-energy conservation acts on the level of self-energy already.

$$St^{\frac{\partial\hat{\hat\rho}}{\partial t}+[\hat{\hat W},\hat{\hat\rho}]=0}_{\frac{\partial\hat{\hat\rho}}{\partial t}+[\hat{\hat W},\hat{\hat\rho}]=0},\quad \hat{\hat\rho} = \exp(i\widehat{H}_0 t/\hbar)\hat\rho\exp(-i\widehat{H}_0 t/\hbar),\quad \hat{\hat W} = \exp(i\widehat{H}_0 t/\hbar)\widehat{W}\exp(-i\widehat{H}_0 t/\hbar).$$

$$\widehat{H} = \widehat{H}_0 + \widehat{W}_0,\ \widehat{H}_0$$

Hamilton operator -considered quantum system energ $St^{\widehat H}_{\widehat H} = St^{\widehat H_0+\widehat W_0}_{\widehat H_0+\widehat W_0} = St^{\widehat H_0}_{\widehat H_0+\widehat W_0} + St^{\widehat W_0}_{\widehat H_0+\widehat W_0}$ ts, without their interaction v of their interaction, ρ ̂-statistical operator [3]. Self-energy

$$= St^{\widehat H_0}_{\widehat H_0} + St^{\widehat H_0}_{\widehat W_0} + St^{\widehat W_0}_{\widehat H_0} + St^{\widehat W_0}_{\widehat W_0},\quad St^{\widehat H_0}_{\widehat H_0}$$

$St^{\widehat W_0}_{\widehat W_0}$,

$St^{\widehat W_0}_{\widehat W_0}$;

$St^{\widehat W_0}_{\widehat W_0}$;

considered quantum system self-energy is self-energy of their interaction, --object manifes $\frac{\partial\hat{\hat\rho}}{\partial t}+[\hat{\hat W},\hat{\hat\rho}]$ of the energy of the system in an external field., - the manifestation of the energy of the system in the energy interaction with the external field. Variants of the S =0 of the form S2f, S3f are possible, $\frac{\partial\rho}{\partial t}$+ [H, ρ]=0 (*): $St^{\frac{\partial\rho}{\partial t}+[H,\rho]=0}_{\frac{\partial\rho}{\partial t}+[H,\rho]=0}$ rm (2) [1]. For Classical statistical Mechanics self-analogue of the equation

The carrier of the measu $St^{objectivity}_{objectivity}$ ctivity-mass should be objectivity-elementary particle graviton, i.e. have the form therefore it is a self-particle and is not an element of the level of objectivity, but is an element of the level self. Therefore, it cannot be found at our level. In fact, the theory of Sit-elements helps to form a unified field theory on a qualitative level, because it is not possible to create a quantitative unified field

S_{∞}^{-}=sin(-∞)--↓ I $\uparrow_{-1}^{1}$, T_{∞}^{+}=tg∞--↑ I $\downarrow_{-\infty}^{\infty}$, T_{∞}^{-}=tg(-∞)--↓ I $\uparrow_{-\infty}^{\infty}$, f↑I↓g for any

the type

f, g etc.

$_{D}^{C}St_{B}^{A}$

Similarly, you can consider all this through **S¹et**, only in much more interesting versions. But this is already in the next articles. The transition process in the form of is switched on during the transition from one world A (spatial variables, which we denote by X1, and temporal variables, through T1) to another B (spatial variables, which we denote by X2, and temporal variables, through T2). It is accompanied by spatial variables in form (T1, X1), and temporary - T3.

Declarations

Availability of Data and Material

1. Danilishyn I.V. Danilishyn O.V. THE USAGE OF SIT-ELEMENTS FOR NETWORKS. IV International Scientific and Practical Conference" GRUNDLAGEN DER MODERNEN WISSENCHAFTLICHEN FORSCHUNG", 31.03.2023/Zurich, Switzerland. https://archive.logos-science.com/index.php/conference-proceedings/issue/view/9
2. Danilishyn I.V. Danilishyn O.V. MATHEMATICS ST, PROGRAMMING OPERATORS ST AND SOME EMPLOYMENT. Collection of scientific papers "SCIENTIA", 2023. https://previous.scientia.report/index.php/archive/issue/view/07.04.2023
3. Dnilishyn I.V. Danilishyn O.V. DYNAMICAL SIT-ELEMENTS . IV International Scientific and Practical Conference "GRUNDLAGEN DER MODERNEN WISSENCHAFTLICHEN FORSCHUNG ", 31.03.2023/Zurich, Switzerland. https://archive.logos-science.com/index.php/conference-proceedings/issue/view/9

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References

1. Thomas Jech J (1971) LECTURES IN SET THEORY WITH PARTICULAR EMPHASIS ON THE METHOD OF FORCING. SPRINGER-VERLAG Berlin. Heidelberg.
2. Danilishyn IV, Danilishyn OV (2023) THE USAGE OF SIT-ELEMENTS FOR NETWORKS. IV International Scientific and Practical Conference GRUNDLAGEN DER MODERNEN WISSENCHAFTLICHEN FORSCHUNG, 31.03.2023/Zurich, Switzerland 129-134.
3. Danilishyn IV, Danilishyn OV (2023) DYNAMICAL SIT-ELEMENTS. IV International Scientific and Practical Conference GRUNDLAGEN DER MODERNEN WISSENCHAFTLICHEN FORSCHUNG, Zurich, Switzerland. https://archive.logos-science.com/index.php/conference-proceedings/issue/view/9
4. Danilishyn IV, Danilishyn OV (2023) MATHEMATICS ST, PROGRAMMING OPERATORS ST AND SOME EMPLOYMENT. Collection of scientific papers "SCIEN-